

EXAMINING THE RELATIONSHIP BETWEEN THE LEVELS OF DIGITAL CITIZENSHIP AND SOCIAL PRESENCE FOR THE GRADUATE STUDENTS HAVING ONLINE EDUCATION

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ABSTRACT

The aim of this study is to determine the levels of digital citizenship and social presence of the graduate students having distance education and to reveal the relationship between these two variables. The research was carried out with 50 women (35%) and 93 men (65%) graduate students enrolled in distance education master programs of Karadeniz Technical University. Individual Information Form, Social Presence Scale and Digital Citizenship Scale were used to collect data. Descriptive statistics were used in the study to determine the levels of digital citizenship and social presence of the students. Correlation analysis for the relationship between variables and linear regression for the predictive power were used. The results indicated that graduate students enrolled in distance education master programs had high levels in digital citizenship and social presence. Furthermore, the mentioned levels were comprehended to have significant and positive relationship among themselves. While the levels of digital citizenship and social presence didn't differentiate significantly in terms of gender, social presence levels differentiated in favour of Educational Sciences Institute. Also the level of social presence for the graduate students was concluded to be significantly predictive for digital citizenship level.

Keywords: Online education, social presence, digital citizenship.

INTRODUCTION

Online education has become a popular paradigm in educational environments thanks to the flexibility and freedom it provides during the learning process (Pillay, Irving, & Tones, 2007). Online educational environment is defined to be the atmosphere where learners have opportunity to have multiple learning activities and also to reach various sources at the same time (Artino, 2009). While Arulchelvan (2011) defines online educational environment as providing the activities related with internet technologies, Pearson (2005) defines it as an interaction environment, where instructor and learner exist in the same atmosphere, based on the context and recounting the educational material which are supporting the course. The definitions here about the online educational environment

reveal that interaction in the online educational environment be a major factor. In this context, the researches on how the learners perceive themselves in online educational environments generates the concept of "social presence". Gunawardena (1995) defines the social presence concept as individual's perception of himself/herself as a real person in the online environments whereas Garrison, Anderson and Archer (2000) define it as "the person's perceiving himself/herself emotionally and socially a real individual". According to the definition of Tu (2000); social presence is the individual difference of learners during their interactions in the online educational environments. While Picciano (2002) determines that social presence is the individuals' "feeling themselves as part of the course" in the online educational environments; Biocca, Harms and Burgoon (2003) define it as individual's perceiving himself/herself with the others together in e-learning environments.

In studies, the perception of social presence in online educational environments was explored to be effective on the variables such as academic success, satisfaction and performance. Rodriguez (2015) expresses that there is a strong relationship between social presence, academic success and student's satisfaction, in his/her study. Similarly; in their study Zhan and Mei (2013) clarify that social presence affects the students' success. Hostetter and Busch (2013), by aiming to reveal the relationship between learning outputs and social presence in their study, display that a significant relation exists between the mentioned variables. Additionally Bulu (2012) finds out that there is a positive relationship between social presence and satisfaction, by studying on students' satisfaction. While the studies by Strong et al. (2012), Nyachael (2011) and Cobb (2011) reveal that social presence is effective on students' satisfaction level, the study by Lomicka and Lord (2007) shows that social presence have an effect on students' performance level. The research mentioned are considered to be important in presenting the social presence perception in online educational environments. Kim and Cho (2011) state that there is a strong relationship between social presence, media integration and quality of education in their study. Additionally Tu and Mc Isaac (2002) determine that the level of social presence is closely related with interaction. Also Borup, West and Graham (2012) declare that the videos used are effective on social presence perception of learners and instructors.

