



## The effect of digital leisure participation purposes on flow experience and leisure satisfaction

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### Abstract

The aim of this research is to examine the effect of university students' digital leisure activities participation purposes in on flow experience and leisure satisfaction. Relational survey model, one of the quantitative research methods, was used in the research. Simple random sampling technique was chosen for the sample group. The study was carried out with a total of 731 (Age Mean = 20.75±2,468) participants, 268 women and 463 men. The demographic information form created by the researchers, the Digital Leisure Participation Purposes Scale, the Digital Leisure Flow Experience Scale and the Leisure Satisfaction Scale were used as data collection tools in the study. In the analysis of the data obtained, descriptive statistics, Confirmatory Factor Analysis, Structural Equation Modeling were performed by means of SPSS 25 and Jamovi programs. When the findings were examined, it was determined that digital leisure participation purposes had a positive effect on digital leisure flow experience and leisure satisfaction. In addition, it has been determined that digital leisure flow experience had a positive effect on leisure satisfaction. In the second model created, it was determined that digital leisure flow experience had a mediating role in the effect of digital leisure participation purposes on leisure satisfaction. As a result, with this study, it can be said that digital leisure participation purposes positively affect digital leisure flow experience and leisure satisfaction. However, it is possible to say that the digital leisure flow experience also had a positive effect on leisure satisfaction.

**Keywords:** Digital leisure, flow experience, leisure, leisure satisfaction

### *Dijital serbest zaman etkinliklerine katılım amaçlarının akış deneyimi ve serbest zaman doyumuna etkisi*

#### Öz

Bu araştırmanın amacı üniversite öğrencilerinin dijital serbest zaman etkinliklerine katılım amaçlarının akış deneyimi ve serbest zaman doyumuna etkisinin incelenmesidir. Araştırmada nicel araştırma yöntemlerinden ilişkisel tarama modeli kullanılmıştır. Örneklem grubu için basit tesadüfi (rassal) örneklem tekniği seçilmiştir. Çalışma 268 kadın, 463 erkek olmak üzere toplam 731 (Yaş Ort.=20,75±2,468) katılımcı ile gerçekleştirilmiştir. Çalışmada veri toplama aracı olarak araştırmacılar tarafından oluşturulan demografik bilgi formu, Dijital Serbest Zaman Katılım Amaçları Ölçeği, Dijital Serbest Zaman Akış Deneyimi Ölçeği ve Serbest Zaman Doyum Ölçeği kullanılmıştır. Elde edilen verilerin analizinde SPSS 25 ve Jamovi programları aracılığıyla tanımlayıcı istatistikler, Doğrulamalı Faktör Analizi, Yapısal Eşitlik Modellemesi analizlerinden yararlanılmıştır. Elde edilen bulgular incelendiğinde dijital serbest zaman katılım amaçlarının, dijital serbest zaman akış deneyimi ve serbest zaman doyumunu üzerinde pozitif yönde etkisi olduğu tespit edilmiştir. Buna ek olarak dijital serbest zaman akış deneyiminin serbest zaman doyum üzerinde pozitif yönlü etkisi olduğu saptanmıştır. Oluşturulan ikinci modelde ise dijital serbest zaman katılım amaçlarının, serbest zaman doyumunu üzerindeki etkisinde dijital serbest zaman akış deneyiminin aracılık rolünün olduğu tespit edilmiştir. Sonuç olarak bu çalışma ile dijital serbest zaman katılım amaçlarının, dijital serbest zaman akış deneyimi ve serbest zaman doyumunu olumlu yönde etkilediği söylenebilir. Bununla birlikte dijital serbest zaman akış deneyiminin de serbest zaman doyumunu üzerinde olumlu etkisi olduğunu söylemek mümkündür.

**Anahtar Kelimeler:** Dijital serbest zaman, akış deneyimi, serbest zaman, serbest zaman doyumunu

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## INTRODUCTION

Today, as a result of technological developments and the widespread use of the internet, the social behavior of individuals and societies has also changed. While applications that can be accessed via devices such as information and communication technologies, personal computers, mobile phones and tablets deeply affect the norms in all living areas of the society, this situation is also reflected in the leisure experiences of individuals (Nimrod & Adoni, 2012). Historically, it is possible to talk about the existence of a relationship between technology and leisure. It can be said that the development and increasing use of digital technologies have led to the transformation of modern leisure activities (Bryce, 2001). Juniu (2009) similarly argues that the digital revolution also games a role in the transformation of modern leisure. He argues that digital technologies create a virtual sense of satisfaction with new concepts of distance and communication. Finally, technological developments within the digital revolution have had a direct impact on many areas of individuals such as relationships, communication, socialization, education, and game. It has also caused a change in the traditional structure of leisure practices by shaping the social participation experiences of societies. It can be said that this situation reveals the concept of “digital leisure”.

### **Digital leisure participation purposes**

Digital leisure is a type of leisure in which individuals freely participate in digital environments for different purposes such as game, entertainment, socialization and communication without spatial limitation through the use of digital technologies. In other words, digital leisure can be expressed as individuals' evaluation of their leisure experiences with the use of digital technologies (Er & Cengiz, 2022). With another approach, digital leisure can be expressed as any freely chosen activity carried out with digital technologies in leisure (Sintas et al., 2015). It can be said that this transformation in leisure experiences provides new digital applications that mediate our social life experiences such as games, entertainment, socialization, communication and learning without a geographical binding (Carnicelli et al., 2017). For example, individuals may tend to evaluate this experience in digital environments due to the transformation of the game today, and this may represent an important purpose. However, digital games, which are one of the most preferred leisure activities at the global level, have been an active dimension in the emergence of digital leisure by significantly affecting the way the concept of leisure is evaluated (Boyle et al., 2012; Redhead, 2016; Tham, 2019). It is also possible to say that leisure experiences include entertaining and enjoyable activities by nature (Cushman et al., 2005; Yildırım et al., 2020). The entertainment dimension,

