Original

UNA INVESTIGACIÓN SOBRE LA PRESENCIA SOCIAL EN EL E-LEARNING Y LA AUTOEFICACIA ACADÉMICA EN GESTIÓN DEPORTIVA DURANTE EL CONFINAMIENTO POR COVID-19

A RESEARCH ON SOCIAL PRESENCE IN E-LEARNING AND ACADEMIC SELF-EFFICIENCY IN SPORT MANAGEMENT DURING CONFINEMENT BY COVID-19

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RESUMEN

Este estudio pretende examinar la relación entre presencia social y la autoeficacia académica de estudiantes universitarios de gestión deportiva, en el proceso de educación a distancia durante el confinamiento por Covid-19. La investigación se diseñó con el modelo de encuesta descriptiva y relacional, uno de los métodos de investigación cuantitativa. Los participantes fueron 461 estudiantes voluntarios (227 mujeres y 234 hombres), seleccionados mediante muestreo no aleatorio por conveniencia. La escala de presencia social para entornos de aprendizaje en línea y la escala de autoeficacia académica se utilizaron como herramientas de recopilación de datos en el estudio. Para analizar los datos, se utilizaron pruebas paramétricas como la prueba T independiente, el análisis de correlación de Pearson y la regresión múltiple. Como resultado del análisis, se observó una diferencia a favor de las mujeres en las prácticas cognitivas, que son subescalas de la escala de autoeficacia académica. En los resultados de las pruebas de correlación se encontraron relaciones moderadamente positivas entre las subescalas de la escala de presencia social y la escala de autoeficacia académica para entornos de aprendizaje en línea. Cuando se examinaron las correlaciones de orden cero y parciales entre las variables predictoras y la variable dependiente, se observó que las subescalas de la escala de presencia social para entornos de aprendizaje en línea tenían un efecto predictivo sobre la autoeficacia académica. Como resultado, procurar que los objetivos de aprendizaje sean atractivos puede afectar positivamente los niveles de presencia de las personas en el proceso de formación. Por lo tanto, utilizar las innovaciones que trae la era digital en la que vivimos en el proceso de educación y formación puede aumentar el interés y la autoeficacia de las personas hacia el aprendizaje.

Palabras clave: Formación en gestión deportiva, educación en línea, autoeficacia académica, educación universitaria, sector deportivo.

ABSTRACT

This study aims to examine the relationship between social presence and academic self-efficacy of university sports management students in e-learning process during confinement by Covid-19. The participants were 461 students (227 females and 234 males), who were selected through convenience sampling participated in the study voluntarily. Social Presence for E-Learning Environments Scale and Academic Self-efficacy Scale were used as data collection tools in the study. Parametric tests such as Independent T test, Pearson Correlation Analysis and Multiple Regression test were used to analyze the data. In correlation test results, moderately positive relationships were found between sub-scales of social presence scale and academic self-efficacy scale for e-learning environments. When the zero-order and partial correlations between the predictor variables and the dependent variables were examined, it was seen that the sub-scales of the social presence scale for e-learning environments had a predictive effect on academic self-efficacy. Consequently, making learning goals attractive may positively affect the presence levels of individuals in the education and training process. Therefore, using the innovations brought by the digital age we live in in the education and training process may increase the interest and self-efficacy of individuals towards learning.

Keywords: Sport management education, online education, academic self-efficacy, university education, sport sector.

INTRODUCTION

21st century has caused immense changes in our lives with the innovations brought by the digital era. One of the significant areas that have been affected by this change is education system. The recent developments in the education system has given the competition in the education field prominence.

The quality of learning environment and the services has had the key role in the education preferences of individuals. The competitive educational environments brought about managing universities with an innovative point of view. With this innovative point of view, online learning has attracted attention worldwide thanks to the flexibility, freedom and learning independency of the education environment (Fırat, 2016). The concept of distance education/online education is not new; however, it has become popular first among the people who do not have time to meet the requirements of regular education thanks to the internet craze and now poses as an obligation in the days of Covid-19 since different layers of education such as primary, secondary and high schools as well as universities and colleges have to offer programs through the distance education platforms. It is reported that during Covid-19, teaching and learning process has been affected significantly in such areas as decrease in school use, lacking quality and appropriate education, decrease in access to education services, decrease in the existence of educational institutions, lack of maintenance at schools, and lack of teacher-trainings (Bozkurt & Sharma, 2020; Hallgarten, 2020). In the literature, it is stated that the concepts of distance education and online learning (e-learning) are used interchangeably (Arnold, 1999; Ryan, 2002; Twigg, 2001). However, it is important to state that various forms of learning through information and communication technologies (ICT) are defined in the literature with at least a dozen of different terms such as web-based learning, computer mediated communication, e-learning and virtual classrooms (Guri-Rosenblit, 2005). The same author, on the other hand, defines all learning/teaching forms which are supported by ICT as "e-learning".