It is possible to access various implementations which promote the perception of social presence within the online environments by arising popularity. Implementations such as forums, wikis, blogs, videos and social networks improve the perception of social presence (Watkins, 2005). Therefore; it is a leading duty for the people who benefit from the implementations within online environments to obey the ethical rules and to behave according to universal values (Ribble, Bailey, & Ross, 2004). The majority of the people benefiting from online environments including the framework of ethical principles and norms are formed by the individuals who are called as "digital generation" (Cubukcu & Bayzan, 2013). Hence; the concept of digital citizenship has been on the agenda since the digital technologies are benefited accessing cyber communities. It is observed that citizenship concept today is changing continuously due to the improvement of internet technologies, by information society. Individuals can interact with the other citizens from various geographies. Therefore; it is obvious that the borders between countries are actually disappeared in the context of information and communication. The fact that digital devices are used in many different countries around the world indicates that individuals are world citizens with equal rights and responsibilities in social, public and politic activities (Vizenor, 2014). Particularly the effect of internet on individuals has had a key role in conveying the term "citizenship" to digital environments. Then the ability of individuals to join the society online is admitted to be the digital citizenship indicator (Mossberger, Tolbert, & McNeal, 2007). Ribble (2012) defines the concept of digital citizenship as individuals' being aware of various damages within online environment also forming their reactions due to the ethical and global principles. Additionally the same concept is defined by Ohler (2012) as the recommendations for individuals to use online technologies and digital platforms correctly and consciously. Like the other definitions by

various authors; while Oxley (2010) defines digital citizenship as behavioral practices which ensure the using of information and communication technologies in online environments according to legal and ethical principles in safe, the same concept is defined by Goode (2010) as forming the fundamental technologic talents being necessary for individuals within digital platforms due to ethical principles. By examining the various definitions in the literature; digital citizenship -as the most common definition- is to be defined as individuals' awareness of various damages within online environment based on equal rights and responsibilities due to the ethical principles. According to Richards (2010); the individuals who use information and communication technologies correctly besides respect the ethical principles and human rights within online environments also react responsibly; are called as digital citizens.

Digital citizens contribute to the digital environment worldwide thanks to the advantages provided by information and communication technologies. They can effectively shape digital environment by using citizens' information and communication technologies skills they have through ethical principles, legal, safe, responsible and appropriate way (Greenhow, Robelia, & Hughes, 2009). Through their sophisticated attitudes both for personal and social evolution within cyberspace, digital citizens have an important role in forming the communities and safer environments (Bennett, 2008). Digital citizenship levels of individuals within online environments such as forums, wikis, blogs, videos, online education environments, cyber schools and social networks are suggested to be effective on social presence perception. There is not sufficient amount of studies found in the literature aiming directly to examine the relationship between the levels of digital citizenship and social presence. Therefore; the study is held for the need of examining the relationship between the levels of digital citizenship and social presence for the students besides contributing the literature.

Aim of the Study

It is aimed to determine the levels of digital citizenship and social presence for the graduate students having online education besides to reveal the relationship between the mentioned levels, in the study. Hence; the answers are seeking for the questions shown below:

- What is the level of digital citizenship and social presence perception for the graduate students having online education? Does it differentiate in terms of gender, age and institutes enrolled?
- Is there a statistically significant relationship between the levels of digital citizenship and social presence for the graduate students having online education?
- Does the level of social presence for the graduate students having online education perceive their digital citizenship level?

METHOD

Research Model

Relational survey model, as a quantitative research method, is used in the study aiming to determine the levels of digital citizenship and social presence for the graduate students having online education and to reveal their relationship between the mentioned levels, in the study. As research model intends to reflect the situation as its existing form (Karasar, 2012; Ekiz, 2009; Kothari, 2004) it is suggested to be appropriate for the aim of the target.

Study Group

Being easily accessible and suitable for the study, study group is determined by appropriate sampling method. Appropriate sampling is defined to be the method implemented on participants being voluntary, easily accesible and located nearby (Erkuş, 2011). The research is conducted to 143 graduate students, 50 women (35%) and 93

men (65%), enrolled in distance education master programs of Karadeniz Technical University, for the Spring term of 2015-2016 academic year. The distribution of students is illustrated below in Table 1 in terms of gender and institutes enrolled.