which can be expressed as a purpose of participation in digital leisure, refers to participation in an activity for entertainment purposes, which is in the basic structure of leisure. While all digital leisure activities may include the feeling of entertainment and pleasure, it is thought that this dimension will allow participation, the main purpose of which is entertainment and the experience of enjoying the activity. In terms of the concept of digital leisure, it can be said that the purpose of socialization refers to the connections established between individuals and technological channels. While the importance of leisure for socialization is accepted by all researchers from past to present, there are also differences in the socialization dimensions of activities. It is thought that participation in digital leisure activities for socialization has important effects on social characteristics, as in the experience of traditional leisure activities (De Francisco et al., 2016). Participation in digital leisure activities is also effective in turning individuals towards digital channels for communication in leisure, through the developments experienced at the global level in recent years. It can be said that ease of access and accessibility in interpersonal communication increase these tendencies (Arora, 2011; Sharaievska, 2017; Meier et al., 2021). That can be said that the activities attended for the purpose of communication in digital leisure can provide advantages for individuals in terms of time and reduce obstacles such as distance (Silk et al., 2016; Valtchanov & Parry, 2017). Therefore, it is seen that communicating through digital channels in leisure represents participation purposes in other dimensions. In this direction, in the present study, participation purposes of digital leisure are considered as game, entertainment, socialization and communication (Er & Cengiz, 2022).

### **Flow experience**

In line with the existence of studies on flow experience and leisure activities, the relationship between these concepts can be mentioned. Especially in the measurement of flow experience, the existence of studies on leisure participation in the literature stands out (Cheng et al., 2016; Chang, 2017a, 2017b; Tao et al., 2022). In addition, it is seen that there are some studies in the literature on the measurement of the relationship between the serious leisure approach, which examines the flow experience on continuous participation in leisure activities (Havitz & Mannell, 2005) and the regular and continuous participation in leisure activities (Heo et al., 2010; Elkington, 2011; Shen et al., 2022). In line with these studies in the literature, it would not be wrong to say that participation in leisure activities increases the flow experience and that the flow experience has an effect on continuous participation in leisure activities. It is also stated that the use of the internet as digital leisure participation can provide the flow

experience and this can affect the continuous participation of individuals (Wang et al., 2015). In addition, there are studies that test the effect of flow experience on leisure satisfaction and the relationship between them in participation in leisure activities (Chen et al., 2010).

### **Leisure satisfaction**

Leisure satisfaction is one of the concepts that was first studied in the literature by Beard and Ragheb (1980) and is often associated with leisure activities today. Leisure satisfaction, which consists of psychological, educational, social, physical, relaxation and aesthetic dimensions, can be said to have an effect on future participation in leisure activities (Ayhan, 2022). With another approach, it can be said that the behavioral state and perceived experience in the leisure activities are predictors of the leisure satisfaction levels (Er & Güzel-Gürbüz, 2021). However, it is thought that the leisure experience comes from the meaning of the activity for the individual, not from the activity itself. It is thought that the level of satisfaction obtained from a certain experience such as digital leisure may also be an important determinant of individual happiness (Ateca-Amestoy et al., 2008). It is known that many socio-economic and psychological variables, including leisure structures, have an effect on leisure satisfaction. It can be said that some of these factors are related to each other (Kovacs, 2007).

Human life has experienced different developments and changes in every period of history. However, in recent years, it can be said that the speed of technological developments has increased considerably. It is seen that these developments are included in all areas of life. In particular, it is seen that the social and psychological interaction between humans and the digital world has been examined from different perspectives in the literature. In the field of leisure activities, it can be said that there is a rapid change in preference from traditional to digital activities in line with the change in experiences. The social examination of the participation purposes of individuals in these preferences, the examination of the psychological process in line with the flow experience, the concept of satisfaction and the outputs reveal the subjective aspect of this research as a whole. Another subjective aspect is that while there are limited studies in the international literature on the concept of digital leisure, no studies have been found on digital leisure participation purposes, digital leisure time flow experience and interaction with leisure satisfaction. Although studies are carried out within the activities known to be leisure activities over different concepts, it is thought that the concept of digital leisure will be handled holistically with this study. However, it is thought that it will make an important contribution to future studies as the first study in the national literature on the concept of digital leisure.

In this direction, the aim of the research is to consider the changing and transforming leisure experiences of individuals today as the concept of digital leisure and to examine the effect of university students' participation in digital leisure activities on flow experience and leisure satisfaction. For this purpose, the level of influence between the findings obtained from the measurement tools applied to university students and the purpose of participation in digital leisure, the experience of digital leisure and the level of leisure satisfaction within the transformation of the concept of leisure, the importance of which is known in human life, is also examined. However, it is thought that the study will make an important contribution to the literature and will guide the studies in this field. The problem statement and hypotheses created in line with the stated purpose of the research are presented below:

Does the digital leisure participation purposes of university students participating in digital leisure activities have an effect on the flow experience and leisure satisfaction?

