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## **Examining the impact of leisure internet use and study–leisure conflict on university students’ academic achievement**

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### **ABSTRACT**

The aim of this study is to examine the effects of university students' internet usage during their leisure time and their study–leisure conflicts on academic achievement. The study was conducted using a quantitative, correlational research design, and the sample consisted of 392 students studying at universities in Istanbul, selected through simple random sampling. Data were collected using three scales: the Leisure-Time Internet Use Scale, the Study/Leisure Conflict Scale, and the Academic Achievement Scale. According to the results of regression analyses, the level of internet use during leisure time explains 26.2% of the variance in study–leisure conflict and 13.1% of the variance in academic achievement. Additionally, study–leisure conflict was found to be a significant predictor of academic achievement, accounting for 19.9% of the variance. The findings suggest that students' digital leisure habits have both direct and indirect effects on time management, self-regulation, and academic balance. The results highlight the need for digital awareness programs and time management support services in universities. This study aims to contribute to educational policies by shedding light on the psychosocial processes that influence students’ academic success in the digital age.

**Keywords:** recreation management, leisure, internet use, academic achievement, study–leisure conflict

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### **INTRODUCTION**

One of the most profound transformations of the 21st century, digitalization has led to significant changes in individuals' lifestyles and habits (Saykılı, 2019; Popal et al., 2024). The internet, the cornerstone of this transformation, has not only facilitated access to information but has also become a tool that simultaneously performs many functions, such as communication, entertainment, learning, and socializing (Kraut et al., 1998; Amichai-Hamburger and Hayat, 2011). Data from 2024 indicates that 61.4% of the world's population, or approximately 4.95 billion people, use the internet. There has been a 79.1% growth since 2017, and this number is expected to reach 5.17 billion by the end of 2025 (Khoros, 2024). According to data from the US-based Pew Research Center, the 18–29 age group uses the internet at an almost universal rate (99%) in 2024 (Gelles-Watnick, 2024).

The widespread and intensive use of the internet has made it a natural part of life; it has become a medium that directly influences the social, emotional, and cognitive development of younger generations, known as digital natives (Odgers & Jensen, 2020; Clemente-Suárez et al., 2024; Adeyemi, 2025). Consequently, students increasingly engage in leisure activities online, with traditional leisure activities giving way to digital games, social media interactions, and online entertainment (Grund & Fries, 2012; Rustad et al., 2024; Tutar & Turhan, 2023). However, this process also leads to various psychological and academic problems because unstructured and unlimited free time paves the way for uncontrolled internet use (Tihamiyu et al., 2024). In particular, excessive internet use can lead to negative consequences such as attention deficit (Sun

et al., 2023), social isolation (Joorabchi et al., 2024), sleep problems (Alimoradi et al., 2019), and a decline in academic performance (Jiang et al., 2024).

The internet's deep integration with leisure time brings another complex process for students (Kuss & Griffiths, 2012). Experiencing multiple action tendencies simultaneously in daily life makes it difficult for students to choose between studying and leisure activities (Ophir et al., 2009). This situation creates a study-leisure conflict. This motivational conflict pits the pursuit of academic goals against the desire to enjoy social relationships (Grund et al., 2014). Students who choose to study may experience disruptions to self-determination due to the appeal of leisure activities, while those who prefer leisure may experience guilt or anxiety about distancing themselves from academic activities (Kama, 2023). These conflicts not only cause momentary loss of attention but also pave the way for motivational interventions that lead to a long-term decline in academic achievement (Ratelle et al., 2005a).

