

# Learning and performance orientation, life satisfaction and problematic social media use in high school and university students: A moderated mediation

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## ABSTRACT

This study examined the pathways through which learning orientation and performance orientation impact life satisfaction by investigating the mediating role of problematic social media use and the moderating influence of school type. The study recruited 443 participants aged between 13 and 31 ( $M = 18.41 \pm 3.134$ ), comprising 224 high school students and 219 university students, through an online survey. Data collection instruments included the Achievement Goal Questionnaire, Social Media Addiction Scale, and Life Satisfaction Scale. Results revealed that learning orientation influenced life satisfaction indirectly through problematic social media use, whereas performance orientation had a direct impact on life satisfaction. Moderation analyses revealed a significant decrease in life satisfaction for high school students compared to university students as problematic social media use increased. These findings highlight the importance of implementing tailored interventions based on achievement orientations and life satisfaction to minimize issues arising from excessive social media use by students.

## 1. Introduction

Social media holds a crucial role at the core of human life (Lozano-Blasco et al., 2022; Pang & Zhang, 2024). Today, the process of socialization is facilitated through technologies such as social media, the internet, and smartphones, in contrast to face-to-face interactions (Drago, 2015). The decline in face-to-face interactions largely represents increased online communication and, consequently, a more isolated lifestyle and lower life satisfaction (Çiftçi & Yıldız, 2023; Rotondi et al., 2017; Subrahmanyam et al., 2008). We Are Social (2023) reports that the number of social media users across the globe has reached 4.76 billion, while the daily time spent on social media in Türkiye is reported to be 2 h and 54 min. Social media has become a necessity in enabling

individuals to interact independently of time and place (Talan et al., 2024). Despite its numerous benefits, excessive use of social media can trigger negative effects (Longstreet & Brooks, 2017). While social media usage is routine behaviour in daily life, it can become problematic if it adversely affects individuals' daily functionality (Marino et al., 2023). This is because social media usage largely involves the regulation of emotional states (Marino et al., 2016). The misuse of technology is often considered parallel to the addiction phenomenon observed in alcohol and substance use (Bányai et al., 2017; Blackwell et al., 2017; Casale et al., 2018). Moreover, problematic social media use shares characteristics similar to harmful alcohol use (Brunborg et al., 2022; Savolainen et al., 2020). The misuse of social media is characterized in the literature as problematic social media use, and to explain this condition,

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terms such as social media addiction, impulsive social media use, and excessive social media use are also commonly used (Casale et al., 2018; Klobas et al., 2018; Marttila et al., 2021; Zhang et al., 2024). The most commonly used term among these is “social media addiction,” which refers to the manifestation of behavioural addiction symptoms (Cao et al., 2020; Chen, 2019; Turel & Serenko, 2012).

## 2. Problematic social media use

Problematic social media use has been associated with negative effects on individuals' life satisfaction (Longstreet & Brooks, 2017; Yesilyurt & Solpuk Turhan, 2020). Traditionally, the concept of “addiction” has been examined within the context of substance use, leading some researchers to argue that applying this term to social media use is premature (Carbonell & Panova, 2017). As a result, some scholars advocate for the term “problematic use” instead (Caplan, 2010; Lee et al., 2017). To ensure conceptual consistency in this study, we adopt problematic social media use (PSMU) as the primary framework.

PSMU is defined as excessive and impulsive social media engagement that disrupts daily functioning, interpersonal relationships, and emotional well-being (Zhao et al., 2022). Excessive use refers to prolonged time spent on social media, interfering with essential activities, while impulsive use reflects difficulty in self-regulating engagement, leading to compulsive scrolling or immediate gratification-seeking behaviors. By clarifying this distinction, the study emphasizes the potential risks of digital overuse and its psychological consequences.

Social media use is integrated into daily life, but it can have negative effects when it disrupts the functionality of life (Marino et al., 2023). This idea is associated with the misuse of technology (Bányai et al., 2017; Blackwell et al., 2017; Casale et al., 2018). Social media use has become popular as a leisure activity, and the negative outcomes arising from excessive social media use might be harmful to users' individual, social, and professional lives (Griffiths et al., 2014; Hormes, 2016; Ryan et al., 2017; Wu et al., 2013). It can play a distorting role in the motivation of young people regarding life (Lee et al., 2012; Marttila et al., 2021; Savci et al., 2022).