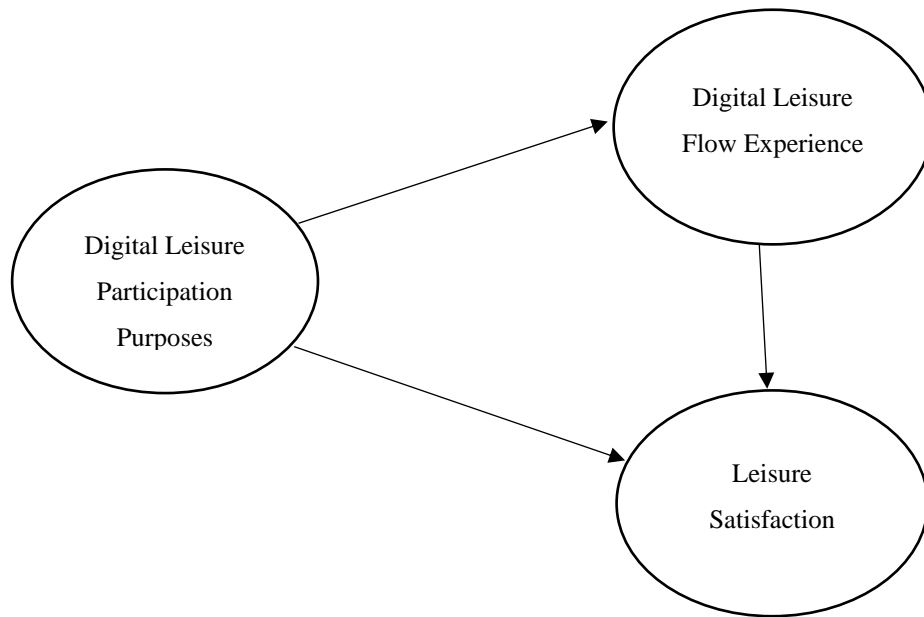
Hypothesis 1 (H1): The participation purposes of university students participating in digital leisure activities have an effect on flow experience and leisure satisfaction.

Hypothesis 2 (H2): Flow experiences of university students participating in digital leisure activities have an effect on their leisure satisfaction levels.

Hypothesis 3 (H3): Digital leisure experience has a mediating role in the indirect effect of digital leisure participation purposes on leisure satisfaction.

## **METHOD**

Quantitative research method, which is an approach to test objective theories by examining the relationship between variables, was used within the planned setup of the study. The numbered data were analyzed using statistical processes by measuring the variables sequentially and using certain tools (Creswell & Creswell, 2017). The research design chosen for this study is the relational model, one of the quantitative research methods. While the relational research model provides the opportunity to observe the events taking place on earth without directly intervening, it also allows us to follow natural events or to reach the instantaneous impression of many variables at a single point (Field, 2009). In addition, the research model created to examine the relationship between digital leisure participation purposes, flow experience and leisure satisfaction is shown in the figure.



**Figure 1. Research model**

**Study group**

In the study, "simple random sampling" method, one of the probability-based sampling techniques, was applied in order to ensure that each sample in the universe has an equal and independent chance (Coşkun et al., 2019). According to Tabachnick and Fidell (2001) and Child (2006), a minimum of 5 times the number of items is sufficient for the adequacy of the sample size. However, Tavşancıl (2002) and Kline (2005) state that although 5 times the number of items is sufficient, it should be 10 times more. Field (2005), on the other hand, defined a sample size of 10-15 times as perfect for each item.

**Table 1. Findings regarding the demographic characteristics of the participants**

	$\bar{X}$	S.s
<b>Age</b>	20.75	2.468
<b>Gender</b>	<b>N</b>	<b>%</b>
Female	268	36.7
Male	463	63.3
<b>Regular Leisure Activity Participation</b>	<b>N</b>	<b>%</b>
Yes	407	55.7
No	324	44.3
<b>Income Status</b>	<b>N</b>	<b>%</b>
0-850 ₺	238	32.6
851-2500 ₺	174	23.8
2501-5500 ₺	179	24.5
5501 ₺ and above	140	19.1
<b>Working Status</b>	<b>N</b>	<b>%</b>
Yes	295	40.4
No	436	59.6

When the demographic information of the university students participating in the research is examined, it is seen that there are 268 female (36.7%) and 463 male (63.3%) university students in total with a mean age of  $20.75 \pm 2.468$ . However, 55.7% of the university students who participated in the study stated that they regularly participated in leisure activities, while 44.3% stated that they did not. When the distribution in the income status variable of the participants is examined, it is seen that 32.6% of them are 0-850 ₺, 23.8% are 851-2500 ₺, 24.5% are 2501-5500 ₺ and 19.1% are 5501 ₺ and appears to have a higher income. In terms of working status variable, it was determined that 40.4% of university students worked in any job and 59.6% did not work.

**Table 2. Findings on digital leisure participation**

<b>Daily Digital Leisure Participation Time</b>	<b>N</b>	<b>%</b>
1 hour and below	154	21.1
1-3 hours	291	39.8
4-5 hours	203	27.8
6 hours and above	83	11.3
<b>Weekly Digital Leisure Participation Frequency</b>	<b>N</b>	<b>%</b>
1-2 days	216	29.5
3-4 days	200	27.4
5 or more days	263	36.0
Weekdays only	13	1.8
Weekend only	39	5.3
<b>Digital Device Preference</b>	<b>N</b>	<b>%</b>
Smartphone	414	56.6
Computer	116	15.9
Tablet	45	6.1
Game Console	81	11.1
Television	37	5.1
Virtual Reality	38	5.2
<b>Digital Platform Preference</b>	<b>N</b>	<b>%</b>
Internet Browser Apps	101	13.8
Social Media Apps	239	32.7
Audio Content Apps	89	12.2
Video Content Apps	113	15.4
Digital Games	87	11.9
Shopping Apps	65	8.9
Financial Apps	37	5.1

In terms of daily digital leisure participation, 21.1% of university students are 1 hour or less, 39.8% are 1-3 hours, 27.8% are 4-5 hours and 11.3% 6 hours or more participate to activities. When the weekly digital leisure participation frequency variable is examined, it is seen that 29.5% of university students have 1-2 days, 27.4% 3-4 days, 36% 5 or more days, 1.8% only weekly and 5.3% stated that they only participate in activities on weekends. In the

study, when the frequency of digital device preferences of university student participants was examined, they appear to be 56.6% preferred smart phones, 15.9% computers, 6.1% tablets, 11.1% game consoles, 5.1% televisions and 5.2% virtual reality devices. On the other hand, when the frequency of digital platform preferences of university students is examined, it is observed that 13.8% internet browser applications, 32.7% social media applications, 12.2% audio content listening applications, 15.4% video streaming content applications, 11.9% digital games, 8.9% shopping applications and 5.1% financial applications.