It is noted that such conflicts are particularly intense among individuals during their university years (Pluut et al., 2015) and that this situation directly impacts academic performance (Grund et al., 2014). The literature contains findings that students' motivation for leisure activities negatively affects self-regulation during the study process, resulting in lower grades, procrastination, and decreased academic interest (Hofer et al., 2009; Grund et al., 2014). It has been determined that students experience internal conflict during class due to the appeal of leisure activities, which negatively affects motivation to learn and self-regulation. In particular, attractive alternatives, such as spending time with friends, have been found to disrupt motivation and student performance (Grund & Fries, 2012). It has been observed that the vast majority of studies cover traditional leisure activities, but there are only a limited number of academic studies that include individuals' digital leisure habits (Ratelle et al., 2005a; Lin et al., 2014; Mansour and Tremblay, 2016). Given that leisure time, which is part of the conflict between school and leisure, is now frequently filled by individuals with digital activities (Tutar & Turhan, 2023), the importance of evaluating digitalization in this context is increasing. Especially as educational institutions strive to integrate digital technologies into learning processes, students' digital leisure consumption habits are largely overlooked (Pérez-Juárez et al., 2023). This situation leads to the inadequacy of both pedagogical approaches and school-based psychosocial support strategies (Cowling et al., 2025). Therefore, the findings of this study are considered to have the potential to contribute to the more realistic structuring of guidance services, teaching plans, and student support policies.

In this context, examining the impact of students' internet usage habits and the conflict between schoolwork and leisure time on academic achievement contributes to understanding a current issue and provides important insights for the restructuring of educational policies. The main objective of this study is to examine the impact of students' leisure-time internet usage habits and the conflict between schoolwork and leisure time on their academic achievement. This will provide a clearer understanding of both the place of the internet in students' lives and the impact of extracurricular activities on the academic process.

In the 21st century, with the rapid spread of digitalization, the concept of leisure has transcended its traditional boundaries and undergone a significant transformation (Tutar & Turhan, 2023). At the center of this transformation lie internet technologies, which have reshaped both the quantitative and qualitative dimensions of leisure practices. The incorporation of the internet into leisure activities has been found to directly influence individuals' everyday life experiences, patterns of social interaction, and levels of personal satisfaction (Leung & Lee, 2005; Rojas de Francisco et al., 2016). While digitalization in leisure offers certain advantages to individuals (Asan & Zwiendelaar, 2025), it also introduces potential risks (Bányai et al., 2019; Yin et al., 2020; Yu et al., 2025). From a positive standpoint, the internet has largely freed leisure activities from spatial and temporal constraints (Benyon et al., 2014). Individuals can now participate in various cultural, educational, or social events and engage with online communities without leaving their homes (Karatzogianni, 2015). However, from a negative perspective, intensive internet use during leisure time has been shown to reduce active leisure participation and contribute to socialization problems (Yu et al., 2025). Another noteworthy issue emerging

from internet use in leisure contexts is the conflict between study and leisure time (Gao et al., 2020).

The study, leisure conflict is defined as a form of role conflict that arises when students fail to balance their academic responsibilities with their leisure needs (Durhan, 2020). This conflict tends to become more apparent during periods of limited time, such as exam weeks or project submission deadlines (Tsaur et al., 2012). A study conducted by Birinci and Avan (2022) demonstrated that the study–leisure conflict negatively affects students’ psychological resilience. Similarly, Thi and Duong (2024) reported that as university students’ level of study–leisure conflict increases, their perceived self-efficacy decreases, while their likelihood of experiencing academic burnout rises. In another study, Koçyiğit and Üret (2022) found that individuals with a high level of leisure awareness can organize their study time more effectively and experience lower levels of conflict. Most studies addressing the study–leisure conflict in the literature, however, have been conducted independently of digital activities. Considering that internet use has become prevalent across almost all domains of leisure, this gap in the literature appears increasingly evident.

It has been suggested that uncontrolled and purposeless internet use during leisure time may increase the level of study–leisure conflict among individuals (Isik & Demirel, 2018; Wang et al., 2019). The limited number of studies available in the literature indicates that excessive internet use among university students significantly heightens the degree of study–leisure conflict (Grund & Fries, 2012). In particular, as the daily duration of internet use increases, behaviors such as “spending time on social media instead of studying” become more frequent, which in turn adversely affects academic performance (Pluut et al., 2015). Another study found that students who spend their leisure time on the internet in an unplanned, spontaneous manner experience more intense role conflict, resulting in negative consequences for both academic achievement and psychological well-being (Wang et al., 2019). Based on these findings, the following hypothesis was developed: H1: Leisure-time internet use significantly predicts study–leisure conflict.