Vulnerable groups, such as students, may experience more distress from this behavioural addiction (Bányai et al., 2017). This condition can be considered as an underlying factor indirectly affecting students' life satisfaction (Masood et al., 2021; Şahin, 2017). The role of achievement orientations as a protective and preventive factor may be significant concerning social and behavioural problems like addiction (Sengupta & Datta, 2023). Moreover, this protective and preventive role can enhance life satisfaction and act as a buffer against harmful behaviors such as problematic smartphone use (Diseth et al., 2012). This is largely associated with the triggering of achievement behaviour through both intrinsic and extrinsic motivation. Many studies investigating the effects of problematic social media use (PSMU) have been conducted over almost two decades (Al-Menayes, 2015; Caplan, 2003; Hogan, 2010; Hou et al., 2019; Talan et al., 2024). These studies especially extensively examined how individuals are affected biopsychosocially and spiritually by PSMU (Griffiths, 2005; Wood et al., 2016). These were valuable studies that presented different perspectives.

## 3. Achievement orientations

Competence at the desired level is essential for achieving success (Dweck, 1986; Nicholls, 1984). Achievement orientations are an approach that examines individuals' behaviors related to learning, based on their goals for learning and their thoughts about themselves and their tasks (Kayış, 2013). In studies, the sub-dimensions of achievement orientations are defined as learning and performance orientations (Pintrich, 2000). While learning orientation represents intrinsic motivation in obtaining knowledge, performance orientation represents external motivation, such as surpassing others in acquiring knowledge (Harackiewicz et al., 2000).

Achievement orientations, including performance and learning orientations, have been widely studied in relation to life satisfaction. Theoretical frameworks such as Self-Determination Theory (Ryan & Deci, 2001) and Goal Orientation Theory (Dweck, 1986) suggest that the way individuals approach achievement—whether focusing on mastery or external validation—can shape their overall well-being. However, the potential role of problematic social media use in moderating or mediating these effects remains underexplored. Given the increasing digital engagement among students, examining how these achievement orientations interact with social media behaviors could provide important evidence about their impact on life satisfaction. Moreover, this study did not assess the distinct effects of sub-factors within achievement orientation—such as performance orientation (driven by external motivation) and learning orientation (fueled by internal motivation)—or the extent to which PSMU may contribute to these variations. Since excessive or problematic social media use can disrupt achievement orientation, it may ultimately hinder life satisfaction, underscoring the need for further exploration of these interconnections.

## 4. Life satisfaction

Life satisfaction refers to an individual's cognitive evaluation of their life, encompassing attitudes and feelings over a specific period (Diener et al., 1985; Solmaz et al., 2024). It reflects the perceived gap between one's desired and actual life circumstances (Rask et al., 2002) and is commonly assessed through self-reported measures focused on satisfaction with various life domains (Clapham et al., 2018). This study draws upon the Mental Health Continuum Model proposed by Keyes (2002), which conceptualizes well-being as a balance between emotional vitality and psychosocial functioning. Within this framework, the PERMA model—comprising positive emotions, engagement, relationships, meaning, and accomplishment—offers a structure for understanding flourishing (Diener et al., 2010; Seligman, 2012).

However, the rising prevalence of problematic social media use may disrupt these dimensions, adversely affecting psychological flexibility and emotional development over time (Tanhan et al., 2024). Supporting this concern, Pang and Wang (2025) found that mobile app addiction, privacy concerns, and cognitive overload significantly diminish subjective well-being and academic expectancy. Similarly, Pang (2024) highlighted the detrimental effects of depressive mood and self-disclosure on problematic mobile app use and academic performance. These findings suggest the need to examine the associations between psychological and behavioural factors. In particular, achievement orientations—namely, learning and performance orientations—may influence life satisfaction, while problematic social media use could moderate or mediate this relationship. Therefore, the present study seeks to contribute to the literature by exploring these interconnections among high school and university students.

