

# THE CORRELATION BETWEEN MEDIA LITERACY AND GLOBAL CITIZENSHIP SKILLS OF PRE-SERVICE SOCIAL STUDIES TEACHERS

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## Abstract

The study aims to investigate the global citizenship and media literacy skills of pre-service social studies teachers based on various variables and determine the correlation between media literacy and global citizenship skills. The study was conducted with 502 pre-service teachers attending the Social Studies Teaching Department. The study data were collected the media literacy skills scale developed by Erişti & Erdem (2017), and the global citizenship scale adapted in to Turkish language by Şahin & Çermik (2014). The data were analyzed with the Independent Samples T test, ANOVA, Pearson product-moment correlation coefficient, and multiple regression analysis. The findings demonstrated that there were no differences between the media literacy skills of pre-service teachers based on gender and daily internet use; however, there were differences based on class level, level of use of digital tools and previous attendance in a media literacy course. It was determined that there were differences between their global citizenship levels based on gender, class level, level of use of digital tools and previous attendance in a media literacy course, and there were no differences based on daily internet use. Other study findings revealed that there was a low, positive and significant correlation between media literacy and global citizenship skills of pre-service teachers.

*Keywords:* Global citizenship, media literacy, social studies.

## 1. Introduction

Globalization diminished the distances between societies via advances in communication technologies, increasing inter-societal dialogue. Thus, individuals who were only aware of the events in their own countries acquired the opportunity to follow global events. This led to global citizenship, which some accept as the complement to national citizenship and others as the end of national citizenship. Global citizenship could be described as a general state of international awareness. It includes taking responsibility and action in the face of global problems and rights violations. Because global citizens accept the concept of "us" instead of "me" and "others". Their homeland is the entire world. Diogenes, who lived hundreds of years ago, when asked where he was from responded he was a citizen of the world, referencing to global citizenship in known history.

Today, several nations prioritize the existence of individuals who consider themselves as global citizens. Fifty years ago, this idea could have been considered insincere. Because nations considered global citizenship as an alternative to national citizenship. But today, it is accepted by most countries that it was necessary for a sustainable world. Countries agree that global warming, climate change, nuclear armament, epidemics and wars are not only national, regional or continental problems. Thus, they tend to promote global citizenship education and revise related curricula. Non-Governmental Organizations (NGOs) also support these revisions. However, the desired outcomes are yet to be achieved. Various factors have been discussed. Non-acquisition of various literacy skills has also been discussed among these

factors. Thus, media literacy that allow the individuals to follow, perceive and interpret the global events has been considered important.

Media literacy entails broad access to, analysis and interpretation of media messages. It is imperative for global citizens to be media literate to follow global events, interpret these events and take action. Similar to global citizenship, education is an important factor in media literacy. Individuals can access the knowledge, skills and values required by global citizenship and media literacy skills during education. The most fundamental element in education is the teacher. Thus, global citizenship and media literacy skills of teachers are important.

## 2. Literature Review

Globalization indicates high political, social, cultural and economic interaction between societies and states. After globalization, the concepts of time and space lost their importance, where individuals interact with other societies and cultures via mass media. Interaction increased the awareness of individuals about foreign events and situations. Also, they increasingly became global citizens, while they were previously members of a particular society.

Global citizenship is used to describe citizens who accept and care about differences, strive for a more livable environment and understand how the world works economically, politically and socially (Reysen, Larey & Katzarska-Miller, 2012; Schattle, 2009; Ersoy, 2013; Lagos, 2002). In global citizenship, legal ties to a state and the privileges and statuses associated with these ties are not important, unlike national citizenship. Global citizenship is not based on law but by morality, and global citizens are tied with a spirit of common destiny. Language, ethnicity and bloodlines that nation states were based upon, are dispensable for global citizens. Global citizens prioritize the problems of individuals who have nothing in common. For example, people living in another continent could worry about hunger and drought in Africa. For concerned individuals, humanity is not a biological species, but is interconnected by mutual concern and common interest (Parekh, 2003). Furthermore, these individuals realize that regional problems could have global consequences. Thus, global citizenship skills include awareness about individual roles as global citizens, respect of diversity, action against social injustices, participation in various local or global cultural communities, and action for a just and sustainable world. The analysis of these skills would reveal both local and global awareness. Acquisition of this awareness is possible through certain competencies that include knowledge, understanding, skills, values and attitudes (Oxfam, 2006).

Knowledge and understanding includes knowledge essential for global citizenship. Namely, an individual without knowledge on globalization or social justice could not interpret the meaning and scope of global citizenship. Global citizenship is a multidimensional concept. Skill competency, on the other hand, aims the acquisition of various skills such as critical thinking, cooperation and fighting injustice. In fact, development of a critical perspective, ability to cooperate in the case of a global problem and standing up against injustice are important for global citizenship. Values and attitudes are associated with empathy, identity, self-esteem, respect for differences and equality (Balbağ & Türkcan, 2017). These competencies are important for global citizenship. However, these are only meaningful when they are acquired by individuals. Thus, global citizenship education is significant.

Global citizenship education was introduced in 1992 by the views of Lynch on citizenship education in multicultural societies. Lynch emphasized that globalization required individuals who speak several languages, believe in various religions, and with different ethnic backgrounds to live together. Thus, he advocated the development of knowledge, skills and values based on acceptance of differences in multicultural societies. The increase in human

rights violations in the following years increased the interest in this issue and various international human rights conventions (Hacat & Demir, 2017). It was argued that it was important to respect the rights of others and to adopt a common stance against global problems. These issues gave birth to the concept of global citizenship. It was accepted that education was important in training global citizens. Thus, several European countries, especially the UK introduced global citizenship education (Davies, 2006; Davies & Kirkpatrick, 2000).