The increasing prominence of the internet within leisure activities has made the nature of this relationship more complex (López-Sintas et al., 2017). While the use of the internet for academic purposes, such as accessing information, obtaining online learning materials, and conducting research, can yield positive outcomes (Torres-Díaz et al., 2016), entertainment-oriented use through social media, online gaming, and video-sharing platforms may have adverse effects on students’ attention, motivation, and time management (Tate et al., 2015). Empirical studies have shown that students who primarily use the internet for entertainment and social media during their leisure time tend to exhibit lower levels of academic achievement (Giunchiglia et al., 2018). In a study conducted by Alhusban et al. (2022), excessive social media use was found to lead to in-class attention deficits and a loss of discipline, directly influencing students’ grade point averages. Similarly, another study found that students with access to high-speed internet are more likely to consume non-educational content, thereby diminishing their academic performance (Leung, 2015). Consistent with these findings, a Scopus-indexed study by Alhusban et al. (2022) highlighted that problematic social media use among university students contributes to attention deficits and classroom discipline issues, which in turn negatively affect academic success.

On the other hand, it has been observed that students enrich their study activities through online resources such as digital libraries and web-based course materials (Shahibi & Rusli, 2017; Ladrón de Guevara Rodríguez et al., 2022; Winantaka et al., 2025). In this regard, Park (2015) demonstrated that students who effectively use the internet for purposes such as exam preparation, academic research, and note sharing tend to achieve higher levels of academic success. A survey conducted at the University of the Punjab in Pakistan revealed that 96.8% of students use the internet, with 66.8% reporting that they use it primarily for academic purposes (Sain et al., 2024). The majority of respondents in the study expressed the view that the internet serves as a tool that enhances academic achievement (Sain et al., 2024). Meta-analyses investigating the impact of internet-supported education on academic performance have yielded similar results (Bekele & Menchaca, 2008; van de Kop et al., 2019). Online learning has been found to make a moderately positive contribution to students’ academic achievement. In particular, synchronous and asynchronous learning platforms are highlighted as supportive factors, as they provide content

tailored to students' individual learning paces (Aharony, 2006; Winantaka et al., 2025). Based on the reviewed literature, the following hypothesis was developed: H2: Leisure-time internet use significantly predicts academic achievement.

At the higher education level, students' academic achievement is known to depend not only on their cognitive competencies but also on their psychosocial balance (Clifton et al., 2004). Within this framework, the study-leisure conflict, an important variable, refers to the temporal and role conflict that students experience between their academic responsibilities and leisure activities (Grund & Fries, 2012). This conflict exerts both direct and indirect negative effects on academic performance (Guo et al., 2024). When students fail to allocate sufficient time to their studies or to plan their leisure time effectively, they may experience a loss of performance at both cognitive and motivational levels (Grund & Senker, 2018). In a study conducted by Pluut et al. (2015), the relationship between university students' academic and social stressors and their study-leisure conflicts were examined. The findings indicated that this conflict significantly and negatively affects both life satisfaction and academic performance. The researchers also emphasized that such conflict may lead to mental fatigue and academic burnout among students (Pluut et al., 2015). Similarly, Ratelle et al. (2005a) found that the conflict between students' motivation for leisure activities and their academic responsibilities reduces intrinsic motivation for learning. According to their study, students experiencing motivational conflict exhibited divided attention and diminished task engagement, ultimately resulting in decreased academic performance (Ratelle et al., 2005b). Furthermore, a systematic review revealed that students with high levels of leisure satisfaction tend to exhibit greater academic motivation, whereas those unable to meet their leisure needs experience heightened study-leisure conflict, which negatively influences their learning outcomes (Cho & Chiu, 2021). Based on this rationale, the following hypothesis was developed: H3: Study-leisure conflict significantly predicts academic achievement.

## **METHOD**

This study was designed within the framework of the relational survey model. The relational survey model is a widely used quantitative research approach that aims to reveal the existing relationships among variables. The analysis of the research data was conducted using SPSS version 26.0. Initially, descriptive analyses were conducted on the dataset, and the distributional characteristics of the variables were evaluated by calculating the arithmetic mean, standard deviation, skewness, and kurtosis values. In addition, Cronbach's alpha coefficients were computed to assess the internal consistency of the scales, and reliability analyses were conducted. To assess the construct validity of the scales, factor analysis was applied. In line with the study's main objective, Pearson correlation analysis was conducted to identify relationships among variables, while simple linear regression was used to examine predictive effects. For all statistical analyses, a significance level of  $p < .05$  at the 95% confidence interval was adopted.