#### **Data collection tools**

In the study, demographic information form, Digital Leisure Participation Purposes Scale (DLPPS), Digital Leisure Flow Experience Scale (DLFES), and Leisure Satisfaction Scale (LSS) were used as data collection tools.

*Demographic information form:* The demographic information form created by the researcher was used in the study. This demographic information form includes variables such as the age, gender, regular participation in leisure activities, income status, employment status, daily participation in digital leisure activities, weekly participation in digital leisure activities. In addition, the demographic information form also includes questions to determine the types of devices and platforms used in digital leisure participation.

*Digital leisure participation purposes scale (DLPPS):* The Digital Leisure Participation Scale (DLPPS) Er and Cengiz (2022) considers the whole of leisure activities that individuals participate through the use of digital technologies as “digital leisure”; It was developed to determine and measure the purposes of participation in digital leisure activities. The fact that it is the first measurement tool to determine the current and common digital participation purposes of individuals in their leisure activity preferences reflects the subjective aspect of the scale. The Digital Leisure Participation Purposes Scale has a 7-point Likert type (1-strongly disagree 7-strongly agree) and consists of 24 items and 4 sub-dimensions. The sub-dimensions of the scale are “game (5 items)”, “entertainment (8 items)”, “socialization (5 items)” and “communication (6 items)”. The Cronbach Alpha internal consistency coefficients of the sub-dimensions in the original study were game  $\alpha = 0.816$ ; entertainment  $\alpha = 0.852$ ; socialization  $\alpha = 0.798$ ; communication was determined as  $\alpha = 0.799$ . The item contents of the sub-dimensions of the scale are 1-5 game; 6-13 entertainment; 14-18 is socialization and 19-24 is communication.



*Digital leisure flow experience scale (DLFES)*: The Digital Leisure Flow Experience Scale (DLFES) Er and Cengiz (2023) was developed to address the change of individuals' leisure experiences in the digitalized world with the concept of "digital leisure" and to measure the flow experience in these activities. The sub-dimensions of the scale, which consists of 17 items and 3 sub-dimensions, are respectively 1-experience, 2-activity 3-time. The internal consistency coefficients of the sub-dimensions of the scale were experience  $\alpha= 0.867$ ; activity  $\alpha= 0.795$ ; time was calculated as  $\alpha= 0.736$ . The scale, which has a 7-point Likert type structure, is answered as "1-strongly disagree and 7-strongly agree". Items related to the sub-dimensions of the scale are 1-8 experience, 9-12 activities and 13-17 time.

*Leisure satisfaction scale (LSS)*: The Leisure Satisfaction Scale, developed by Beard and Ragheb (1980) to measure the leisure satisfaction of individuals, has 51 items and six dimensions. These dimensions are psychological, educational, social, relaxation, physical and aesthetic. The short form of the reorganized scale was adapted to Turkish culture by Gökçe and Orhan (2011) as the "Leisure Satisfaction Scale". While the scale consists of 6 dimensions as psychological, educational, social, relaxation, physical and aesthetic, it has a 5-point Likert structure (1-almost never true, 5-almost always true). The internal consistency coefficients of the sub-dimensions of the scale were psychological  $\alpha=0.77$ ; educational  $\alpha=0.77$ ; social  $\alpha=0.76$ ; physiological  $\alpha=0.79$ ;  $\alpha$ =relaxation  $\alpha=0.80$  and aesthetics  $\alpha=0.79$ . The item contents of the sub-dimensions of the scale are, respectively, 1-4 items are psychological, items 5-8 are educational, items 9-12 are social, items 13-16 are physiological, items 17-20 are relaxation, and items 21-24 are aesthetic.

The Cronbach Alpha ( $\alpha$ ) reliability coefficient values obtained in the current study were for the Digital Leisure Participation Purposes Scale (DLPPS); game  $\alpha=0.825$ ; entertainment  $\alpha=0.885$ ; socialization  $\alpha=0.838$  and communication  $\alpha=0.857$ . For the Digital Leisure Flow Experience Scale (DLFES), the experience was  $\alpha=0.900$ ; activity  $\alpha=0.848$  and time  $\alpha=0.831$ . For Leisure Satisfaction Scale (LSS); psychological  $\alpha=0.790$ ; educational  $\alpha=0.780$ ; social  $\alpha=0.735$ ; relaxation=0.798; physiological  $\alpha=0.764$  and aesthetic  $\alpha=0.774$ . The obtained values show that the measurement tools used in the study have a reliable structure.

### **Data collection**

Permission for the research was obtained from the Social and Human Sciences Scientific Research and Publication Ethics Committee of the Presidency of Manisa Celal Bayar University, with the ethics committee report dated 20.05.2022 and numbered E-050.01.04-

306670. It was applied face-to-face and through digital channels between November 2022 and January 2023, by giving information about the purpose of the research and data collection tools to the university students, who are the target group of the study. In both methods, necessary information about the study was given to the volunteer participants.

#### **Analysis of data**

SPSS 25 and Jamovi licensed package program were used in the analysis of the data obtained. Percentage and frequency values were examined in the distribution of the demographic information of the participants. Skewness and Kurtosis values were used to examine whether the data showed a normal distribution. While it was determined that the data showed normal distribution, arithmetic mean, standard deviation and frequency values were presented in their statistical representations. In order to test the effect between the variables, the models created for Structural Equation Modeling were tested using the Jamovi package program.

### **FINDINGS**

#### **Findings regarding the model measurement of the research**

Structural equation modeling, which expresses the sum of statistical techniques that allows to examine a series of relationships between one or more continuous or discrete independent variables and one or more continuous or discrete dependent variables, was used in the study (Ullman & Bentler, 2013). Confirmatory Factor Analysis was carried out using the maximum probability estimation method in order to verify the created model. Confirmatory factor analysis refers to an analysis process to create a latent variable (factor) based on the variables observed through a previously created model and is used to verify a structure (Yaşlıoğlu, 2017). However, some fit indices were examined in order to test the suitability of the research model. These fit indices are Chi-Square divided by degrees of freedom-CMIN/DF ( $\chi^2/df$ ), Standardized Root Mean Square Errors (SRMR), Root Mean Square Errors of Approximate (RMSEA), Comparative Fit Index (CFI), Goodness of Fit Index (GFI) and Tucker Lewis Index (TLI) (Hu & Bentler, 1999; Kline, 2005; Hair et al, 2006; Hair et al, 2010; Byrne, 2016; Schumacker & Lomax, 2016).