Global citizenship education covers topics associated with knowledge on global issues, questioning and critical thinking skills, knowledge and skills required to analyze global issues, and recognition of the fact that global issues are a part of the world we live in (Merryfield, 2009; Banks, 2004; Osiadacz, 2018). Several significant studies have been conducted on global citizenship education in leading countries. Oxfam Institution in the UK developed a global citizenship curriculum, and the program was implemented in Wales, Scotland and Northern Ireland. Furthermore, the United Nations International Children's Emergency Fund (UNICEF) collaborated with academician to develop a global citizenship curriculum in Canada, known for its multicultural society and climate activists (Oğurlu et al., 2016). Also, various non-governmental organizations (NGOs) supported global citizenship education (Griffiths, 1998). Although significant studies have conducted on global citizenship education, the desired outcome was not achieved. This was associated with the difficulty of the comprehension of the topics by the students, irrelevance of the topics for certain societies, simple solutions are not possible for complex problems, the intensity of the programs, and the weakness of literacy topics in the curriculum (Kan, 2009; Golden, 2016). These barriers have been important impediments of an active global citizenship education. However, among these obstacles, it was reported that literacy types, and particularly media literacy have played a key role.

Media literacy could be described as the acquisition of critical thinking skills that allows the comprehension of the visual and auditory symbols in digital media, access, analysis and conveyance of various forms of messages, and reaching independent judgments about media content (Adams & Hamm 2001; Aufderheide, 1993; Silverblatt & Eliceiri, 1997). Several other definitions are available for media literacy. Media literacy has different meanings for various groups such as scientists, activists and educators. However, instead of increasing the number of definitions, it would be sufficient to note the significance of media literacy in global citizenship education. The global citizens should be media literate in the 21<sup>st</sup> century, where the influence of mass media has increased ominously. In other words, the media could provide information about the events that take place in various parts of the world within a short time and create public opinion. For instance, the media could report the disasters in the Antarctica due to global warming, the annihilation of the natural habitat due to the destruction of the rainforests in the Equator, or the damages caused by the civil war in Syria. These events mobilize climate activists, environmental associations, journalists and even the United Nations. People in various nations could organize anti-government protests and aid campaigns. Thus, there is a trend from national citizenship to global citizenship. Media literacy is a must for global citizenship. Because only global citizens could perceive the message conveyed by the media accurately and decide based on this perception.

Educational activities play a key role in global citizenship and media literacy. It was determined that certain courses could be more effective in education. It was accepted that the social studies course is among these courses. The main aim of the social studies course is to train active citizens who would be beneficial for their nation and the world. In other words, the course aims to train national and global citizens. Media literacy was considered significant for the achievement of these goals. Social studies course has been employed in both global citizenship and media literacy education in several nations. However, the teachers who will instruct the course are as important as the course. Because teachers with a high media literacy

and global citizenship improve these skills in their students. Thus, the acquisition of these skills is important for future teachers. In the study, the global citizenship and media literacy skills of the pre-service social studies teachers, and correlation between their media literacy and global citizenship skills were determined. Literature review revealed that the number of studies on global citizenship and media literacy levels of pre-service teachers was limited (Stein & Prewett, 2009; Tormey & Gleeson 2012; Som & Kurt 2012; Youngbauer, 2013; Çepni, Palaz & Ablak 2015; Özel, 2018; Botturi, 2019). No previous study aimed to determine the correlation between media literacy and global citizenship skills of pre-service teachers. Thus, the present study aimed to investigate the correlation between media literacy and global citizenship levels of pre-service social studies teachers. For this purpose, following research questions were determined:

1. What is the media literacy level of pre-service social studies teachers?
2. What is the global citizenship level of pre-service social studies teachers?
3. Does the media literacy level of the pre-service social studies teachers differ based on?
  - a. Gender,
  - b. Previous attendance in a media literacy course,
  - c. Class level,
  - d. Digital proficiency,
  - e. Daily internet use?
4. Does the global citizenship level of the pre-service social studies teachers differ based on?
  - a. Gender
  - b. Previous attendance in a media literacy course,
  - c. Class level,
  - d. Digital proficiency,
  - e. Daily internet use?
5. Is there a correlation between media literacy and global citizenship levels of pre-service social studies teachers?
6. Is media literacy level of pre-service social studies teachers a predictor of their global citizenship level?

### 3. Method

#### 3.1. The Research Model

The relational screening model was employed in the present study. In relational screening, the correlations across various groups are compared based on certain variables (Karasar, 2010). In the study, the correlation between media literacy and global citizenship levels of pre-service social studies teachers was investigated. Also, whether media literacy predicted global citizenship level was determined.

### 3.2. Population and Sample

The study population included pre-service teachers attending Social Studies Teaching Departments in public universities in Turkey, and the study sample included 502 pre-service social studies teachers attending Social Studies Teaching Departments in public universities in seven geographical regions in Turkey during the 2021-2022 academic year. Stratified sampling was employed to assign the study sample. In this sampling method, a large universe is required in order to minimize the sampling error. In this context, there are also a large number of samples to be drawn from the universe. However, if it is not desirable to work with a large number of samples, homogeneous universes should be used (Creswell & Clark, 2016). In the study, each geographical region was considered a layer.

Table 1. *Participant Demographics*

Gender	N	%
Female	278	55.3
Male	224	44.6
<b>Total</b>	<b>502</b>	<b>100</b>
<b>Class</b>		
Freshman	121	24.1
Sophomore	126	25.0
Junior	123	24.5
Senior	132	26.2
<b>Total</b>	<b>502</b>	<b>100</b>
<b>Previous attendance in a media literacy course</b>		
Yes	265	52.7
No	237	47.2
<b>Total</b>	<b>502</b>	<b>100</b>
<b>Digital competency</b>		
Low	39	7.7
Moderate	193	38.4
High	183	36.4
Very high	87	17.3
<b>Total</b>	<b>502</b>	<b>100</b>
<b>Daily internet use (min)</b>		
0-60	38	7.5
61-120	187	37.2
121-180	211	42.0
181-240	66	13.1
<b>Total</b>	<b>502</b>	<b>100</b>

As seen in Table 1, 55.3% of the participating pre-service teachers were female and 44.6% were male. It was observed that 24.1% were freshmen, 25% were sophomores, 24.5% were juniors, and 26.2% were senior students. It was determined that 52.7% of the pre-service teachers previously took a media literacy course, and 47.2% did not. 7.7% of the pre-service teachers stated their digital proficiency as low, 38.4% as moderate, 36.4% as high, and 17.3% as very high. 7.5% of the pre-service teachers spent 0-60 minutes on the internet daily, 37.2% spent 61-120 minutes, 42% spent 121-180 minutes, and 13.1% spent 181-240 minutes.