The sample for this study consisted of associate and undergraduate students at universities in Istanbul, Turkey. Istanbul was selected as the research setting since it is the city with the highest number of universities in the country. The city hosts 61 higher education institutions, including 14 public and 44 private universities, as well as 3 vocational schools of higher education, offering a broad, diverse, and representative student population. Accordingly, Istanbul hosts approximately 30% of Turkey's universities, offering significant potential for student density in higher education.

A simple random sampling method was employed to select the participants. In this method, each individual in the population has an equal probability of being chosen. In line with this approach, students from various universities in Istanbul were randomly selected and included in the study. The data collection process took place between May and June 2025, using both online (web-based) and face-to-face survey methods. A total of 392 students from the target population participated in the study, and the analyses were conducted using the data obtained from these participants. This sampling procedure aimed to generate meaningful and representative results

regarding Istanbul university students' leisure-time internet use, study–leisure conflict, and academic achievement levels in accordance with the study's objectives.

A quantitative data collection method was employed in this study. The data were gathered through a questionnaire form administered via two different methods: online (web-based) and face-to-face. The first part of the questionnaire included items designed to identify participants' demographic characteristics. Within this scope, data were obtained on variables such as gender, age, marital status, educational level, end-of-term grade point average, daily internet usage duration, and monthly internet consumption volume.

In accordance with the research objectives, three distinct measurement scales were utilized in the subsequent sections of the questionnaire. First, Leisure-Time Internet Use Scale – Developed by Şimşek and Çevik (2023), this scale consists of 16 items and four sub-dimensions. It employs a five-point Likert-type rating. In the original study, the scale's Cronbach's alpha was reported as .854. Second, Study–Leisure Conflict Scale. This scale was adapted by Işık and Demthis (2018) based on the Work–Leisure Conflict Scale developed by Tsaur et al. (2012). It comprises 20 items and is in five dimensions. In the present study, only the “leisure interfering with study” dimension was utilized. The scale uses a five-point Likert-type format, and the Cronbach's alpha coefficient reported in the original study was .901. Lastly, Academic Performance Scale – Originally developed by Welbourne, Johnson, and Erez (1998) and later adapted to the academic context by Whelan et al. (2020), this scale was translated into Turkish by Erdal Akyüz (2023). The scale consists of seven items and employs a seven-point Likert-type rating in this study. The reliability coefficient reported in the original studies was  $\alpha = .910$ .

## FINDINGS AND DISCUSSION

### Findings

This section presents the results of the descriptive statistics, reliability testing, correlation analysis, and simple linear regression analyses performed on the dataset obtained for the study. Demographic findings, the gender distribution of the participants indicates that 53.1% were female ( $n = 208$ ) and 46.9% were male ( $n = 184$ ). Regarding age groups, many respondents were between 18 and 23 years old (73.7%;  $n = 289$ ), followed by those aged 24–29 years (20.4%;  $n = 80$ ), 36 years and older (3.1%;  $n = 12$ ), and 30–35 years (2.8%;  $n = 11$ ). Regarding marital status, 92.9% of participants were single ( $n = 364$ ), and 7.1% were married ( $n = 28$ ). With respect to educational level, 84.7% of the respondents were undergraduate students ( $n = 332$ ), while 15.3% were associate degree students ( $n = 60$ ). Examination of end-of-term grade point averages (GPAs) revealed that 46.2% of participants had a GPA between 2.00 and 2.50 ( $n = 181$ ), 36.5% between 2.50 and 3.00 ( $n = 143$ ), 15.3% between 3.00 and 3.50 ( $n = 60$ ), and only 2% had a GPA between 3.50 and 4.00 ( $n = 8$ ). Regarding daily internet usage, 53.3% of students reported spending 3–4 hours per day online ( $n = 209$ ), followed by 17.3% who used the internet for four hours or more ( $n = 68$ ), 15.1% for 1–2 hours ( $n = 59$ ), and 14.3% for 2–3 hours ( $n = 56$ ). In terms of monthly internet consumption, 62.8% of the participants used 20 GB or more ( $n = 246$ ), 19.1% used 11–15 GB ( $n = 75$ ), 14% used 6–10 GB ( $n = 55$ ), and 4.1% used 1–5 GB ( $n = 16$ ).