**Table 3. Regression weights, internal consistency, composite reliability and average variance extracted**

Factors/ Items	Estimate	Factor Loading	$\alpha$	CR	AVE
<b>Digital Leisure Participation Purposes</b>			0.878	0.959	0.646
<b>Game</b>			0.824	0.860	0.555
DLPPS-1	1.000	0.696			
DLPPS-2	1.104	0.769			
DLPPS-3	1.167	0.813			
DLPPS-4	1.181	0.822			
DLPPS-5	0.868	0.604			
<b>Entertainment</b>			0.884	0.816	0.531
DLPPS-6	1.000	0.735			
DLPPS-7	0.905	0.666			
DLPPS-8	1.012	0.744			
DLPPS-9	1.028	0.756			
DLPPS-10	0.972	0.715			
DLPPS-11	0.975	0.717			
DLPPS-12	1.031	0.758			
DLPPS-13	1.001	0.736			
<b>Socialization</b>			0.838	0.860	0.552
DLPPS-14	1.000	0.717			
DLPPS-15	1.070	0.767			
DLPPS-16	0.980	0.703			
DLPPS-17	1.049	0.752			
DLPPS-18	1.080	0.774			
<b>Communication</b>			.857	0.866	0.552
DLPPS-19	1.000	0.753			
DLPPS-20	1.005	0.756			
DLPPS-21	1.033	0.777			
DLPPS-22	1.046	0.787			
DLPPS-23	0.908	0.683			
DLPPS-24	0.924	0.695			
<b>Digital Leisure Flow Experience</b>			0.901	0.957	0.749
<b>Experience</b>			0.900	0.908	0.556
DLFES-1	1.000	0.738			
DLFES-2	0.996	0.735			
DLFES-3	0.958	0.706			
DLFES-4	1.082	0.798			
DLFES-5	0.979	0.722			
DLFES-6	1.026	0.757			
DLFES-7	1.041	0.768			
DLFES-8	0.996	0.735			
<b>Activity</b>			0.849	0.871	0.629
DLFES-9	1.000	0.788			
DLFES-10	0.975	0.769			
DLFES-11	1.030	0.812			
DLFES-12	1.017	0.802			

**Table 3. (Continued) Regression weights, internal consistency, composite reliability and average variance extracted**

<b>Time</b>			0.831	0.854	0.541
DLFES-13	1.000	0.707			
DLFES-14	0.974	0.689			
DLFES-15	1.083	0.766			
DLFES-16	1.111	0.785			
DLFES-17	1.030	0.728			
<b>Leisure Satisfaction</b>			0.900	0.964	0.602
<b>Psychological</b>			0.794	0.839	0.568
LSS-1	1.000	0.703			
LSS-2	1.148	0.807			
LSS-3	1.137	0.799			
LSS-4	0.996	0.700			
<b>Educational</b>			0.784	0.829	0.549
LSS-5	1.000	0.779			
LSS-6	0.972	0.757			
LSS-7	0.963	0.750			
LSS-8	0.867	0.675			
<b>Social</b>			0.739	0.786	0.480
LSS-9	1.000	0.708			
LSS-10	0.971	0.687			
LSS-11	0.934	0.661			
LSS-12	1.008	0.713			
<b>Physiological</b>			0.800	0.835	0.559
LSS-13	1.000	0.759			
LSS-14	0.985	0.748			
LSS-15	0.963	0.731			
LSS-16	0.991	0.753			
<b>Relaxation</b>			0.770	0.796	0.495
LSS-17	1.000	0.649			
LSS-18	1.166	0.757			
LSS-19	1.061	0.688			
LSS-20	1.101	0.715			
<b>Aesthetic</b>			0.777	0.814	0.525
LSS-21	1.000	0.676			
LSS-22	1.066	0.721			
LSS-23	1.136	0.768			
LSS-24	1.078	0.729			
$\chi^2/sd= 1.659$ , RMSEA=0.030, SRMR= 0.036, GFI= 0.993, CFI=0.997 , TLI= 0.996					

In line with the model created in the study, CFA, which included 65 items and 13 factors (DLPPS-4 factor, DLFES-3 factor, LSS-6 factor) was performed in the first stage. Although it was determined that the model showed a good fit in line with the results, CFA was performed again in line with the covariance associations among the suggested items. As a result of the CFA performed after the proposed covariance matching, it was seen that the fit indices of the

model were found to be close to perfect fit ( $\chi^2/sd= 1.659$ , RMSEA=0.030, SRMR= 0.036, GFI= 0.993, CFI=0.997, TLI= 0.996). When Table 2 is examined, it is seen that the standardized regression weights of 65 items are between 0.60 and 0.82 and are statistically significant ( $p<.05$ ).

*Reliability:* Cronbach alpha coefficient ( $\alpha$ ) and composite reliability value (CR) were used to evaluate the reliability of the measured model. It is recommended that the Cronbach alpha coefficient value be 0.70 and above (Seçer, 2017) in the current study. It is seen that it takes values between 0.73 and 0.90. While the composite reliability value above 0.70 was shown as the reference value (Fornell & Larcker, 1981), it was found that it took a value between 0.79 and 0.96 in the current study. With these results, it is seen that the model has a very reliable structure.