### 3.3. Data Collection Instruments

#### 3.3.1. Personal Information Form

The personal information form developed by the author was used to determine the effects of independent variables on media literacy and global citizenship levels of the participating pre-service teachers. The personal information form included gender, class, previous media literacy course attendance, digital proficiency, and daily internet use data.

#### 3.3.2. Media Literacy Skills Scale

The media literacy skills scale was developed by Erişti & Erdem (2017). It is a 5-point Likert-type scale [Not true (1) somehow true (2) no idea (3) true (4) and quite true (5)] and includes 45 items. Scale sub-dimensions are access, analysis, evaluation and communication. Internal consistency reliability coefficients of the sub-dimensions were .76, .83, .72 and .83, respectively. The Cronbach alpha internal consistency coefficient for the overall scale was .91 (Erişti & Erdem, 2017). The overall Cronbach alpha internal consistency coefficient was .94.

#### 3.3.3. Global Citizenship Scale

The scale was developed by Morais & Ogden (2011) and adapted to Turkish language by Şahin & Çermik (2014). It is a 5-point Likert-type scale [strongly disagree (1) disagree (2) undecided (3) agree (4) and strongly agree (5)] and includes 30 items. Scale sub-dimensions are global competence, global civic engagement and social responsibility. Internal consistency reliability coefficients of the sub-dimensions were .75, .76 and .73, respectively. The internal consistency coefficient of the overall scale was .76, and the Spearman Brown split-half reliability coefficient was .75 (Şahin & Çermik, 2014). In the current research, the Cronbach alpha internal consistency coefficient of the scale was .79.

#### 3.3.4. Data Collection and Analysis

The study data were collected with Google Form application. For this purpose, personal information form, global citizenship and media literacy skills scales were uploaded to Google Form. They were presented to the study group online. Data were collected within four weeks. The data were analyzed with descriptive statistics, independent samples t-test, ANOVA, Pearson product-moment correlation coefficient and multiple regression analysis. The analysis findings are presented in tables.

## 4. Findings

### 4.1. Media literacy skills of the pre-service teachers

Table 2. Mean and Standard Deviation of Media Literacy Skills of Pre-Service Social Studies Teachers

Variable	$\bar{x}$	ss	Choice	Score
Access	3.62	.87	Not true	1.00-1.79
Analysis	3.69	.87	Somehow true	1.80-2.59
Evaluation	3.70	.93	No idea	2.60-3.39
Communication	3.66	.88	True	3.40-4.19
Media literacy skills	3.67	.85	Quite true	4.19-5.00

As seen in Table 2, the mean media literacy skill score of the pre-service teachers was 3.67. The mean access sub-dimension score was 3.62, the mean analysis sub-dimension score was 3.69, the mean evaluation sub-dimension score was 3.70, and the mean communication sub-



dimension score was 3.66. The findings demonstrated that the mean media literacy skill score of the pre-service teachers was in the true range.

#### 4.2. Global citizenship levels of the pre-service teachers

Table 3. *Mean and Standard Deviation of Global Citizenship Levels of Pre-Service Social Studies Teachers*

Variable	$\bar{x}$	ss	Choice	Score
Global competence	3.02	.71	Strongly disagree	1.00-1.79
Global civic engagement	3.15	.82	Disagree	1.80-2.59
Social responsibility	2.78	.80	Undecided	2.60-3.39
Global citizenship	2.99	.29	Agree	3.40-4.19
			Strongly agree	4.19-5.00

As seen in Table 2, the mean global citizenship score of the pre-service teachers was 2.99. The mean global competence sub-dimension score was 3.02, the mean civic participation sub-dimension score was 3.15, and the mean social responsibility sub-dimension score was 2.78. The findings demonstrated that the mean global citizenship score of the pre-service teachers was in the indecisive range.

4.2.1. The comparison of media literacy levels of pre-service teachers based on study variables

The variances in media literacy skills of the pre-service social studies teachers were analyzed based on the following variables:

- Gender,
- Previous attendance in a media literacy course,
- Class level,
- Digital proficiency,
- Daily internet use

Table 4. *Media literacy levels based on gender variable*

Scale	Gender	N	$\bar{x}$	Ss	Sd	T	P
Access	Male	224	3.63	.92	500	.077	.938
	Female	278	3.62	.83			
Analysis	Male	224	3.69	.93	500	-.051	.958
	Female	278	3.70	.83			
Evaluation	Male	224	3.70	.97	500	-.166	.867
	Female	278	3.71	.89			
Communication	Male	224	3.67	.92	500	.353	.721
	Female	278	3.64	.84			
Media literacy	Male	224	3.67	.90	500	.052	.958
	Female	278	3.67	.80			

T-test was conducted to determine whether the media literacy levels of the pre-service teachers

differed based on the gender variable. T-test results conducted on media literacy access [ $t_{(500)} = .077$ ;  $p > .05$ ], analysis [ $t_{(500)} = -.051$ ;  $p > .05$ ], evaluation [ $t_{(500)} = -.166$ ;  $p > .05$ ], and communication [ $t_{(500)} = .353$ ;  $p > .05$ ] sub-dimensions and overall scale [ $t_{(500)} = .052$ ;  $p > .05$ ] revealed that there were no significant differences.

Table 5. *Media literacy levels based on previous attendance in a media literacy course variable*

Scale	Attendance	N	$\bar{x}$	Ss	Sd	T	P	Cohen'sd																																															
Access	Yes	265	3.91	.72	500	8.054	.000**	.72																																															
	No	237	3.31	.91					Analysis	Yes	265	3.98	.72	500	8.100	.000**	.72	No	237	3.37	.92	Evaluation	Yes	265	3.97	.79	500	6.953	.000**	.62	No	237	3.41	.98	Communication	Yes	265	3.92	.74	500	7.440	.000**	.67	No	237	3.36	.92	Media literacy	Yes	265	3.94	.70	500	8.030	.000**
Analysis	Yes	265	3.98	.72	500	8.100	.000**	.72																																															
	No	237	3.37	.92					Evaluation	Yes	265	3.97	.79	500	6.953	.000**	.62	No	237	3.41	.98	Communication	Yes	265	3.92	.74	500	7.440	.000**	.67	No	237	3.36	.92	Media literacy	Yes	265	3.94	.70	500	8.030	.000**	.72	No	237	3.36	.89								
Evaluation	Yes	265	3.97	.79	500	6.953	.000**	.62																																															
	No	237	3.41	.98					Communication	Yes	265	3.92	.74	500	7.440	.000**	.67	No	237	3.36	.92	Media literacy	Yes	265	3.94	.70	500	8.030	.000**	.72	No	237	3.36	.89																					
Communication	Yes	265	3.92	.74	500	7.440	.000**	.67																																															
	No	237	3.36	.92					Media literacy	Yes	265	3.94	.70	500	8.030	.000**	.72	No	237	3.36	.89																																		
Media literacy	Yes	265	3.94	.70	500	8.030	.000**	.72																																															
	No	237	3.36	.89																																																			