**Table 1. Means, standard deviations, skewness, kurtosis, and reliability of the scales**

	Mean	Standard Deviation	Skewness	Kurtosis	Reliability ( $\alpha$ )
Leisure-Time Internet Use Scale	3.8396	0.54227	0.078	0.076	0.897
Study–Leisure Conflict Scale	3.7183	0.83295	-0.748	-0.535	0.913
Academic Achievement Scale	3.1498	1.02493	-0.229	-0.535	0.888

According to Table 1, the mean score on the Leisure-Time Internet Use Scale was 3.84 (SD = 0.54). The skewness value (0.078) and kurtosis value (0.076) indicate that the distribution demonstrates a normal tendency. The reliability coefficient ( $\alpha = .897$ ) signifies a high level of internal consistency. For the Study–Leisure Conflict Scale, the mean score was 3.72 (SD = 0.83), with a skewness value of  $-0.748$  and a kurtosis value of  $-0.535$ . The Cronbach's alpha value of

.913 suggests a very high internal consistency. Regarding the Academic Achievement Scale, the mean score was 3.15 (SD = 1.02), with a skewness value of -0.229 and a kurtosis value of -0.535. The scale's internal consistency coefficient ( $\alpha = .888$ ) also indicates a high level of reliability. According to Tabachnick and Fidell (2013), skewness and kurtosis values between -1.5 and +1.5 suggest that the data are approximately normally distributed. Based on this criterion, all obtained values fall within the acceptable range, indicating that the data exhibits normal distribution characteristics. Furthermore, as stated by Tavşancıl (2005), if the alpha coefficient is below .40, the scale is considered unreliable; between .40 and .60, it shows low reliability; between .60 and .80, it is considered fairly reliable; and between .80 and 1.00, it demonstrates a high level of reliability. In line with this classification, all scales used in the current study can be regarded as highly reliable.

**Table 2. Correlation analysis among variables**

	1.	2.	3
1. Leisure-Time Internet Use	1.00		
2. Study-Leisure Conflict	.512**	1.00	
3. Academic Achievement	-.362**	-.446**	1.00

Note: \*\*  $p < .001$

In Table 2, a Pearson correlation analysis was conducted to determine the relationships among the variables included in the study. Accordingly, a positive and moderately significant relationship was found between Leisure-Time Internet Use and Study-Leisure Conflict ( $r = .512$ ;  $p < .001$ ). This finding indicates that increased leisure-time internet use may lead to greater conflict between students' study and leisure activities. A negative and moderate significant relationship was observed between Leisure-Time Internet Use and Academic Achievement ( $r = -.362$ ;  $p < .001$ ), suggesting that higher levels of internet use during leisure time may negatively influence academic performance. Additionally, a moderate, significant negative relationship was found between Study-Leisure Conflict and Academic Achievement ( $r = -.446$ ;  $p < .001$ ), indicating that greater conflict between study and leisure activities may be associated with lower academic achievement. According to the classification proposed by Ural and Kılıç (2021), all obtained correlation coefficients fall within the moderate relationship category, and the relationships between the variables are statistically significant ( $p < .001$ ).

**Table 3. Simple linear regression analysis predicting study-leisure conflict based on leisure-time internet use**

	R	R <sup>2</sup>	F	p	$\beta$	t	p
Study-Leisure Conflict	0.512	0.262	138.214	<.001	0.786	11.756	0

Note: Independent Variable: Leisure Time Internet Use

In Table 3, a simple linear regression analysis was conducted to examine the predictive effect of Leisure-Time Internet Use on Study-Leisure Conflict. The results indicated that the model was statistically significant [ $F(1, 390) = 138.214$ ;  $p < .001$ ]. The coefficient of determination ( $R^2 = .262$ ) revealed that Leisure-Time Internet Use explained approximately 26.2% of the total variance in Study-Leisure Conflict. Examination of the regression coefficient showed that Leisure-Time Internet Use significantly and positively predicted Study-Leisure Conflict ( $\beta = .786$ ;  $t = 11.756$ ;  $p < .001$ ).