## 5. Present study

Previous studies have shown a positive relationship between achievement orientations and life satisfaction (Hwang, 2016; Özgüngör, 2020). There are also findings on the negative relationship between problematic social media use and achievement orientations, and the negative relationship between problematic social media use and life satisfaction (Longstreet & Brooks, 2017; Şahin, 2017; Sengupta & Datta, 2023; Yesilyurt & Solpuk Turhan, 2020). However, no study planned problematic social media use as a mediating variable between achievement orientations and life satisfaction. Therefore, this study investigated the mediating role of problematic social media use. Additionally, it was analyzed whether school type serves as a moderating variable in these relationships.

Positive motivation towards life and socio-emotional functionality are essential conditions for a well-being (Keyes & Haidt, 2003). In other words, it reflects the perspective that psychosocial well-being

contributes to a mentally healthier life (Keyes, 2002). Achievement orientation is crucial for well-being because personal development is associated with motivational achievement (Datu, 2017, 2018; Ng et al., 2015; Nickerson et al., 2011). Moreover, it is linked to an inner trigger to achieve success (Isen & Reeve, 2005). Extensive research on the developmental process has demonstrated that a positive approach to life is closely linked to a passion for achievement, patience, and life satisfaction, all of which contribute to a fulfilling and meaningful existence (Arslan et al., 2022; Coffey et al., 2016; Datu et al., 2016; Green & Yildirim, 2022; Yildirim et al., 2023). On the other hand, factors such as problematic social media use have a negative impact on a well-being (Marciano & Viswanath, 2023). Therefore, from the perspective of well-being, achievement orientations (learning and performance) contribute to an individual's development, thereby increasing life satisfaction. However, the formation of behavioural problems can undermine these relationships, especially for a more vulnerable group such as students.

According to the Mental Health Continuum Model, individuals focus on enhancing their psychosocial functioning to support their well-being (Keyes & Haidt, 2003). Achievement orientations, both internal motivation (learning orientation) and external motivation (performance orientation), shape the individual's desire and ambition for success. This internal and external motivation enables the individual to pursue and achieve their goals, thereby supporting life satisfaction. Therefore,

**H1.** Learning orientation is positively related to life satisfaction.

**H2.** Performance orientation is positively related to life satisfaction.

When an individual encounters potential risks associated with factors like social media, it becomes challenging for the individual to maintain internal and external motivation for success by excessively and impulsively using social media. Negative changes in internal and external support mechanisms due to technological innovations like social media also adversely affect an individual's achievement behaviour. As individuals progress towards their goals and fulfil their responsibilities, a sense of accomplishment is formed (Butler & Kern, 2016; Ryan & Deci, 2001). The reversal of this sense of accomplishment occurs when factors hindering goal attainment come into play. Therefore,

**H3.** Learning orientations are negatively related to problematic social media use.

**H4.** Performance orientations are negatively related to problematic social media use.

Being psychosocially and spiritually well contributes to building stronger mental health (Keyes, 2002). Stronger mental health is crucial for positive emotions (Catalino & Fredrickson, 2011; Eryilmaz et al., 2024). Some negative conditions and events can reverse our positive outlook on life (Dalgard et al., 1995). This can indirectly harm our emotional and thought world, thus affecting our life satisfaction. Factors like problematic social media use have similar effects. Social media use largely focuses on regulating emotional states (Marino et al., 2016). In other words, the problematic use of social media contributes to the formation of various mental problems and reduces life satisfaction, with a ripple effect (Brailovskaia et al., 2023). Therefore,

**H5.** Problematic social media use is negatively related to life satisfaction.

Achievement orientations activate internal and external motivation to support well-being (Keyes & Haidt, 2003). This situation is a significant determinant that increases individuals' life satisfaction (Hwang, 2016; Özgüngör, 2020). Because the desire and aspiration required to achieve success also contribute to the degree of satisfaction derived from life. However, some variables can reduce life satisfaction by damaging this achievement motivation (McGaffin et al., 2015). In this current study, problematic social media use, proven to have some harmful

effects, seems likely to decrease life satisfaction as a behavioural problem. Therefore,