T-test was conducted to determine whether the media literacy levels of the pre-service teachers differed based on the previous attendance in media literacy course variable. T-test results conducted on media literacy access [ $t_{(500)} = 8.054$ ;  $p < .05$ , Cohen's  $d = .72$ ], analysis [ $t_{(500)} = 8.100$ ;  $p < .05$ , Cohen's  $d = .72$ ], evaluation [ $t_{(500)} = 6.953$ ;  $p < .05$ , Cohen's  $d = .62$ ], and communication [ $t_{(500)} = 7.440$ ;  $p < .05$ , Cohen's  $d = .67$ ] sub-dimensions and overall scale [ $t_{(500)} = 8.030$ ;  $p < .05$ , Cohen's  $d = .72$ ] indicated that there were significant differences that favored those who took the course. The effect sizes were moderate for access, analysis, evaluation, communication sub-dimensions and the overall scale.

Table 6. Media literacy levels based on class variable

	Class	N	$\bar{x}$	Ss	Source of the variance	Sum of squares	Sd	Mean of squares	F	P	Difference (sid Eta-square (η <sup>2</sup> ))
Access	Freshman	121	2.92	.86	Inter-group	103.512	3	34.504	61.645	.000**	2-1 3-1-2 4-1-2-3
	Sophomore	126	3.51	.84	Intra-group	278.744	498	.560			
	Junior	123	3.91	.67	Total	382.256	501				
	Senior	132	4.11	.58							
Analysis	Freshman	121	3.03	.88	Inter-group	109.804	3	36.601	65.626	.000**	2-1 3-1-2 4-1-2-3
	Sophomore	126	3.48	.85	Intra-group	277.749	498	.558			
	Junior	123	3.99	.65	Total	387.553	501				
	Senior	132	4.24	.55							
Evaluation	Freshman	121	3.04	.94	Inter-group	106.905	3	35.635	54.196	.000**	2-1 3-1-2 4-1-2-3
	Sophomore	126	3.50	.93	Intra-group	327.443	498	.658			
	Junior	123	3.97	.72	Total	434.348	501				
	Senior	132	4.25	.59							
Communication	Freshman	121	2.96	.84	Inter-group	109.605	3	36.535	65.209	.000**	2-1 3-1-2 4-1-2-3
	Sophomore	126	3.49	.84	Intra-group	279.016	498	.560			
	Junior	123	3.91	.70	Total	388.621	501	35.695	.000**		
	Senior	132	4.21	.57							
Media literacy	Freshman	126	2.99	.83	Inter-group	107.084	3	.512	69.706	.000**	2-1 3-1-2 4-1-2-3
	Sophomore	123	3.50	.82	Intra-group	255.014	498				
	Junior	132	3.95	.64	Total	362.098	501				
	Senior	121	4.20	.52							

ANOVA was conducted to determine whether the media literacy levels of the pre-service teachers differed based on class. ANOVA results conducted on media literacy access [F3-498) =61.645, p<.05, (η<sup>2</sup>=.27)], analysis [F3-498) =65.626, p<.05, (η<sup>2</sup>= .28)], evaluation [F3-498) =54.196, p<.05, (η<sup>2</sup>=.24)], and communication [F3-498) =65.209, p<.05, (η<sup>2</sup>=0.28)] sub-dimensions, and the overall scale [F3-498) =69.706, p<.05, (η<sup>2</sup>=.29)] revealed significant differences. The effect sizes demonstrated strong effects for the analysis, evaluation, communication sub-dimensions and the overall scale. The analysis of the source of difference demonstrated that there were differences between the sophomores and freshmen that favored the sophomores, between juniors and freshmen and sophomores that favored the juniors, and between the seniors and all others that favored the seniors.

Table 7. Media literacy levels based on digital proficiency variable

	Digital proficiency	N	$\bar{x}$	Ss	Source of the variance	Sum of squares	Sd	Mean squares	F	P	Differenc e (sidak)	Eta-square ( $\eta^2$ )
<b>Access</b>	Poor (1)	39	2.32	.73	Inter-group	107.420	3	35.807	64.882	000**	2-1 3-2 4-1-2-3	.28
	Moderate (2)	193	3.44	.74	Intra-group	274.836	498	.552				
	Good (3)	183	3.81	.78	Total	382.256	501					
	Very Good (4)	87	4.20	.63								
<b>Analysis</b>	Poor (1)	39	2.41	.84	Inter-group	102.228	3	34.076	59.476	000**	2-1 3-2 4-1-2-3	.26
	Moderate (2)	193	3.52	.76	Intra-group	285.325	498	.573				
	Good (3)	183	3.90	.78	Total	387.553	501					
	Very Good (4)	87	4.23	.62								
<b>Evaluation</b>	Poor (1)	39	2.38	.88	Inter-group	112.694	3	37.565	58.160	000**	2-1 3-2 4-1-2-3	.25
	Moderate (2)	193	3.51	.82	Intra-group	321.653	498	.646				
	Good (3)	183	3.93	.81	Total	434.347	501					
	Very Good (4)	87	4.26	.66								
<b>Communication</b>	Poor (1)	39	2.42	.88	Inter-group	102.556	3	34.185	59.512	000**	2-1 3-2 4-1-2-3	.26
	Moderate (2)	193	3.47	.77	Intra-group	286.065	498	.574				
	Good (3)	183	3.84	.76	Total	388.621	501					
	Very Good (4)	87	4.24	.61								
<b>Media literacy</b>	Poor (1)	39	2.38	.78	Inter-group	106.086	3	35.362	68.787	000**	2-1 3-2 4-1-2-3	.29
	Moderate (2)	193	3.48	.72	Intra-group	256.012	498	.514				
	Good (3)	183	3.87	.74	Total	362.098	501					
	Very Good (4)	87	4.23	.59								