Table 1. The distribution of students due to gender and institutes enrolled

Institutes	Number (N)			Percent (%)		
	Women	Men	Total	Women	Men	Total
Educational	17	38	55	11,8	26,7	38,5
Natural Sciences	12	15	27	8,5	10,4	18,9
Social Sciences	21	40	61	14,7	27,9	42,6
Total	50	93	143	35	65	100

Data Collecting Tool

Research data including demographic factors is collected by using Individual Information Forms based on a 5 points Likert type "Social Presence Scale" with 17 items developed by Cakmak, Cebi and Kan (2014), and a 5 points Likert type "Digital Citizenship Scale" with 33 items developed by İşman and Gungören (2014). Cronbach Alpha value of social presence scale including 3 sub-dimension as transaction, belonging and affective expression is 0.84. Additionally; Cronbach Alpha value of digital citizenship scale including 9 sub-dimension such as digital freedom, digital law, digital rights and responsibilities, digital communication, digital security, digital accession, digital proprieties (do's and don'ts) and digital health is calculated as 0.85. In this study; while the Cronbach Alpha value of social presence scale is 0.81, it is evaluated as 0.79 for digital citizenship; indicating the scales as reliable tools.

Data Collection Process

At the data collection process, first of all; the permissions required are acquired for the scales to use, from the people who developed them. Besides; the permission to carry out the study is acquired by the board of Distance Education Application and Research Center in Karadeniz Technical University dated May 2nd, 2016. Data collection tools are stored as online accession forms on official web site of Distance Education Application and Research Center, Karadeniz Technical University for 4 weeks to fulfill for participants. At the beginning of data collection period; the importance of sincerity is mentioned and the data is collected on the principle of voluntariness.

Analysis of the Data

The data obtained are analyzed via SPSS 22.0 data analysis program. Descriptive statistics to determine the levels of social presence and digital citizenship, correlation analysis to reveal the the relationship between the variables and simple linear regression analysis to predict are used for data analysis. Independent samples t-test and ANOVA analysis are held to find out whether social presence and digital citizenship levels differentiate or not in terms of such variables as gender, age and institute. The options for 5 points Likert type are arranged as follows: "strongly agree", "agree", "neutral", "disagree", "strongly disagree". While positive suggestions are scored as 5-4-3-2-1, the negative ones are scored as the reverse; 1-2-3-4-5. The ranges of the scale to analyze and comprehend the data are stated as the following: "4.20-5.00 as very high level", "3.40-4.19 as high level", "2.60-3.39 as medium level", "1.80-2.59 as low level" and "1.00-1.79 as very low level".

FINDINGS

The findings relating the levels of social presence and digital citizenship for the graduate students having online education are shown below in Table 2:

Table 2. Arithmetic average and standard deviation values belonged to the points from social presence and digital citizenship scales

Scale	N	\bar{x}	S
Social Presence	143	3,78	0,71
Digital Citizenship	143	3,83	0,72

As it is seen in Table 2; the arithmetic averages of the points from scales for social presence and digital citizenship are calculated as 3.78 and 3.83. Hence; the levels of both social presence and digital citizenship for the graduate students having online education are evaluated to be "high level". Independent sample t-test is implemented to find out whether social presence and digital citizenship levels of participants differentiate or not in terms of gender. The results acquired are shown in Table 3, below:

Table 3. Independent sample t-test results of participants' social presence and digital citizenship levels, in terms of gender

Scales	Gender	N	\bar{x}	S	Sd	t	P
Social Presence	Female	50	3,81	,765	141	0,44	,176
	Male	93	3,84	,706			
Digital Citizenship	Female	50	3,54	,737	141	2,99	,547
	Male	93	3,90	,667			

According to Table 3; it is concluded that there is not a significant differentiation ($P > 0,05$) for the points acquired in terms of gender. ANOVA test (one way variance analysis) is held to determine the differences of social presence and digital citizenship levels of graduate students having online education in terms of age variable. The results acquired are illustrated below in Table 4:

Table 4. ANOVA results of social presence and digital citizenship levels for participants in terms of age

Scales	Sources of Variance	Sum of Squares	Degrees of Freedom (df)	Quadratic Mean	Variance Analysis (F)	Probability (P)
Social Presence	Between Groups	3,50	3	1,16	2,28	,082
	Within Groups	71,13	139	0,51		
	Total	74,63	142			
Digital Citizenship	Between Groups	1,18	3	0,39	0,77	,510
	Within Groups	70,73	139	0,50		
	Total	71,91	142			