It is a known fact that traditional education includes face-to-face interaction which is emphasized by Kristiansen et al. (2019) who pointed out in their study that face-to-face education is a significant factor in education. The process of teaching/learning afar has been a subject that is in question for a while. As Al Lily et al. (2020) states previous attempts were made in order to internationalize the distance education process; however, the global pandemic of coronavirus made it a little more above humans; therefore, although the face-to-face interaction between a teacher and a student is necessary, distance education tools can create an interaction as well. Distance education comes with some certain benefits such as lack of need to transport to a particular place at a particular hour (Anderson & Rivera-Vargas, 2020). Especially online courses now offer their students the comfort of their homes.

According to Sangrà et al. (2012), e-learning consists of four elements; these are technology-driven, delivery-system-oriented, communication-oriented and educational-paradigm-oriented. Choudhury and Pattnaik (2020) defines e-learning as "the transfer of knowledge and skills, in a well-designed course content that has established accreditations, through an electronic media like the Internet". Kumar Basak et al., (2018) suggests that e-learning can be used both as an alternative to the traditional education and as a complementary. Saxena et al. (2020) pointed out that the improvements in online education programs and their quality factors have a great part in the bright future of young millennials especially during the outbreak of a pandemic which makes it hard to carry out traditional education.

New technologies, innovations in education and promising hope for a better future brings the academics to the question of how students/learners can deal with the new system of education which has differences with traditional education. At this point, the academic self-efficacy of the students is in question. According to Yeşilyurt et al. (2016) academic self-efficacy is a belief in the achieving goals related to education, and it affects the learning process of the individuals along with increasing their success. Also, it is reported that high level of self-efficacy will affect performance positively, and as a cycle, better performances will increase the level of self-efficacy (Cheng et al., 2019). In the literature academic self-efficacy was scrutinized in terms of different correlations that it has (Batool et al., 2017; Grøtan et al., 2019).

Social presence is accepted as a significant part of the learning as an experience since the computer-based environment lacks face-to-face human interaction most of the time (Weidlich & Bastiaens, 2019). According to Karadeniz (2018), determining learners social presence in e-learning processes and environments is a crucial matter because social presence stands for the level of acceptance of an individual in a communication environment which can be synchronous or asynchronous whereas individuals participate the communication in different places. Furthermore, social presence is thought to be the emotional qualities of a learner in a learning environment in which they are able to express themselves (Costley, 2019). As known by many, as social creatures, humans need interaction and communicate through their emotions and how they reveal their emotions. Today, in an environment in which there is an either voluntary or obligatory lockdown, people lack this transfer of emotions; however, thanks to the technology they have a platform to express themselves in a group of fellow students. Therefore, the investigation of their levels of social presence is rather important since receiving education is essentially a social phenomenon. Even though this phenomenon occurs online, there are social attitudes and acquisitions that can come to light during distance learning process. Dilling et al. (2020) conducted a research to determine if differences exist in teaching and social presence between traditional and online education environments and concluded that an equally strong teaching and social presence can be obtained in the online learning process. Even before the lockdown process, this issue was in question in the literature, and there are studies proving that physical barriers can be removed by integrating multimedia into the online classroom environment which in the very end increases social presence and students' learning experiences (Lu, 2017). So as the authors of the current study, the aim is to examine the relationship between social presence and academic self-efficacy of university sports management students in e-learning process during confinement by Covid-19.

METHODS
Participants

The current study was designed in the descriptive and correlational survey models which are among quantitative research methods. In the study, the sample group consisted of 461 university students of sport management department (227 female and 234 male) whose mean age is 22,15±2.51. The sample group was selected with convenient sampling method of non-random sampling methods. In convenience sampling method, the researcher starts to form the sample group beginning from the respondents who are the most available until the researcher reaches the required target group, or they simply works on a convenient group of samples (Cohen et al., 2005).

Instruments and procedures

As data collection tools, demographic information form, Social Presence Scale for Measuring Online Learners' Involvement and Academic Self-Efficacy Scale were used in the current study.

Demographic Information Form: The form consists of information regarding gender, class, learning status and daily computer use duration.

Social Presence Scale for Measuring Online Learners' Involvement: The scale was developed by Kang et al. (2007) and adapted into Turkish language by Olpak and Kılıç-Çakmak (2009). The measurement tool consists of 19 items and 3 factors which are Co-presence, Influence and Cohesiveness. The scale is in 5-point Likert type (1 = I completely disagree, to 5 = I completely agree).