**H6.** Learning orientation and life satisfaction are mediated by problematic social media use.

**H7.** Performance orientation and life satisfaction are mediated by problematic social media use.

Various factors can impede this developmental process and exploit individuals' vulnerabilities. As emphasized in the present study, problematic social media use has an impact that can hinder development and reduce life satisfaction (Marciano & Viswanath, 2023). Previous literature has demonstrated the relationship of this effect with demographic characteristics in numerous studies (Acun, 2020; Hawi & Samaha, 2017). From our perspective, high school and university encompass different psychological and sociological systems (Frost & McKelvie, 2004; Parker et al., 2004). Therefore, the difference between high school and university also shapes the levels of influence (Simsek et al., 2019). Because emotions, thoughts, and behaviors vary over time and regulate vulnerabilities. Therefore,

**H8.** The school type has a moderating role in the relationship between problematic social media use and life satisfaction.

## 6. Method

### 6.1. Study design, participants, and procedure

This study employed a quantitative research design, with data collected through an online survey. Given the study's focus and the need to target participants with specific characteristics, a non-probability sampling method was used—an approach commonly adopted in psychological research. According to the Turkish Statistical Institute, approximately 30 million students were enrolled in educational institutions across Türkiye in 2022 (TÜİK, 2022), making students a relevant and accessible population for this research. With Türkiye's overall population exceeding 85 million, a minimum sample size of 384 participants is recommended for a heterogeneous population at a 95 % confidence level (Taherdoost, 2016). Accordingly, the sample size for this study was set at 384 or more to ensure statistical adequacy.

The study group consisted of 443 (310 female and 133 male) university and high school students. Participants are individuals aged between 13 and 31 ( $M = 18.41$ ;  $SD = 3.134$ ). This age range was selected to encompass both high school and university students. Data were collected from educational institutions across the Marmara region of Türkiye, a geographically and socioeconomically diverse area that includes both metropolitan and non-metropolitan settings. The participants consist of 224 high school students and 219 university students selected from various regions of Turkey. Just before accessing the data, the participants were shown a general information form about the purpose of the study. With this form, the participants were informed about the scales, confidentiality of the data and the aim of the study. The characteristics of the participants are shown in Table 1.

**Table 1**  
Descriptive Statistics.

Variable	Level	N	%	M	SD
Age	–	–	–	18,41	3134
	Gender				
	Female	310	70		
	Male	133	30		
School type	High school	224	50,6		
	University	219	49,4		

Note. M = Mean; SD = Standard deviation.

## 6.2. Measures

### 6.2.1. Internet addiction scale

Problematic social media use was measured with the Internet Addiction Scale, which was developed by Güniç (2009) as the section on functional impairment, specifically focusing on social media addiction. The scale consists of 7 items measured using a 5-point Likert scale. In the current study, the Cronbach's Alpha internal consistency coefficient of the scale was determined to be 0.88.

### 6.2.2. Achievement goal questionnaire

The scale, developed by Elliot and Murayama (2008) and adapted into Turkish by Arslan & Akin, (2015), consists of 12 items. The scale includes 4 sub-dimensions: learning-approach orientation, learning-avoidance orientation, performance-approach orientation, and performance-avoidance orientation. However, following the factor analysis in our study, the sub-dimensions were reduced to 2: learning orientation and performance orientation. The items are measured on a 5-point Likert scale. The Cronbach's alpha internal consistency reliability coefficients of the scale were found to be 0.894 for learning orientation and 0.923 for performance orientation.

### 6.2.3. Life satisfaction scale

The scale was developed by Diener et al. (1985) and adapted into Turkish by Dağlı and Baysal (2016). The scale, which has a single factor, consists of 5 items. Items are measured on a 5-point Likert scale. The Cronbach's alpha internal consistency reliability coefficient of the scale was determined to be 0.836.

## 6.3. Procedure

This study used a cross-sectional research design, with data collected through an online survey. A secure survey link was created and disseminated via social networking platforms such as WhatsApp and Facebook, as well as through targeted emails. To reach high school students, the management of participating schools distributed emails containing an invitation letter to encourage participation. Similarly, the survey link was shared with university students to expand the pool of potential participants. Eligible participants included individuals currently enrolled in high school or university and pursuing a qualification, such as a high school diploma or undergraduate degree. Those meeting the criteria were invited to complete the survey, hosted on the Google Forms platform. Prior to the commencement of the study, ethical approval was obtained from the Institutional Review Board of Istanbul University-Cerrahpasa (approval reference number: E-74555795-050.01.04-119,392). Informed consent was secured from all participants. To ensure strict confidentiality, the survey was designed without collecting personal identifiers, ensuring participant anonymity and confidentiality. Access to the collected data was restricted to the research team to further protect the privacy of participants. No incentives were provided to participants for their involvement in the study.