It is seen from the table above that the levels of social presence and digital citizenship for the graduate students having online education do not differentiate in terms of age variable ($p > 0,05$). One way variance analysis (ANOVA test) is held to find out whether social presence and digital citizenship levels of participants differentiate or not in terms of institute enrolled. Their results are shown in Table 5 below:

Table 5. ANOVA results of social presence and digital citizenship levels for participants, in terms of institute enrolled

Scales	Sources of Variance	Sum of Squares	Degrees of Freedom (df)	Quadratic Mean	Variance Analysis (F)	Probability (P)
Social Presence	Between Groups	3,82	2	1,91	3,77	,025
	Within Groups	70,81	140	0,50		
	Total	74,61	142			
Digital Citizenship	Between Groups	0,58	2	0,29	0,57	,567
	Within Groups	71,33	140	0,51		
	Total	71,91	142			

It is indicated in Table 5 that digital citizenship level for the graduate students having online education does not differentiate in terms of institute variable ($p>0.05$), however; social presence level differentiates related with the variable of institute enrolled.

Herein; Tukey HSD test is implemented to find out the institute causing differentiation for social presence level. The results acquired via Tukey HSD test are illustrated below in Table 6:

Table 6. Tukey HSD results due to institute variable

Institutes	N	Subset for Alpha = 0.05	
		1	2
Educational Sciences	27	3,66	
Natural Sciences Bilimleri	61	3,73	
Social Sciences	55		4,04
Sig. (P)		,900	,015

According to Table 6; Institute of Educational Sciences is determined to be the foundation causing the differentiation for social presence level of the participants ($p<0.05$).

Simple correlation analysis is held to determine the relationship between the levels of digital citizenship and social presence of the graduate students having online education. The findings are as follows in the table:

Table 7. Correlation analysis results between the levels of digital citizenship and social presence of participants

Scales	Digital Citizenship	Social Presence
Digital Citizenship	R	1
	P	,768
	N	,025
Social Presence	R	1
	P	,768
	N	,025
	N	143

It is seen in Table 7 that a high level, positive and significant relation exists between total points of the levels for digital citizenship and social presence ($r= 0.768$, $p<0.05$).

Regression analysis is held to find out the perceiving power of graduate students' social presence level for their digital citizenship level, the findings are shown below in Table 8:

Table 8. The results of regression analysis held relating with perceiving power of social presence level towards digital citizenship

Variable Perceived	Perceiving Variable	St. Deviation	R	R ²	Intercept	t	P
Digital Citizenship Level	Social Presence Level	2,03	,768	,589	,572	29,89	,025

According to the table above; social presence level of graduate students having online education is evaluated to be a significant perceiving variable for digital citizenship level ($R=0.768$, $R^2=0.589$, $p<0.05$). Herein; 58% of total variance relating digital citizenship level is explained by social presence level.

DISCUSSION AND RESULTS

It is aimed to determine the levels of digital citizenship and social presence of the graduate students having distance education and to reveal the relationship between these two variables. The relation between the levels of social presence and digital citizenship for graduate students having online education is evaluated and these results have been reached;

- Digital citizenship level of the participants is 3.78 which is determined to be "high level". This result shows that, the graduate students having distance education use online learning environment ethically, correctly and consciously. This result is consistent with the data obtained from the study by Sakalli and Ciftci (2016) that they carried out with prospective teachers.
- Digital citizenship level of the participants is determined to not to be differentiated statistically; due to institute, age and gender. The result that digital citizenship level did not differ in terms of gender was consistent with the results obtained from the studies by Sakalli and Ciftci (2016), Bardakci, Akyuz, Samsa-Yetik and Keser (2014) and İşman and Gungören (2013).
- Social presence level of the participants is 3.83 which is determined to be "high level". This result shows that, participants perceive themselves emotionally and socially real individuals in the online learning environment. Kilic, Cakiroglu and Horzum (2016), Burks (2016), Kozan (2016) and Morueta, Lopez, Gomez and Harris(2016) also found that social presence level of participants in online environments was high.
- Social presence level of the participants is determined to not to be differentiated statistically; due to age and gender, however; social presence level differentiates significantly related with the variable of Educational Sciences Institute enrolled.
- Owing to $R=0,768$ value; a positive and significant relation exists between the levels for digital citizenship and social presence. This result shows a positive strong relationship between digital citizenship and social presence. In other words, the higher the digital citizenship level of students the higher their perception level of social presence.
- Due to the regression analysis held to find out the perceiving power of graduate students' social presence level for their digital citizenship level, R^2 is calculated as 0.589 which is meaning that social presence affects digital citizenship level about the amount of 58%.