ANOVA was conducted to determine whether the media literacy levels of the pre-service social studies teachers differed based on digital proficiency. ANOVA results conducted on media literacy access [F(3-498) =64,882,  $p < .05$ , ( $\eta^2 = .28$ )], analysis [F(3-498) =59.476,  $p < .05$ , ( $\eta^2 = .26$ )], evaluation [F(3-498) =58.160,  $p < .05$ , ( $\eta^2 = .25$ )], and communication [F(3-498) =59.512,  $p < .05$ , ( $\eta^2 = .26$ )] sub-dimensions, and the overall scale [F(3-498) =68.787,  $p < .05$ , ( $\eta^2 = .29$ )] indicated significant differences. The effect size was high for the access, analysis, evaluation, communication sub-dimensions and the overall scale. The analysis of the source of difference demonstrated that there were differences between those with poor and moderate digital proficiency favoring those with moderate proficiency, between those with moderate and good proficiency favoring those with good proficiency, between those with good and very good proficiency favoring those with very good proficiency, and between those with very good proficiency and all others favoring those with very good digital proficiency.



Table 8. Media literacy levels based on internet use variable

	Daily internet use (min)	N	$\bar{x}$	Ss	Source of the variance	Sum of squares	Sd	Mean squares	F	P
Access	0-60	38	3.64	.97	Inter-group	0.64	3	.021	.028	.994
	61-120	187	3.61	.85	Intra-group	382.192	498	.767		
	121-180	211	3.62	.90	Total	382.256	501			
	181-240	66	3.64	.77						
Analysis	0-60	38	3.69	.96	Inter-group	.277	3	.092	.119	.949
	61-120	187	3.72	.88	Intra-group	387.276	498	.778		
	121-180	211	3.67	.89	Total	387.553	501			
	181-240	66	3.69	.78						
Evaluation	0-60	38	3.82	.99	Inter-group	2.081	3	.694	.799	.495
	61-120	187	3.76	.93	Intra-group	432.266	498	.868		
	121-180	211	3.66	.95	Total	434.348	501			
	181-240	66	3.62	.79						
Communication	0-60	38	3.69	.95	Inter-group	1.764	3	.588	.757	.519
	61-120	187	3.70	.87	Intra-group	386.857	498	.777		
	121-180	211	3.65	.90	Total	388.621	501			
	181-240	66	3.52	.77						
Media literacy	0-60	38	3.71	.92	Inter-group	.489	3	.163	.224	.879
	61-120	187	3.70	.95	Intra-group	.361.609	498	.726		
	121-180	211	3.65	.87	Total	362.089	501			
	181-240	66	3.62	.73						

ANOVA was conducted to determine whether the media literacy levels of the pre-service social studies teachers differed based on internet use. ANOVA results conducted on media literacy access [F3-498) =.028 p>0], analysis [F3-498) =.119, p>0], evaluation [F3-498) =.799, p>0], and communication [F3-498) =.757, p>0] sub-dimensions and overall scale [F3-498) =.224, p>0] indicated no significant differences.

4.2.2. The comparison of global citizenship levels of pre-service teachers based on study variables

The variances in global citizenship of the pre-service social studies teachers were analyzed based on the following variables:

- Gender,
- Previous attendance in a media literacy course,
- Class level,
- Digital proficiency,
- Daily internet use

Table 9. *Global citizenship levels based on gender variable*

Scale	Gender	N	$\bar{x}$	Ss	Sd	T	P	Cohen'sd
Global competency	Male	224	3.18	.67	500	4.516	.000**	.41
	Female	278	2.89	.72				
Global civic engagement	Male	224	3.33	.82	500	4.449	.000**	.40
	Female	278	3.01	.79				
Social responsibility	Male	224	2.66	.82	500	-3.201	.001**	-.29
	Female	278	2.89	.77				
Global citizenship	Male	224	3.06	.26	500	4.952	.000**	.44
	Female	278	2.93	.30				

T-test was conducted to determine whether the global citizenship levels of the pre-service teachers differed based on the gender variable. T-test results conducted on global citizenship global competence [ $t_{(500)}=4.516$ ;  $p<.05$ , Cohen's  $d=.41$ ] and global civic participation [ $t_{(500)}=4.449$ ;  $p<.05$ , Cohen's  $d=.40$ ] sub-dimensions and overall scale [ $t_{(500)}=4.952$ ;  $p<.05$ , Cohen's  $d=.44$ ] indicated significant differences that favored males. The effect size was low for global competence, global civic participation and overall scale. In social responsibility [ $t_{(500)}=-3.201$ ;  $p<.05$ , Cohen's  $d=-.29$ ], a significant difference that favored females was determined. The effect size was low.

Table 10. *Global citizenship levels based on attendance in media literacy course variable*

Scale	Attendance	N	$\bar{x}$	Ss	Sd	T	P	Cohen'sd
Global competency	Yes	265	3.16	.68	500	4.880	.000	.44
	No	237	2.86	.72				
Global civic engagement	Yes	265	3.38	.76	500	6.911	.000	.62
	No	237	2.90	.80				
Social responsibility	Yes	265	2.57	.72	500	-6.387	.000	-.57
	No	237	3.02	.82				
Global citizenship	Yes	265	3.04	.28	500	4.508	.000	.40
	No	237	2.92	.38				

T-test was conducted to determine whether the global citizenship levels of the pre-service teachers differed based on the previous attendance in a media literacy course variable. T-test results conducted on global citizenship global competence [ $t_{(500)}=4.880$ ;  $p<.05$ , Cohen's  $d=.44$ ] and global civic participation [ $t_{(500)}=-6,911$ ;  $p<.05$ , Cohen's  $d=.62$ ] sub-dimensions and the overall scale [ $t_{(500)}=4.508$ ;  $p<.05$ , Cohen's  $d=.40$ ] indicated significant differences that favored those who took the course. The effect size was low for the global competence sub-dimension and overall scale, and moderate for the global civic participation sub-dimension. There was a significant difference in the social responsibility dimension that favored those who did not take the course [ $t_{(500)}=-6.387$ ;  $p<.05$ , Cohen's  $d=-.57$ ]. The effect size was moderate.