Academic Self-Efficacy Scale: The scale was developed by Owen and Froman (1988) and adapted into Turkish language by Ekici (2012). The scale consists of 33 items and 3 factors which are Social Situations, Cognitive Operations and Technical Skills. The scale is in 5-point Likert type (1 = I completely disagree, to 5 = I completely agree).

Table 1. Reliability coefficients related to the measurement tools used in the study.

Scales	Factors	Cronbach's Alpha (α)
Social Presence Scale for Measuring Online Learners' Involvement	Co-presence	5 Items-0,859
	Influence	7 Items-0,890
	Cohesiveness	7 Items-0,907
Academic Self-Efficacy	Social status	10 Items-0,864
	Cognitive operations	19 Items-0,926
	Technical skills	4 Items-0,737

Statistical analysis

In the current study, the literature review was conducted, the scales were given to the students receiving distance education lessons, and data were collected. In the analysis of the data, SPSS 25 package program was used. In the analysis phase, descriptive statistics methods such as frequency (f), percentage (%), mean (x) and standard deviation (SD) as well as reliability analysis and Skewness-Kurtosis normality tests were used. Since the data displayed normal and homogenous distribution,

Independent T test and One-Way ANOVA test were used.

RESULTS
In this part of the current study, the tables and their descriptions related to the obtained results of the statistical analysis were given.

Table 2. Descriptive statistics.

Variables	Groups	f	%	n
Gender	Female	227	49,2	461
	Male	234	50,8	
Class	1st grade	79	17,1	
	2nd grade	101	21,9	461
	3rd grade	121	26,2	
	4th grade	160	34,7	461
Learning status	Formal	335	72,7	
	Night school	126	27,3	
Daily computer use	None	94	20,4	
	Less than one hour	120	26	
	1-3 hours	152	33	461
	4-6 hours	79	17,1	
	More than 7 hours	16	3,5	

When Table 2 is examined, it is determined that 49,2% of the participants are female and 50,8% of the participants are male; 17,1% of the participants are 1st graders, 21,9% of the participants are 2nd graders, 26,2% of the participants are 3rd graders and 34,7%

of the participants are 4th graders. It is observed that while 72,7% of the participants receive formal education, 27,3% of the participants receive lesson in night school. On the other hand, 33% of the participants use computer for 1-3 hours whereas 79,6% of the participants spend lesser amount of time on the computer.

Table 3. Comparison of the participants' subscale means of Social Presence Scale for Measuring Online Learners' Involvement and Academic Self-efficacy Scale in terms of gender variable.

Gender		N	Mean	Std. Dev.	df	t	*p*
Social status	Female	227	4,099	0,628	459	1,065	0,288
	Male	234	4,036	0,637			
Cognitive operations	Female	227	4,121	0,615	459	2,160	0,031*
	Male	234	3,994	0,642			
Technical skills	Female	227	4,110	0,697	459	0,652	0,514
	Male	234	4,067	0,711			
Co-presence	Female	227	4,159	0,706	459	0,206	0,837

	Male	234	4,146	0,681			
Influence	Female	227	4,200	0,660	459	-0,217	0,828
	Male	234	4,213	0,618			
Cohesiveness	Female	227	4,249	0,631	459	0,350	0,727
	Male	234	4,228	0,614			

Note: *p<0,05

In the light of the analysis result which was conducted in order to test if the attitudes of the participants towards Social Presence Scale for Measuring Online Learners' Involvement and Academic Self-efficacy Scale differ in terms of gender variable, it is determined that cognitive operations subscale of academic self-efficacy scale displayed a significant difference in terms of gender $(t(160)=2,160, p<0,05)$. It is found out that female students $(M = 4,121)$ have a higher level of attitude towards academic self-efficacy cognitive operations when compared to male students $(M = 3,994)$.

Table 4. Correlation test results of the subscales of Social Presence Scale for Measuring Online Learners' Involvement and Academic Self-efficacy Scale.

Variables			Social Presence Scale for Measuring Online Learners' Involvement		
			Co-presence	Influence	Cohesiveness
Academ. Self-efficacy Scale	**Social Situations**	r	0,693*	0,693*	0,686*
		p	0,000	0,000	0,000
	Cognitive Operations	r	0,685*	0,699*	0,686*
		p	0,000	0,000	0,000
	Technical Skills	r	0,626*	0,648*	0,671*
		p	0,000	0,000	0,000

*p<0,05

When the results of correlation analysis are examined, it is determined that there are positive medium level correlations between Social Situations and Co-presence (r = 0,693), Influence (r = 0,693) and Cohesiveness (r = 0,686); there are positive medium level correlations between Cognitive Operations and Co-presence (r = 0,685), Influence (r = 0,699) and Cohesiveness (r = 0,686); as well as there are positive medium level correlations between Technical Skills and Co-presence (r = 0,626), Influence (r = 0,648) and Cohesiveness (r = 0,671) $(p<0,5)$.