According to the data analyzed in the study; the levels of social presence and digital citizenship of graduate students having online education are determined to be "high level". Therefore; online education environments are suggested to have contribution to both social presence and digital citizenship levels. Here; the factor of "being in graduate

level" is supposed to be effective on the participants' high levels for social presence and digital citizenship. Besides, according to Kim and Cho (2008) and Kim, Kwon and Cho (2011) social presence is a significant relation between media integration and education's qualification. Hence; media integration, qualified education and interaction are determined as the factors affecting social presence. It is very important to find out the social presence level of students having online education. By the study prepared with this context; while social presence levels of the students are determined to not to be differentiated in terms of gender and age statistically, but it differentiates in terms of institute enrolled. Thus; it is approved that online education environments have similar effects on social presence perception levels of all age and gender groups, yet it differentiates for virtual classroom groups. The differentiation for Educational Sciences Institute is suggested to be the result of the education the academics and students had for teaching profession. Collopy and Arnold (2009) and Polly (2014) conclude that the views of candidate teachers are in favour of online education environments as being beneficial for interaction and practicability. Besides; Bailey (2005) decides that the social presence levels of candidate teachers are high which is supporting the differentiation for educational sciences.

Digital citizenship is defined as individuals' being aware of various dangers within online environment, and using online technologies and digital platforms correctly and consciously in accordance with the ethical and global principles (Ribble, 2012; Ohler, 2012). To form the secured communities and safer environments by being wise and leader, it is important to determine the level of digital citizenship of the students both for personal and social evolution within cyberspace (Board, 2012). It is determined within the study that the digital citizenship levels of students statistically do not differentiate in terms of the variables of institute enrolled, age and gender. Thus; it is concluded that online technologies and digital platforms are benefited correctly and consciously by the graduate students participated in the study, who are over a certain age range.

A high level, positive and significant relation is found between the levels of digital citizenship and social presence for graduate students having online education within the study. That is concluded to be related with their appropriate behaviours due to the definitions by Oxley (2010); "using information and communication technologies in online environments according to legal and ethical principles in safe", additionally by Garrison, Anderson and Archer (2000) assuming themselves as real individuals emotionally and socially. Besides; the social presence level of graduate students having online education is evaluated to be a significant perceiving variable for digital citizenship level. Perceiving oneself together with the others is strongly probable for the individuals who are considering their rights and responsibilities about technology using within online environments. Arising the efficiency in distance learning facilities is suggested to be very important. The limitations within the study can be arranged as; "insufficient amount of studies in the literature aiming directly to examine the relationship between the levels of digital citizenship and social presence", "having no comparison of the acquired results with any other studies" besides "running the study via limited amount of solely graduate students participated in the study". Therefore; further studies to be held can benefit from larger societies having education in various levels.

In this study, the relationship between digital citizenship level and social presence is examined. It has been concluded that there is a strong relationship between digital citizenship and social presence. Considering that social presence level is an important factor in the increasing online learning environments today, the environment to be created needs to include the elements that increase the level of social presence. The impact of digital citizenship perception on the level of social presence, defined as students' awareness of their responsibilities and their ethical use in online settings, is revealed by this research. Today, when information and communication technologies are becoming the most important sources of information, it is important to educate individuals on the effective and efficient use of these environments. In this context, it is thought that giving lessons about the importance of digital citizenship to students in lessons such as media literacy will contribute to more effective and efficient use of online learning environments in individuals' future life.

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