Table 11. Global citizenship levels based on class variable

	Class	N	$\bar{x}$	Ss	Source of the variance	Sum of squares	Sd	Mean squares	F	P	Difference (sidak)	Eta-square ( $\eta^2$ )
Global competency	Freshman	121	2.74	.64	Inter-group	34.256	3	11.419	25.374	000**	3-1-2	.13
	Sophomore	126	2.82	.68	Intra-group	224.104	498	.450			4-1-2-3	
	Junior	123	3.09	.72	Total	258.360	501					
	Senior	132	3.40	.62								
Global civic engagement	Freshman	121	2.76	.73	Inter-group	58.016	3	19.339	34.253	000**	3-1-2	.17
	Sophomore	126	2.93	.71	Intra-group	281.164	498	.565			4-1-2-3	
	Junior	123	3.22	.79	Total	339.181	501					
	Senior	132	3.65	.76								
Social responsibility	Freshman	121	3.15	.71	Inter-group	50.187	3	16.729	30.255	000**	1-3-4	.15
	Sophomore	126	3.01	.82	Intra-group	275.358	498	.553			2-3-4	
	Junior	123	2.64	.73	Total	325.545	501				3-4	
	Senior	132	2.34	.68	Inter-group	4.574	3	1.525	19.867	000**	3-1	.10
Spherical citizenship	Freshman	121	2.88	.28	Intra-group	38.216	498	.077			4-1-2-3	
	Sophomore	126	2.92	.26	Total	42.790	501					
	Junior	123	2.99	.28								
	Senior	132	3.13	.26								

ANOVA was conducted to determine whether the global citizenship of pre-service social studies teachers differed based on class. ANOVA test conducted on global citizenship scale global competence [F(3,498) = 25.374,  $p < .05$ , ( $\eta^2 = .13$ )], global civic engagement [F(3,498) = 34.253,  $p < .05$ , ( $\eta^2 = .17$ )], social responsibility [F(3,498) = 30.255,  $p < .05$ , ( $\eta^2 = .15$ )] sub-dimensions and the overall scale [F(3,498) = 19.867,  $p < .05$ , ( $\eta^2 = .10$ )] indicated significant difference. The effect size was moderate for the global competence sub-dimension and overall scale, and high for the global civic participation and social responsibility sub-dimensions. The analysis of the source of the difference demonstrated that the difference between the juniors and freshmen and sophomores favored the juniors and the difference between the seniors and all others favored the seniors in the global competence sub-dimension. In the global civic participation sub-dimension, the difference between juniors and freshmen and sophomores favored the juniors, and the difference between the seniors and all others favored the seniors. In the social responsibility sub-dimension, the difference between freshmen and juniors and seniors favored the freshmen, and the difference between sophomores and juniors and seniors favored the sophomores, and the difference between juniors and seniors favored juniors. In the overall scale, the difference between juniors and freshmen favored juniors and the difference between seniors and all others favored seniors.

Table 12. *Global citizenship levels based on digital proficiency variable*

	Digital proficiency	n	$\bar{x}$	Ss	Source of the variance	Sum of squares	Sd	Mean squares	F	P	Difference (sidak)	Eta-square ( $\eta^2$ )
<b>Global competency</b>	Poor (1)	39	2.61	.62	Inter-group	41.229	3	13.743	31.520	000**	3-1	.15
	Moderate (2)	193	2.85	.69	Intra-group	217.132	498	.436			4-1-2-3	
	Good (3)	183	3.02	.64	Total	258.361	501					
	Very good (4)	187	3.59	.61								
<b>Global civic engagement</b>	Poor (1)	39	2.56	.74	Inter-group	66.038	3	22.013	40.134	000**	2-1	.19
	Moderate (2)	193	2.94	.76	Intra-group	273.143	498	.548			3-1-2	
	Good (3)	183	3.17	.76	Total	339.181	501				4-1-2-3	
	Very good (4)	187	3.86	.62								
<b>Social responsibility</b>	Poor (1)	39	3.45	.84	Inter-group	57.656	3	19.219	35.727	000**	1-2-3-4	.17
	Moderate (2)	193	2.98	.73	Intra-group	267.889	498	.538			2-3-4	
	Good (3)	183	2.71	.75	Total	325.545	501				3-4	
	Very good (4)	187	2.18	.62	Inter-group	5.717						
<b>Spherical Citizenship</b>	Poor (1)	39	2.87	.24	Intra-group	37.072	3	19.906	25.601	000**	4-1-2	.13
	Moderate (2)	193	2.92	.29	Total	42.789	498	.074				
	Good (3)	183	2.97	.26			501					
	Very good (4)	187	3.21	.24								

ANOVA was conducted to determine whether the global citizenship of pre-service social studies teachers differed based on digital proficiency. ANOVA test conducted on global citizenship scale global competence [F(3-498) =31.520, p<.05, ( $\eta^2$ =.15)], global civic engagement [F(3-498) =40.134, p<.05, ( $\eta^2$ =.19)], and social responsibility [F(3-498) =35.727, p<.05, ( $\eta^2$ =.17)] sub-dimensions and overall scale [F(3-498) =25.601, p<.05, ( $\eta^2$ =.13)] indicated that there were significant differences. The effect size was high for global competence, global civic participation, social responsibility sub-dimensions, and moderate for the overall scale. The difference in the global competence sub-dimension between those with good and poor proficiency favored those with good digital proficiency, and the difference between those with very good proficiency and all others favored those with very good proficiency. In the global civic participation dimension, the differences between those with higher proficiency and others favored those with higher proficiency. In the social responsibility sub-dimension, the differences between those with poorer proficiency and higher proficiency levels favored those with poorer proficiency levels in all comparisons. In the overall scale, the difference between those with very good proficiency and others favored those with high digital proficiency.