## 6.4. Data analysis

Path analyses in the study were conducted using IBM SPSS Amos (version 24.0). Analyses of normality assumption, reliability findings, descriptive outputs and correlation results were obtained through SPSS (version 24.0). Moderation analysis was conducted using Process Macro (version 4.2) Model 59, also installed in SPSS. Direct and indirect effects in the research model were tested using 95 % bias-corrected confidence intervals obtained from 5000 resamples generated by bias-corrected bootstrapping.

## 7. Results

### 7.1. Preliminary analysis

Table 2 presents the normality, reliability, validity, and scale means. We used skewness and kurtosis values for normality, which are expected to fall within the range of  $\pm 2.00$ . According to the results, the data set is normally distributed (George & Mallery, 2020). The Cronbach's Alpha values are observed to be above 0.70, indicating that they are reliable (George & Mallery, 2020). A confirmatory factor analysis was conducted on the dataset, which included a sample size exceeding 384 and 20–30 observed variables. By creating a total of 7 covariances between items based on modification indices, the confirmatory factor analysis in the refined structural equation model achieved goodness-of-fit values within the acceptable range ( $\chi^2/df = 1.96$ , RMSEA = 0.047, SRMR = 0.054; GFI = 0.92, TLI = 0.96, IFI = 0.965, CFI = 0.965). The data set's validity has been confirmed (Kline, 2011).

A comparison between the scale and sample averages revealed that the sample averages for social media addiction (1.85) and life satisfaction (2.90) were lower than their corresponding scale averages (3.00 and 3.00, respectively). Life satisfaction was relatively close to the norm. The sample average of learning orientation (3.95) and performance orientation (3.92) were found to be above the scale average (3.0). In a sample where problematic social media use and life satisfaction were below the average, it is noteworthy that learning and performance orientations were above the average.

### 7.2. Correlation among the study variables

Table 3 illustrates the relationships between demographic variables and scales. Performance orientation and learning orientation have a positive significant relationship with life satisfaction ( $p < 0.01$ ,  $r = 0.735$ ,  $r = 0.361$ , respectively), while problematic social media use has a negative significant relationship ( $p < 0.01$ ,  $r = -0.347$ ). Learning orientation has a negative relationship with problematic social media use ( $p < 0.01$ ,  $r = -0.418$ ) and a positive significant relationship with life satisfaction ( $p < 0.01$ ,  $r = 0.319$ ). Additionally, problematic social media use was negatively associated with life satisfaction ( $p < 0.01$ ,  $r = -0.394$ ).

### 7.3. Mediation of problematic social media use

Findings regarding mediation analysis are presented in Table 4. The direct effect of the independent variables on the dependent variable was analyzed to see the effect of mediation. Performance orientation has a significant positive effect on life satisfaction ( $\beta = -0.200$ ,  $p < 0.01$ ), while the effect of learning orientation on life satisfaction is not significant ( $\beta = 0.049$ ,  $p > 0.05$ ). In addition, the direct effects between the independent variable and the mediating variable, as well as the mediating variable and the dependent variable, were examined. While the direct effect of performance orientation on problematic social media use is not significant ( $\beta = -0.088$ ,  $p > 0.05$ ), the effect of learning orientation on problematic social media use is negatively significant ( $\beta = -0.311$ ,  $p < 0.001$ ). Problematic social media use, in turn, has a significant negative effect on life satisfaction ( $\beta = -0.241$ ,  $p < 0.001$ ). Furthermore, when examining total effects alongside direct effects, the total effect of learning orientation on life satisfaction, which is 0.123, reveals a direct effect of 0.049 when problematic social media use is included. The insignificance in the total effect became significant through the mediation analysis, indicating the presence of mediation.