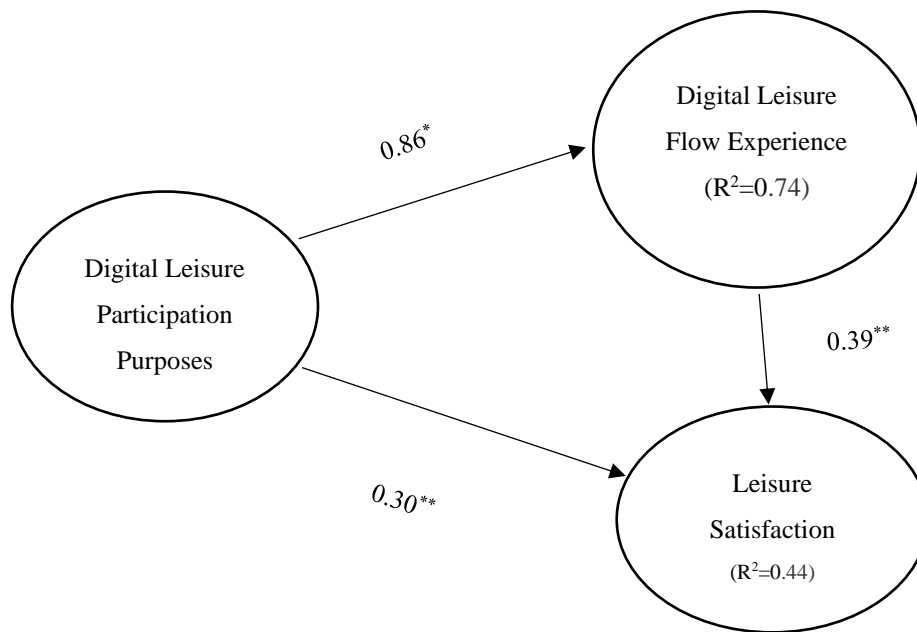
*Validity:* In the measurement of the model, the average variance (AVE) value was used to evaluate the validity. While Bagozzi and Yi (1988) stated that the acceptable value for the AVE value is  $>0.5$ , Hair et al. (2010) state that this value should be lower than the composite reliability value. It is seen that the mean variance values extracted in this direction take values between 0.48 and 0.75 and are lower than the composite reliability values. However, Hatcher (1994) states that low mean variance values are acceptable when composite reliability is at acceptable levels for construct reliability. In general terms, considering the reference values, it is possible to say that the model to be measured has a reliable and valid structure.

**Table 4. Impact results on the research model**

Relationship	Estimate	Standart Estimate	$\beta$	p
DLPPS → DLFES	1.006	0.0500	0.860	<b>0.001*</b>
DLPPS → LSS	0.205	0.0556	0.300	<b>0.001*</b>
DLFES → LSS	0.232	0.0473	0.395	<b>0.001*</b>

$p<0.001^*$

When the results of the direct effects between the variables regarding the research model are examined in Table 3, the effect of digital leisure participation purposes on the digital leisure flow experience is high ( $\beta=0.860$ ,  $p<0.01$ ), and the effect on leisure satisfaction is moderately positive ( $\beta=0.300$ ,  $p<0.01$ ). On the other hand, the effect of digital leisure flow experience on leisure satisfaction is moderate in the positive direction ( $\beta=0.395$ ,  $p<0.01$ ). When the multiple correlation coefficients related to the model were examined, it was determined that the findings explained 74% ( $R^2=0.74$ ) of the variance in the digital leisure participation purposes, digital leisure flow experience variable and 44% ( $R^2=0.44$ ) of the variance in the leisure satisfaction variable.



**Figure 2. Model results**

$\chi^2/sd= 4.016$  , RMSEA=0.064, SRMR= 0.032, GFI= 0.992, CFI=0.971, TLI= 0.964

In general, when the findings are examined, first of all, the results for CFA and structural equation modeling show that the data set has an acceptable good fit. In the model, the direct positive effect of digital leisure participation purposes on digital leisure experience and leisure satisfaction; However, a direct positive effect of digital leisure flow experience on leisure satisfaction was determined. When Figure 2 is examined, it is seen that the fit index values obtained as a result of the model are at an acceptable level ( $\chi^2/sd= 4.016$ , RMSEA=0.064, SRMR= 0.032, GFI= 0.992, CFI=0.971, TLI= 0.964).

The results of the second model, which was created to examine whether digital leisure experience has a mediating role in the indirect effect of digital leisure participation purposes on leisure satisfaction, are shown in Table 4 and Table 5.

**Table 5. Path coefficients (direct and indirect effects)**

<b>Direct Effects</b>	<b><math>\beta</math></b>	<b>p</b>
DLPPS $\rightarrow$ DLFES	0.608	0.001*
DLFES $\rightarrow$ LSS	0.409	0.001*
DLPPS $\rightarrow$ LSS	0.294	0.001*
<b>Indirect Effects</b>		
DLPPS $\rightarrow$ DLFES $\rightarrow$ LSS	0.248	0.001*

p<0.001\*

**Table 6. DLPPS, DLFES and LSS standardized direct, indirect and total affect**

	<b>DLPPS</b>			<b>DLFES</b>			<b>LSS</b>		
	Direct Effect	Indirect Effect	Total Effect	Direct Effect	Indirect Effect	Total Effect	Direct Effect	Indirect Effect	Total Effect
<b>DLPPS</b>							0.294	0.248	
<b>DLFES</b>	0.608		0.608				0.409		
<b>LSS</b>	0.294	0.248	0.543	0.409		0.409			

p<0.001\*

According to the results, digital leisure participation purposes is directly and positively on digital leisure flow experience ( $\beta=0.608$ ;  $p<0.001$ ), digital leisure flow experience is direct and positive on leisure satisfaction ( $\beta=0.409$ ;  $p<0.001$ ) and digital leisure participation purposes have a direct and positive ( $\beta=0.294$ ;  $p<0.001$ ) effect on leisure satisfaction. On the other hand, it was determined that digital leisure flow experience had a partial mediation effect on the effect of digital leisure participation purposes on leisure satisfaction ( $\beta=0.248$ ;  $p<0.001$ ).