Table 13. Global citizenship levels based on Daily internet use variable

	Daily internet use N (min)	$\bar{x}$	Ss	Source of the variance	Sum of squares	Sd	Mean squares	F	P
Global competency	0-60	381	2.95	.73	<b>Inter-group</b>	1.446	3	.482	.935 .424
	61-120	187	3.05	.70	<b>Intra-group</b>	256.914	498	.516	
	121-180	211	3.04	.74	<b>Total</b>	258.36	501		
	181-240	66	2.90	.65					
Global civic engagement	0-60	381	3.00	.83	<b>Inter-group</b>	3.937	3	1.312	1.949.121
	61-120	187	3.23	.79	<b>Intra-group</b>	335.244	498	.673	
	121-180	211	3.16	.85	<b>Total</b>	339.181	501		
	181-240	66	2.99	.74					
Social responsibility	0-60	381	2.82	.85	<b>Inter-group</b>	3.698	3	1.233	1.907.127
	61-120	187	2.72	.79	<b>Intra-group</b>	321.847	498	.646	
	121-180	211	2.77	.82	<b>Total</b>	325.545	501		
	181-240	66	2.99	.72					
Spherical citizenship	0-60	381	2.92	.35	<b>Inter-group</b>	.242	3	.081	.946 .418
	61-120	187	3.00	.29	<b>Intra-group</b>	42.547	498	.085	
	121-180	211	2.99	.28	<b>Total</b>	42.789	501		
	181-240	66	2.96	.27					

ANOVA was conducted to determine whether the global citizenship of pre-service social studies teachers differed based on daily internet use. ANOVA test conducted on global citizenship scale global competence [F3-498) =.935 p>.05], global civic engagement [F3-498) =.1.949, p>.05], and social responsibility [F3-498) =.1.907, p>.05] sub-dimensions and the overall scale [F3-498) =.946, p<.05] indicated that there were no significant differences.

4.2.3. The correlation between media literacy and global citizenship levels of pre-sevice social studies teachers

Table 14. The correlation between media literacy and global citizenship levels of pre-sevice social studies teachers

Variables	1	2	3	4	5	6	7	8	9
1	-	.888**	.837**	.851**	.439**	.501**	-.561**	.314**	.936**
2		-	.914**	.895**	.447**	.513**	-.573**	.321**	.969**
3			-	.894**	.427**	.512**	-.560**	.316**	.957**
4				-	.505**	.576**	-.620**	.384**	.954**
5					-	.897**	-.837**	.891**	.476**
6						-	-.877**	.866**	.551**
7							-	.590**	-.606**
8								-	.349**
9									-



1: Access, 2: Analysis, 3: Evaluation, 4: Communication, 5: Kuryet, 6: Kursivil, 7: Sossor, 8: Total global citizenship, 9: Total media literacy.

As seen in the Table 13, where the results of the correlation analysis conducted to determine the correlations between media literacy skills and global citizenship levels of pre-service social studies teachers, a low, positive and significant correlation was determined between the media literacy skills and global citizenship levels of the pre-service teachers ( $r = .34, p < .01$ ).

Highly significant correlations were determined between media literacy skills and access ( $r = .93, p < .01$ ), analysis ( $r = .96, p < .01$ ), evaluation ( $r = .95, p < .01$ ), communication ( $r = .95, p < .01$ ) sub-dimensions.

Moderately significant positive correlations were determined between global citizenship and global competence ( $r = .89, p < .01$ ) global civic participation ( $r = .86, p < .01$ ) scale sub-dimensions, and a moderately significant negative correlation was determined in the social responsibility ( $r = .59, p < .01$ ) sub-dimension.

A low significant positive correlation was determined between media literacy and global competence subdimension global competence ( $r = .47, p < .01$ ), a moderate significant positive correlation was determined between media literacy and global civic engagement subdimension ( $r = .55, p < .01$ ), and high significant correlation was determined between media literacy and global competence subdimension social responsibility ( $r = .60, p < .01$ ).

Low significant positive correlations were determined between media literacy subdimensions access ( $r = .31, p < .01$ ) analysis ( $r = .32, p < .01$ ), evaluation ( $r = .31, p < .01$ ), and communication ( $r = .38, p < .01$ ).

4.2.4. Do media literacy skills of pre-service social studies teachers predict their global citizenship levels?

Table 15. *Do media literacy skills of pre-service social studies teachers predict their global citizenship levels?*

Variable	Beta	Standard error	$\beta$	T	P	Paired r	Partial r
Constant	2,539	,054	-	47,080	,00*	-	-
Access	,004	,031	,011	,116	,90**	,314	,005
Analysis	-,022	,042	-,066	-,522	,60**	,321	-,023
Evaluation	-,031	,035	-,099	-,881	,37**	,316	-,039
Communication	,173	,035	,522	4,957	,00*	,384	,217

$R=0,38; R^2=0,15; F_{(4-497)}=22,12, p=0,00<0,01$  \*\* $p>0,05$  \* $p<0,01$

The multiple regression analysis demonstrated that there was a significant correlation only between the communication variable and the global citizenship level ( $R = .38, p < .01$ ). This predictor variable (media literacy skills) explained 15% of the total variance in global citizenship. Thus, it could be suggested that media literacy (communication) skills were a significant predictor of global citizenship ( $R = 0.38; R^2 = 0.15; F_{(4-497)} = 22.12, p < .01$ ). The communication predictor explained 15% of the total variance in disposition of the pre-service teachers to media literacy. Thus, an increase in the media literacy of pre-service teachers increased their global citizenship level.

## **Conclusion, discussion, and recommendations**

The 21st century led to significant interactions between the societies. Communication technologies and media have been influential in this development. Thus, individuals in different countries have the opportunity to follow the events in the rest of the world. This led to an awareness about global events and developments and the development of a new type of citizenship. This new type of citizenship was described as global citizenship. Global citizenship could briefly be described as a state of international awareness. Global citizens are individuals who feel moral responsibility for other individuals who have nothing in common and strive for a more livable world. The number of countries that were cautious about global citizenship only a few decades ago has been gradually decreasing. Because the global consequences of the problems experienced in different continents and countries are on the increase. Wildfires, air pollution, water pollution, global warming, extinction of certain species and wars are among the problems that all societies face. Thus, nations have prioritized global citizenship education. However, the desired success was not achieved in global citizenship education. The common reasons for that were reported as the lack of literacy skills. Literacy in general and media literacy in particular are important in this process. Media literacy skills that entail the comprehension, analysis, and communication of media messages is important for global citizens who are interested in global events. It has been suggested that media literacy skills were important for global citizens. However, education is an important factor in training global citizens with media literacy skills. In education, the social studies course that aims to train individuals with an awareness about local and global events is important. Thus, both in-service and pre-service social studies teachers should have both media literacy skills and global citizenship competencies. In the present study, global citizenship levels and media literacy skills of pre-service social studies teachers were investigated based on certain variables and the correlations between their media literacy skills and global citizenship levels were determined. The study findings demonstrated that the media literacy levels of the pre-service social studies teachers were high, in other words, the mean access, analysis, evaluation and communication sub-dimension scores were in the “true” range. This could be considered positive since the pre-service teachers could access, interpret and communicate media messages. The finding was consistent with the findings reported by Altıntaş (2019), Özel (2018), and Çepni, Palaz & Ablak (2015). It was also determined that the mean global citizenship scale global competence, global civic participation and social responsibility sub-dimension scores were only moderate. The finding demonstrated that the social studies teachers of the future, who are expected to have an impact on training global citizens, were not at the desired level. The finding was also consistent with the reports by Çermik (2015), Şahin, Şahin & Göğebakan Yıldız (2016), and Özden & Karadağ (2021). In related studies, the global citizenship level of social studies teachers was found to be low.