Table 5. Multiple regression analysis results related to prediction of Social Situations subscale of Academic Self-Efficacy Scale.

Variable	B	Std. Error$_β$	$β$	T	p	Zero-order	Partial	Tolerance	VIF
(Constant)	0,817	0,140		5,827	0,000				
Co-presence	0,297	0,048	0,325	6,145	0,000	0,693	0,276	0,348	2,877
Influence	0,283	0,059	0,286	4,766	0,000	0,693	0,218	0,271	3,689
Cohesiveness	0,194	0,064	0,191	3,020	0,003	0,686	0,140	0,244	4,092

R=0,745 // R^2= 0,554

F$_{(3, 457)}$=189.552 // p=0.000

When the zero-order and partial correlations between the predictor variable and the dependent (predicted) variables are examined, it is determined that there is a positive and medium level correlation between Social situations and Co-presence (r = 0,693), Influence (r = 0,693) and Cohesiveness (r = 0,686); however, when the other variables are examined, it is determined that the correlation between binary variables is positive and low level. Co-presence, influence and cohesiveness variables, altogether, reveal a medium level and significant correlation with the social situations of the participants (R = 0,745, R2 = 0,554, $p<0,01$). With aforementioned three variables, it predicts 55% of the total variance in social situations.

According to standardized regression coefficient (β), the relative significance order of the predictor variables on social situations and cognitive operations are as follows: co-presence, influence and cohesiveness. When the t test results related to the significance of regression coefficients are examined, it is seen that co-presence, influence and cohesiveness variables are significant predictors on social situations and cognitive operations.

Table 6. Multiple regression analysis results related to prediction of Cognitive Operations subscale of Academic Self-Efficacy Scale.

Variable	B	Std. Error$_\beta$	β	T	p	Zero-order	Partial	Tolerance	VIF
(Constant)	0,807	0,140		5,758	0,000				
Co-presence	0,272	0,048	0,298	5,624	0,000	0,685	0,254	0,348	2,877
Influence	0,312	0,059	0,315	5,253	0,000	0,699	0,239	0,271	3,689
Cohesiveness	0,190	0,064	0,187	2,963	0,003	0,686	0,137	0,244	4,092

R=0,744 // R²= 0,553

$F_{(3, 457)}$=188,750 // p=0,000

When the zero-order and partial correlations between the predictor variable and the dependent (predicted) variables are examined, it is determined that there is a positive and medium level correlation between Cognitive Operations and Co-presence (r = 0,685), Influence (r = 0,699) and Cohesiveness (r = 0,686); however, when the other variables are examined, it is determined that the correlation between binary variables is positive and low level. Co-presence, influence and cohesiveness variables, altogether, reveal a medium level and significant correlation with the cognitive operations of the participants (R = 0,744, R2 = 0,553, $p<0,01$). With aforementioned three variables, it predicts 55% of the total variance in cognitive operations variable.

Table 7. Multiple regression analysis results related to prediction of Technical Skills subscale of Academic Self-Efficacy Scale.

Variable	B	Std. Error$_\beta$	β	T	p	Zero-order	Partial	Tolerance	VIF
(Constant)	0,644	0,167		3,855	0,000				
Co-presence	0,202	0,058	0,199	3,506	0,000	0,626	0,162	0,348	2,877
Influence	0,243	0,071	0,221	3,437	0,001	0,648	0,159	0,271	3,689
Cohesiveness	0,373	0,077	0,329	4,865	0,000	0,671	0,222	0,244	4,092

R=0,699 // R²= 0,488

$F_{(3, 457)}$=145,476 // p=0,000

When the zero-order and partial correlations between the predictor variable and the dependent (predicted) variables in Table 7 are examined, it is found out that there is a positive and medium level correlation between Technical Skills and Co-presence (r = 0,626), Influence (r = 0,648) and Cohesiveness (r =

0,671); however, when the other variables are examined, it is determined that the correlation between binary variables is positive and low level. Co-presence, influence and cohesiveness variables, altogether, reveal a medium level and significant correlation with the technical skills of the participants (R = 0,699, R2 =0,488, *p*<0,01). With aforementioned three variables, it predicts 49% of the total variance in technical skills variable.