**Table 4. Simple linear regression analysis predicting academic achievement based on leisure-time internet use**

	R	R <sup>2</sup>	F	p	$\beta$	t	p
Academic Achievement	-0.362	0.131	58.707	<.001	-0.684	7.662	0

Note: Independent Variable: Leisure-Time Internet Use

In Table 4, a simple linear regression analysis was conducted to examine the predictive effect of Leisure-Time Internet Use on Academic Achievement. The results indicated that the model was statistically significant [ $F(1, 390) = 58.707; p < .001$ ].

The regression model showed that Leisure-Time Internet Use explained approximately 13.1% of the total variance in Academic Achievement ( $R^2 = .131$ ). The obtained negative regression coefficient ( $\beta = -.684$ ) and its significance level ( $t = 7.662; p < .001$ ) revealed that increased internet use during leisure time significantly and negatively predicts Academic Achievement.

**Table 5. Simple linear regression analysis predicting academic achievement based on study–leisure conflict**

	R	R <sup>2</sup>	F	p	$\beta$	t	p
Academic Achievement	-0.446	0.199	8.454	<.001	-0.582	2.908	0

Note: Independent Variable: Leisure-Time Internet Use

In Table 5, a simple linear regression analysis was performed to examine the predictive effect of Study–Leisure Conflict on Academic Achievement. The analysis results indicated that the model was statistically significant [ $F(1, 390) = 8.454; p < .001$ ]. The coefficient of determination ( $R^2 = .199$ ) showed that Study–Leisure Conflict explained approximately 19.9% of the total variance in Academic Achievement. The negative regression coefficient ( $\beta = -.582$ ) demonstrated that Study–Leisure Conflict is a significant negative predictor of Academic Achievement ( $t = 2.908; p < .001$ ).

### Discussion

The findings of the present study reveal a significant effect of university students’ leisure-time internet use on study–leisure conflict. According to the regression results, the leisure-time internet use variable explained 26.2% of the total variance in study–leisure conflict. This proportion is noteworthy when compared with similar studies in literature and clearly demonstrates the impact of internet use on individuals’ time management, role conflict, and academic balance (Sapriati et al., 2024).

Supporting this finding, Gao et al. (2020) reported that entertainment-oriented internet use among university students significantly increased their levels of study–leisure conflict, explaining approximately 30–40% of the variance in conflict levels. These results are largely consistent with the variance-explanation level observed in the present study. Similarly, a Scopus-indexed study by Hazelhurst et al. (2011) analyzed students’ daily server log data regarding internet usage. The findings revealed that students who engaged in intensive web browsing experienced greater difficulty balancing their academic roles with personal time, with an explanatory power exceeding 35% of the variance. In another study conducted with engineering students, Pérez-Juárez et al. (2023) found that digital distractions accounted for approximately 34% of the variance in role conflicts between study and leisure domains. The diversity of methodological approaches employed in these studies, including survey-based, log analysis, and experimental designs, enhances the robustness of the evidence and provides strong support for the relationship between internet use and students’ time management difficulties.

On the other hand, several studies have reported that the effect of internet use on study–leisure conflict is relatively weaker. In a study conducted by Durhan (2020), only entertainment-oriented internet use had a strong effect on conflict, whereas academic or balanced use did not have a significant influence. This suggests that the impact of internet use on study–leisure conflict may vary depending on the purpose and content of online engagement. Similarly, in a nationwide study conducted with adult participants, Zach and Lissitsa (2016) found that internet use was positively associated with physical activities and did not cause significant conflict in terms of time management. However, since this study was conducted with an adult sample rather than university students, the generalizability of its findings is limited.