Also, whether the media literacy levels of the pre-service teachers differed based on gender was investigated in the study. The scale and access, analysis, evaluation and communication subdimension scores revealed that there were no differences between media literacy levels based on gender. This could be interpreted as the digital divide, which reflects unequal access to digital media and the internet, no longer exists between female and male teachers. Sarsar & Engin (2018) and Çepni, Palaz & Ablak (2015) reported no differences between the media literacy skills of female and male teachers. Also, whether there were differences between the media literacy skills of pre-service social studies teachers based on previous attendance in media literacy courses. The scale and sub-scale scores demonstrated that there was a significant difference that favored those who took the course. The effect size was determined as moderate. Thus, the media literacy course in the social studies teaching undergraduate program contributed to the media literacy skills of the pre-service teachers.

Another significant finding in the study was the differences between all media literacy subdimension scores of the pre-service teachers based on class level. The effect size was high. Media literacy increased with the increase in class. This could be due to the increase in the number of media literacy courses taken; and thus, the increase in knowledge and awareness about media literacy with seniority. Som & Kurt (2012) reported that the media literacy levels of pre-service teachers increased with the increase in student seniority.

It was also determined that the media literacy levels of pre-service social studies teachers differed based on digital proficiency. The scale scores demonstrated that these favored the students with good or very good digital proficiencies in all sub-dimensions. The effect size was high. This could be associated with the significance of digital tools in access to media content. The study findings demonstrated that there was no difference between the media literacy levels of pre-service teachers based on daily internet use. It could be suggested that only internet use did not increase media literacy skills.

In the study, it was also investigated whether the global citizenship levels of pre-service teachers differed based on gender. The findings revealed that there were significant differences between overall scale and global competence and global civic participation dimension scores that favored the males. The effect size was low. This could be due to the position and status of genders in the society. Men play a more active role in socioeconomic life. Thus, they are more dominant in social issues when compared to women. A significant difference was determined between the media literacy social responsibility scores based on gender that favored females. The effect size was small. This could be due to the social assignment of responsibilities to women at an early age. It could be considered normal for women, who undertake familial responsibilities, to feel higher social responsibility when compared to men. Studies in the literature reported both consistent and conflicting findings. Egüz (2016) and Bulut (2019) reported that the global citizenship levels of female pre-service teachers were higher than male pre-service teachers. Karaca and Çoban (2015) and Çermik (2015) reported no significant difference between global citizenship levels of female and male pre-service teachers.

In the study, whether the global citizenship levels of the pre-service teachers differed based on previous attendance in a media literacy course. The findings demonstrated significant differences between global competence and global civic participation subscale and overall scale scores that favored those who took a course. The effect size was low for the global competence sub-dimension and overall scale, and moderate for the global civic participation sub-dimension. The finding could be due to the awareness about global events raised by the media, in other words, their global competence, as well as their sensitivity for these events that allows them to participate in global civic action. However, in the social responsibility dimension, the significant difference favored those who did not take a media literacy course. The effect size was moderate. This was an unexpected finding. Individuals with a media literacy course background could have better knowledge on global events and follow the agenda. Thus, they are expected to feel higher social responsibility towards global society and events.

It was also determined in the study that the global citizenship levels of the pre-service teachers differed based on class level. The overall global citizenship scale and global competence and global civic participation sub-dimension scores increased with the increase in seniority. However, it was determined that the global citizenship social responsibility sub-dimension score decreased with the increase in seniority. Global competence and global civic engagement levels could increase with the increase in knowledge and awareness of pre-service teachers with seniority. In the social responsibility dimension, freshman students felt higher national and global responsibility. Literature review revealed similar and contradictory



findings. Karaca & Çoban (2015) reported that the global citizenship level of pre-service teachers increased with the increase in seniority.

In the study, whether the global citizenship levels of the pre-service teachers differed based on digital proficiency was also investigated. The findings demonstrated that there was a significant difference between the global competence and global civic participation sub-dimension scores that favored those with very good and good digital proficiency. The effect size was high. It could be suggested that digital proficiency allowed global access and improved individuals' knowledge about the rest of the world. However, in the social responsibility dimension, the significant difference favored those with poor and moderate digital proficiency unexpectedly. Because individuals with very good digital proficiency are expected to be aware and feel social responsibility about global issues.

It was also determined that the global citizenship levels of pre-service social studies teachers did not differ based on daily internet use variable. This finding was unexpected. Because the time spent on the internet is expected to have a positive effect on global citizenship, since it raises awareness of individuals about global problems and events. Previous study findings were inconsistent with this result. Kan (2009) and Çakmak, Bulut and Taşkiran (2015) reported that the global citizenship increased with the increase in internet use among pre-service teachers. It was determined in the study that there was a low, positive and significant correlation between media literacy skills and global citizenship levels of the pre-service teachers. Thus, it could be suggested that global citizenship levels increased with the increase in media literacy skills of the pre-service teachers. Furthermore, it was found that the communication sub-dimension of media literacy explains some of the total variance regarding the global citizenship tendency. The findings indicated that the improvement in media literacy skills increased global citizenship level. This finding could be associated with the fact that media literacy allows the individuals to follow global events closely and leads to a moral responsibility for people other than themselves. This could be attributed to media literacy skill of communication allows individuals to access audiovisual media content and convey this content with various methods, creating public opinion and positively affecting their global citizenship levels. In this context, it is considered important to increase the number of content and courses related to media literacy in the Social Studies Teaching program.

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