## DISCUSSION AND CONCLUSION

The aim of this research is to consider the changing and transforming leisure experiences of individuals today as the concept of digital leisure and, in this direction, to examine the effect of university students' participation in digital leisure activities on flow experience and leisure satisfaction.

When we look at the findings of the structure examined as a result of the model created in the research, it has been determined that digital leisure participation purposes (DLPPS) have an effect on digital leisure flow experience (DLFES) and leisure satisfaction (LSS). In addition to this, it was concluded that digital leisure flow experience (DLFES) also has an effect on leisure satisfaction (LSS). As a result of the second model created, it was determined that the digital leisure flow experience (DLFES) had a mediating role in the effect of digital leisure participation purposes (DLPPS) on leisure satisfaction (LSS).

When the literature is examined, Pelet et al. (2017) in their study on social media use and streaming experience, they found that use for this purpose affects streaming experience in the

dimensions of pleasure, control, concentration, challenge and curiosity. In participation in digital leisure activities for game purposes, Chiang et al. (2008) in their study examining the effects of participation in digital games on the flow experience of undergraduate students, they concluded that digital games have a positive effect on the flow experience of undergraduate students. In terms of participation in digital leisure for entertainment purposes, Kim et al. (2015), on the other hand, in their study examining the relationship between the elements of the game, entertainment and flow experience, determined the effect of emotional, cognitive and social entertainment on the flow experience in terms of participation for entertainment purposes. In another study, Khang et al. (2013) examined the effects of psychological factors on the self-esteem, self-efficacy, self-control and educational media use motivations of individuals who use digital media for purposes such as internet, digital games and mobile phone use, on their flow experience and addiction levels. In the study, it was revealed that self-control had a significant impact on the flow experiences of users of internet, digital games and mobile phone use.

When the studies on the effect of digital leisure participation purposes on leisure satisfaction are examined, Sharaievska and Stodolska (2017) examined the interaction with leisure satisfaction in the use of social networking sites as a leisure activity. They found that the use of social networking sites as a leisure activity affects leisure satisfaction. In another study, Mohammad et al. (2019) determined that the use of the internet as a leisure activity in the workplace affects the satisfaction level and productivity of the employees. Sepehr and Head (2018), on the other hand, discussed the competitive element of digital games in their study based on self-determination theory and flow experience. The results of the study show that the perception of competition in digital games has a strong effect on flow experience and satisfaction. Shelstad et al. (2017) found that the use of virtual reality for the purpose of playing games has an effect on the level of satisfaction in their study. When examining the effect of flow experience on leisure satisfaction or general satisfaction in the use of digital technologies in leisure, Song et al. (2011) reported the positive effect of leisure flow experience on leisure satisfaction level in their study on university students' leisure competence, leisure flow experience and leisure satisfaction. In their study, Kim and Ko (2019) examined the effect of the use of virtual reality technology on the flow and satisfaction of sports viewers, they concluded that the flow experience significantly affects the level of satisfaction in the use of virtual reality technology. Zhang and Rahman (2022), on the other hand, examined the flow experience and satisfaction levels of individuals in smart museum technology participation. The



results of the study determined that the information quality and system quality of the smart museums of the Y generation participants also affect the level of satisfaction with the mediating effect of the flow experience.

As a result, it is seen that university students' digital leisure participation purposes have a high positive effect on flow experience and leisure satisfaction. It is thought that this effect generally contributes to the flow experience process of university students participating in digital leisure activities for a specific purpose. When the outputs of the specified flow experience process are examined, it is seen that the activities as leisure satisfaction result in positive perception and experience.

## GENİŞLETİLMİŞ ÖZET

### GİRİŞ

Teknolojik gelişmeler ve internet kullanımının yaygınlaşması sonucunda birey ve toplumların sosyal davranışları da değişim göstermiştir. Bilgi ve iletişim teknolojileri, kişisel bilgisayarlar, cep telefonları ve tabletler gibi cihazlar üzerinden erişilebilen uygulamalar toplumun tüm yaşam alanlarındaki normları derinden etkilerken, bu durum bireylerin serbest zaman deneyimlerine de yansımıştır (Nimrod & Adoni, 2012). Genel hayat akışında yaşanan bu gelişmelerin “dijital serbest zaman” kavramını ortaya çıkarttığı söylenebilir. Dijital serbest zaman, bireylerin serbest zaman deneyimlerini dijital teknolojilerin kullanımı ile değerlendirmesi olarak ifade edilebilirken katılım amaçları iste oyun, eğlence, sosyalleşme ve iletişim olarak belirtilmiştir (Er & Cengiz, 2022). Dijital serbest zaman etkinliklerine katılımın akış deneyimini sağlayabileyeceği ve bunun da bireylerin sürekli katılımını etkileyebileceği de ifade edilir (Wang ve ark., 2015). Buna ek olarak serbest zaman etkinliklerine katılımında akış deneyiminin serbest zaman doyumunu üzerinde etkisini ve aralarındaki ilişkiyi test eden çalışmalar da bulunmaktadır (Chen ve ark., 2010). Bu doğrultuda araştırmanın amacı, günümüzde bireylerin değişim ve dönüşüm gösteren serbest zaman deneyimlerinin dijital serbest zaman kavramı olarak ele alınması ve üniversite öğrencilerinin dijital serbest zaman etkinliklerine katılım amaçlarının akış deneyimi ve serbest zaman doyumuna etkisinin incelenmesidir.