According to the findings of the present study, leisure-time internet use among university students explained 13.1% of the total variance in academic achievement. This proportion indicates that leisure activities directly influence academic performance and that students’ digital leisure

habits can significantly affect their achievement levels. To evaluate this finding, both supportive and contrasting studies indexed in Web of Science and Scopus were reviewed. Among the studies supporting our results, Alhusban et al. (2022) reported that problematic social media use among university students negatively affected academic performance, explaining approximately 20–25% of the variance in achievement, a proportion largely consistent with the 13.1% variance explained in our study. Similarly, a panel study by Leung (2015) revealed that the use of the internet for social media and entertainment purposes had adverse effects on academic performance. The study indicated that intensive social media use reduced students' study time and resulted in lower grade point averages, with an explanatory rate of around 20%. In an earlier investigation, Kubey et al. (2001) examined the impact of internet use on academic performance and found that recreational internet use negatively affected students' academic success. Their study demonstrated that non-academic internet use leads to distraction, procrastination, and difficulties in time management among students.

When examining the non-supportive studies, research findings indicate that leisure-time internet use has a more limited effect on academic achievement. In a study conducted by Feng et al. (2019), it was emphasized that internet use does not directly influence academic performance but rather exerts an indirect effect through mediating variables such as attention, stress, and motivation levels. In that study, the direct explanatory power of internet use accounted for only 10–15% of the variance. Similarly, in research conducted with adult participants, Zach and Lissitsa (2016) found that internet use had a limited impact on academic or cognitive outcomes. Their findings suggested that the type of internet use was a more decisive factor: while social media or gaming-related use had negative effects, internet use for academic or informational purposes was associated with positive achievement outcomes. Although the exact variance explained ratio was not reported, the effects were described as weak.

According to the present study, the study–leisure conflict observed among university students explained approximately 19.9% of the total variance in academic achievement. This proportion indicates that the conflict substantially influences students' academic performance and that the inability to balance leisure needs and academic obligations adversely affects achievement. This finding provides important insights into both individual time management processes and the quality of academic life. A comparative discussion of supportive and limiting evidence is presented below. Consistent with our results, a study conducted by Isik and Demirel (2018) using the Study–Leisure Conflict Scale demonstrated that study–leisure conflict is significantly associated with academic burnout, time pressure, and low perceived achievement among students. Although the proportion of explained variance was not explicitly reported, the results of multiple regression analyses indicated that conflict served as a strong predictor of academic performance. Similarly, Pluut et al. (2015) analyzed the impact of social and academic stressors on academic success in a sample of university students and found that study–leisure conflict had a significant and moderate effect on academic performance. In their structural equation modeling analysis, the variance explained reached approximately 30%, indicating a robust influence. Furthermore, Pluut et al. (2015) identified that study–leisure conflict exerted an indirect but strong effect on the relationship between students' stress levels and academic outcomes, with multiple regression results confirming that the level of conflict was among the primary factors affecting academic success. However, some studies have reported a more limited effect of study–leisure conflict on academic achievement. For instance, Misra and McKean (2000) found significant relationships between time management and stress, but the direct effect of study–leisure conflict on academic performance was relatively weak. Their study noted that other variables, such as sleep patterns, social support, and test anxiety, played a more dominant role in predicting achievement.

## **CONCLUSION**

The findings obtained in this study revealed that university students' leisure-time internet use and study–leisure conflict levels are significantly associated with academic achievement. In particular, leisure-time internet use explained 26.2% of the variance in study–leisure conflict, indicating that such digital habits have a clear impact on students' time management, role conflict,

and ability to maintain academic balance. Furthermore, leisure-time internet use explained 13.1% of the variance in academic achievement. This finding highlights the multilayered nature of the factors that determine academic performance. Variables such as attention regulation, self-determination skills, academic motivation, and learning strategies are essential components for a more comprehensive understanding of academic achievement.

Another important finding is that study–leisure conflict explained 19.9% of the variance in academic achievement. Through mechanisms such as time pressure, distraction, procrastination, and psychological stress, this conflict can disrupt the learning process and affect students' academic performance. In conclusion, this research contributes to understanding the interactions between university students' digital leisure behaviors and their academic lives. Future studies are encouraged to employ multivariate structural models, longitudinal designs, and cross-cultural comparisons to gain deeper insight into these relationships.

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