### 7.4. Moderation effect of school type

The school type moderation variable depicted in the research model was tested using the Process Macro plugin. Therefore, to determine whether students' schools have a moderating effect, an interaction

**Table 2**  
Normality, reliability, validity and statistical mean values.

Measures	Reliability	Normality	Kurtosis	Sample	S.D.	Scale	S.D.
	Cronbach's alpha	Skewness		Mean		Mean	
Problematic Social Media Use	0,88	1.204	1.627	1.85	0.77	3.00	1.58
Learning Orientation	0,89	-1.047	1.752	3.95	0.82	3.00	1.58
Performance Orientation	0,92	-1.096	1.198	3.92	0.94	3.00	1.58
Life Satisfaction	0,84	0.001	0.474	2.90	0.87	3.00	1.58

Note. SD = Standard deviation.

**Table 3**  
Correlations analysis outputs.

No	Variables	1	2	3	4
1	Performance orientation	1			
2	Learning orientation	0.735**	1		
3	Problematic social media use	-0.347**	-0.418**	1	
4	Life satisfaction	0.361**	0.319**	-0.394**	1

\*\*  $p < 0.01$ ; PA: Performance Orientation; LA: Learning Orientation; PSMU: Problematic Social Media Use; LS: Life Satisfaction.

**Table 4**  
Direct, Total and Indirect SEM Analyses.

Direct Effects	St. Est.	S.E.	C:R.	P
PO → PSMU	-0.088	0.05	-1.211	0.226
LO → PSMU	-0.311	0.066	-4.041	***
PSMU → LS	-0.241	0.054	-3.964	***
PO → LS	0.200	0.045	2.71	0.007
LO → LS	0.049	0.058	0.645	0.519

Total Effect	St. Est.	LLCI	ULCI	S.E.	P-Value
PO → LS	0.221	0.095	0.336	0.073	0.003 **
LO → LS	0.123	-0.011	0.268	0.085	0.143 n.s.
Indirect Effects					
PO → PSMU → LS	0.021	-0.011	0.059	0.022	0.276 n.s.
LO → PSMU → LS	0.075	0.032	0.14	0.032	0.001 ***

Notes.  
n.s.: Not Significant; PO: Performance Orientation; LO: Learning Orientation; PSMU: Problematic Social Media Use; LS: Life Satisfaction.  
\*\*  $p < 0.01$ .  
\*\*\*  $p < 0.001$ .

variable was created between school and social media addiction, learning orientation, performance orientation, and life satisfaction variables. The moderating effect of school type on the relationship between learning orientation, performance orientation, and life satisfaction ( $B = 0.11$ ,  $B = 0.06$ ,  $p > 0.05$ ) was not significant. However, school type was found to have a moderating effect ( $B = 0.21$ ,  $p < 0.01$ ) on the relationship between social media addiction and life satisfaction. As seen in Fig. 1, as social media addiction increased, the life satisfaction of high school students decreased more than that of university students.

7.5. The results of the proposed research model and hypotheses

With the variables displayed in Fig. 2, the study's conceptual model, path analyses were performed; the outcomes are displayed in Fig. 3. Under and above the arrows are standardized estimate values. Stars are arranged based on significance levels. It was discovered that the relationship between learning orientation and life satisfaction was mediated by problematic social media use. Model fit values of the research model were in the acceptable range ( $X^2/df = 2.045$ ,  $RMSEA = 0.049$ ,  $GFI = 0.907$ ,  $IFI = 0.957$ ,  $TLI = 0.949$ ,  $CFI = 0.957$ ) (Fig. 3).

8. Discussion

From the past to the present, many factors have contributed to human development, while some other factors have acted as obstacles to development. Individuals have built goals according to their needs, thereby discovering new needs. Achieving success is a goal, and achieving this goal requires motivation (Arslan & Akin, 2015). Supporting motivation contributes to both development and life. This also encourages the formation of a healthy individual. While the whole world adapts to new technologies like social media, it encounters some new problems (Bányai et al., 2017; Blackwell et al., 2017; Casale et al., 2018; Griffiths et al., 2014; Hormes, 2016; Ryan et al., 2017; Wu et al., 2013). Current researchers are working to reveal the pros and cons of these innovations. In this study, we focused on the mediating role of problematic social media use in the impact of these achievement orientations on life satisfaction. The current research is based on the developing life theory. Our reason for basing it on the developing life theory is its support for the interaction between achievement and life satisfaction (Keyes, 2002).