### YÖNTEM

Çalışmada nicel araştırma yönteminden yararlanılmıştır (Creswell & Creswell, 2017). Bu çalışma için seçilen araştırma deseni ise nicel araştırma yöntemlerinden ilişkisel modeldir. İlişkisel araştırma modeli yeryüzünde gerçekleşen olayları doğrudan müdahale etmeden gözlemlene imkânı sunmakla birlikte, doğal olayları takip etmemizi ya da birçok değişkenin

tek bir noktada anlık izlenimine ulaşmamıza olanak sağlamaktadır (Field, 2009). Çalışma grubunu net neslinin önemli bir parçası olan 741 üniversite öğrencisi oluşturmaktadır. Çalışmada veri toplama aracı olarak demografik bilgi formu, Dijital Serbest Zaman Katılım Amaçları Ölçeği (DSZ-KAÖ), Dijital Serbest Zaman Akış Deneyimi Ölçeği (DSZ-ADÖ) ve Serbest Zaman Doyumu Ölçeği (SZDÖ) kullanılmıştır. Elde edilen verilerin analizinde SPSS.25 ve Jamovi lisanslı paket program kullanılmıştır. Katılımcıların demografik bilgilerine ilişkin dağılımlarda yüzde ve frekans değerleri incelenmiştir. Verilerin normal dağılım gösterip göstermediklerini inceleme amacıyla çarpıklık (Skewness) ve basıklık (Kurtosis) değerlerinden yararlanılmıştır. Verilerin normal dağılım gösterdikleri tespit edilirken, istatistiksel gösterimlerinde aritmetik ortalama, standart sapma ve frekans değerleri sunulmuştur. Bununla birlikte değişkenler arasındaki etkiyi test etme amacıyla ise Jamovi paket programı kullanılarak Doğrulamalı Faktör Analizi ve Yapısal Eşitlik Modellemesi için oluşturulan modeller test edilmiştir.

## **BULGULAR**

Çalışmada oluşturulan model doğrultusunda ilk aşamada 65 madde ve 13 faktörün yer aldığı (DSZ-KAÖ- 4 faktör, DSZ-ADÖ-3 faktör, SZDÖ-6 faktör) DFA gerçekleştirilmiştir. Sonuçlar doğrultusunda modelin iyi uyum gösterdiği tespit edilse de önerilen öğeler arasında kovaryans ilişkilendirmeleri doğrultusunda DFA yeniden gerçekleştirilmiştir. Önerilen kovaryans eşleştirmelerinden sonra gerçekleştirilen DFA sonucunda modelin uyum indekslerinin mükemmel uyuma yakın olduğu tespit edildiği görülmektedir ( $\chi^2/sd= 1,659$ ; RMSEA=0,030; SRMR= 0,036; GFI= 0,993; CFI=0,997; TLI= 0,996). Sonuçlar incelendiğinde 65 maddenin standartlaştırılmış regresyon ağırlıklarının 0,60 ve 0,82 arasında olduğu ve istatistiksel olarak anlamlı olduğu görülmektedir ( $p<0,05$ ). Araştırmada oluşturulan ilk modele ilişkin değişkenler arası doğrudan etki sonuçları incelendiğinde dijital serbest zaman katılım amaçlarının dijital serbest zaman akış deneyimi üzerindeki etkisinin pozitif yönde yüksek ( $\beta=0,860$ ,  $p<0,01$ ), serbest zaman doyumu üzerindeki etkisinin ise pozitif yönde orta düzeyde ( $\beta=0,300$ ,  $p<0,01$ ) olduğu tespit edilmiştir. Bununla birlikte dijital serbest zaman akış deneyiminin serbest zaman doyumu üzerindeki etkisi ise pozitif yönde orta düzeydedir ( $\beta=0,395$ ,  $p<0,01$ ). Ayrıca dijital serbest zaman katılım amaçlarının serbest zaman doyumu üzerindeki etkisinde ise dijital serbest zaman akış deneyiminin kısmı aracılık etkisi olduğu tespit edilmiştir ( $\beta=0,248$ ;  $p<0,001$ ).

## **TARTIŞMA VE SONUÇ**

Literatür incelendiğinde dijital teknolojilerin serbest zaman katılım amaçları doğrultusunda ortaya çıkan akış deneyimine ilişkin çalışmalar görülmektedir. Sosyal medya kullanımı, dijital oyunlara katılım ve internet kullanımı gibi etkinliklere oyun, eğlence,

sosyalleşme ve iletişim amacıyla katılımın akış deneyimini sağladığı bu çalışmalarda da ortaya konmuştur (Chiang ve ark., 2008; Khang ve ark., 2013; Kim ve ark., 2015; Pelet ve ark., 2017). Bununla birlikte serbest zamana katılımın dijital teknolojilerin kullanımı yoluyla değerlendirilmesinde akış deneyiminin serbest zaman doyumuna ya da genel doyuma yönelik etkisine yönelik çalışmalar da mevcuttur (Song ve ark., 2011; Kim & Ko, 2019; Zhang & Rahman, 2022).

Sonuç olarak, üniversite öğrencilerinin dijital serbest zaman katılım amaçlarının akış deneyimi ve serbest zaman doyumuna pozitif yönlü yüksek düzeyde etki ettiği görülmektedir. Bu etkinin genel olarak belirli bir amaç doğrultusunda dijital serbest zaman etkinliklerine katılan üniversite öğrencilerinin akış deneyimi sürecine katkı sağladığı düşünülmektedir. Belirtilen akış deneyimi sürecinin çıktılarına bakıldığında serbest zaman doyumunu olarak etkinliklerin olumlu algı ve deneyimle sonuçlandığı ifade edilebilir.

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Fikir ve Kavramsal Örgü <i>Idea or Notion</i>	Araştırma hipotezini veya fikrini oluşturmak <i>Form the research hypothesis or idea</i>	Batuhan ER Recep CENGİZ
Tasarım <i>Design</i>	Yöntem ve araştırma desenini tasarlamak <i>To design the method and research design.</i>	Batuhan ER Recep CENGİZ
Literatür Tarama <i>Literature Review</i>	Çalışma için gerekli literatürü taramak <i>Review the literature required for the study</i>	Batuhan ER Recep CENGİZ
Veri Toplama ve İşleme <i>Data Collecting and Processing</i>	Verileri toplamak, düzenlemek ve raporlaştırmak <i>Collecting, organizing and reporting data</i>	Batuhan ER Recep CENGİZ
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