According to standardized regression coefficient (*β*), the relative significance order of the predictor variables on technical skills are found as follows: cohesiveness, influence and co-presence. When the t test results related to the significance of regression coefficients are examined, it is revealed that co-presence, influence and cohesiveness variables are significant predictors on technical skills.

DISCUSSION

Today the rapid improvement of information and communication technologies has significantly affected both transition to information society and the use of information technologies in various forms. Especially in the millennium era in which we live today, information technologies stand out as an irrevocable element of education (Burns, 2020; Clark, 2019; Yildiz et al., 2019). Today people use information technologies actively as a part of education and teaching, and it is thought that analyzing the online learning behaviors and social presence of individuals is an important research subject. Therefore, the current study aimed to analyze the correlation between social presence and academic self-efficacy levels of the sports management students at a university during distance education process.

The new education paradigm of 21st century requires student-oriented education, improving the potential capacities of individuals and creating optimal conditions in order to let students realize themselves. This technology-based change process of education system also increases the interest in information and communication technologies. Distance learning which removes the time and place barriers via information and communication technologies enables us to sustain education and teaching activities continuously. Due to the social, physical and economic conditions today, distance education

applications have become an inevitable obligation (Kırık, 2014).

In the light of analysis, it is observed that there is significant difference in favor of female participants in terms of the cognitive operations subscale of self-efficacy scale. The attitudes of female students (*M* = 4,121) towards cognitive operations of academic self-efficacy was observed higher than male students (*M* = 3,994).

When the correlation test results are considered, it is determined that there are correlations between the subscales of Social Presence Scale for Measuring Online Learners' Involvement and the subscales of Academic Self-efficacy Scale. When the zero-order and partial correlations between the predictor variable and the dependent (predicted) variables, it is seen that the subscales of Social Presence Scale for Measuring Online Learners' Involvement have a predictor effect on the Academic Self-efficacy Scale. Previous research in the literature has examined the correlation between various computer use behaviors and self-efficacy and has stated the existence of a correlation (Burkhardt & Brass, 1990; Webster & Martocchio, 1992). In another study, according to Hayashi et al. (2004), the readiness of an individual related to the skill of using computer when they perform a task has an effect on the computer-related self-efficacy of that individual.

On the other hand, others authors (Dilling et al., 2020; Kornilova et al., 2009; Lu, 2017) emphasized that social presence is a significant motivator in the learning habits of students. For Hayashi et al. (2004), the degree of control of the trainer in e-learning can improve or devalue the learning results of the students, since too much control could devalue the merits of a personalized and controlled treatment, could lead to distractions and low productivity. It is stated that the lesson related contentment of students who have social presence is strong. Higgins (2020), Johnson et al. (2008) and Zhan and Mei (2013) suggested that creating a learning environment which is shared in an e-learning environment and sustaining this are important in order to increase the contentment of the participants.

While Gough (1975) stated that the students with high level of social presence tend to be smart, creative, active and expressive, Hall and Herrington (2010) emphasized the importance of encouraging

students to take part in lessons by motivating the learners and improving active community feelings. Today we can say that technological improvements are one of the significant factors affecting social presence since the technological improvement can affect the learning performance of individuals in e-learning environments by increasing the interaction between students.

CONCLUSIONS

As a result, making learning goals attractive can affect their presence levels positively in the education process of individuals. Consequently, the use of innovations brought by the digital age that we live in during education process can increase the interest and self-efficacy levels of individuals if learning is concerned. This result indicates that e-learning environments can have positive effects on the academic success of the students who study sport management. The adaptation of young adults into e-learning environments can have a positive effect on the differentiation of their learning behaviors in such features as innovation, curiosity and success motivation.

In the light of the obtained information, it can be expressed that in case the social presence level is improved in the e-learning environment, the academic self-efficacy of the students can increase effectively. It is inevitable that the young adults who receive their university education will be affected by the technological transition process which has become a part of the 21st century education system with the emergence of e-learning environments. As a result, it is significant that the social presence levels of individuals should be considered for e-learning environments in the design process of education process.

Limitations and future research

The design of the study was carried out on sport management students in the frame of pandemic process within the bounds of possibility. A wider range of study group can reveal different results related to the effects of e-learning environments.

The information and technology have significantly changed for the last years, and distance learning has had a particular importance in sports education institutions. Distance learning has a significant effect on the theoretical lessons. However, the integration of education and technology must be provided totally in such areas where hands-on training levels are high just like in the sport sciences. It is important that the university students of sport management department are supported with practices and theoretical education as well as their presence in the educational environments are improved. In the future research, it will be interesting to emphasize research subjects such as digital comic books design which is related to the contribution to enriching sport management education applications.

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