8.1. Direct effects

In this section, hypotheses  $H_1$ ,  $H_2$ ,  $H_3$ ,  $H_4$ , and  $H_5$  were formulated to reveal the direct relationships between achievement orientations, life satisfaction, and problematic social media use. Except for  $H_1$  and  $H_4$ , the other hypotheses were supported. In  $H_1$ , a hypothesis was put forward regarding the positive relationship between the learning orientation, one of the sub-dimensions of achievement orientations, and life satisfaction. However, our results, while showing a positive relationship between these two variables, revealed that it was not statistically significant. Other studies have also indicated a negative relationship between these two variables (Montano, 2024). However, previous results regarding the relationships between these variables are insufficient. Some studies have provided predictions about why focusing on learning provides better life motivation and how. It is known that an optimal level of focus on learning is more motivating and leads to better academic performance (Bernardo, 2008; dela Rosa, 2010; King, 2015, 2016). This situation provides some clues for a more satisfying life.

$H_2$  has yielded the expected result, demonstrating a positive relationship between life satisfaction and performance orientation, one of the sub-dimensions of achievement orientation. Performance orientation represents external motivation and involves a more competition-based orientation. Competition is associated with perseverance and requires a focus on working harder to succeed (Littman-Ovadia & Lavy, 2016). Thus, the individual is close to achieving their success goals, contributing to life satisfaction. Previous similar studies support these meaningful relationships (Dubey, 2020).

In hypothesis  $H_3$ , a negative relationship is proposed between the sub-dimensions of achievement orientation, specifically the learning orientation, and problematic social media use. Learning orientation emphasizes the importance of intrinsic motivation in reaching goals (Harackiewicz et al., 2000). In this way, the individual is involved in a realistic learning process. Technologies such as social media can act as inhibitors in this learning process because they serve as primary online environments connecting individuals to the world. Individuals with a

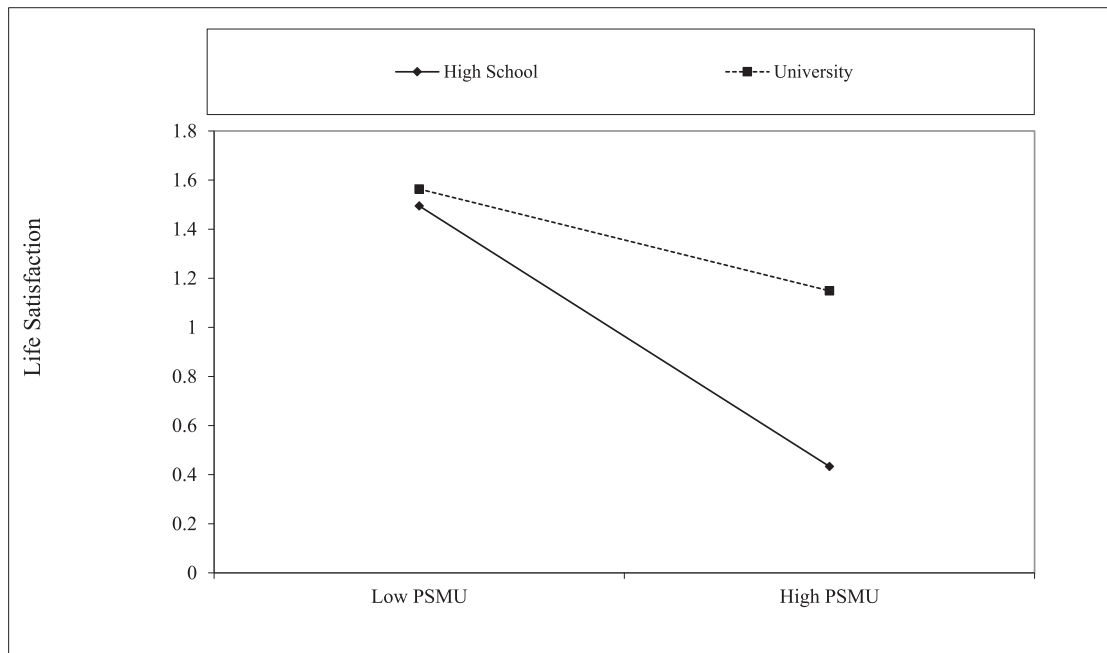


Fig. 1. Moderation effect of school type in the relations between PSMU and life satisfaction.

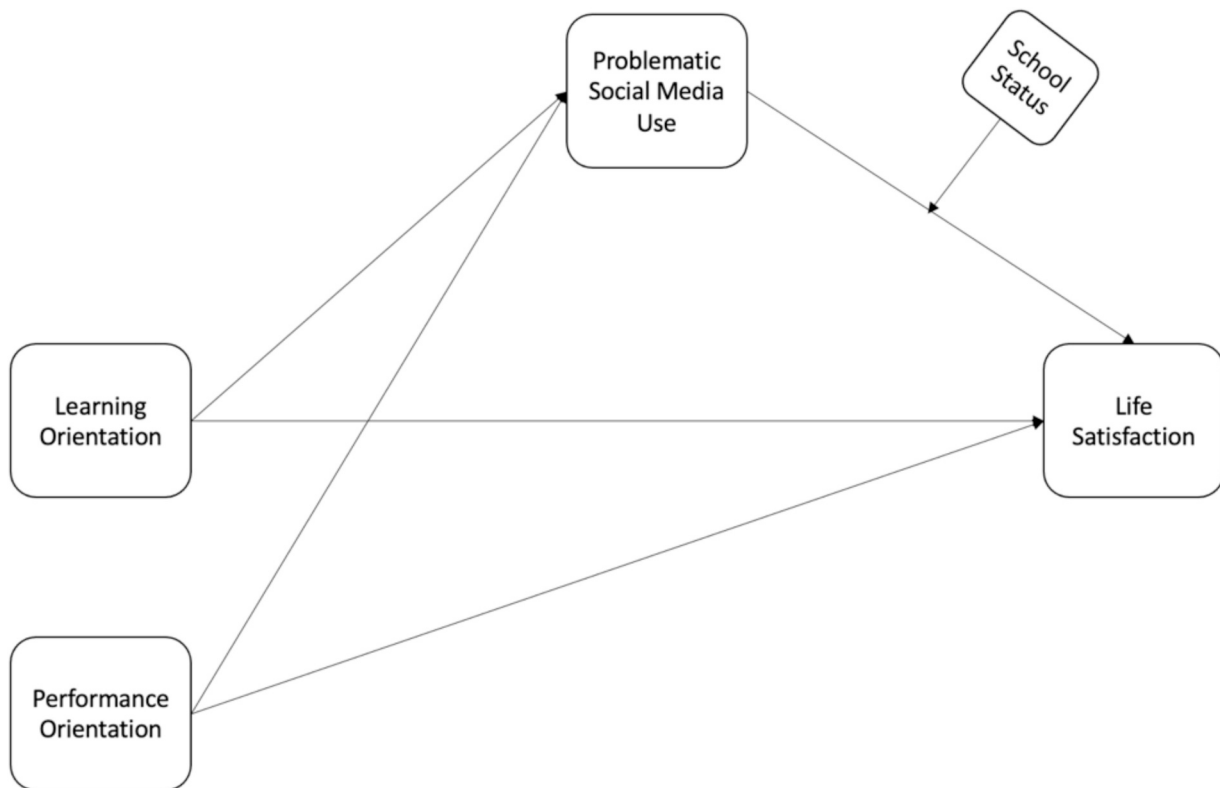


Fig. 2. The proposed research model.

learning orientation tend to avoid detrimental behaviors that may impact their intrinsic motivation when they are focused on achieving success (Hatlevik & Arnseth, 2014; Wang et al., 2021).

The H<sub>4</sub> hypothesis, suggesting a negative relationship between performance orientation and problematic social media use, while yielding negative results in the current study, is not statistically significant. Performance orientation is triggered by external motivation and

represents a continuous focus on competition (Harackiewicz et al., 2000). Motivational forces acquired externally are more prevalent in online spaces such as social media. This may be largely because social media includes posts that are independent of real life. In other words, social media becomes an area where performance-oriented individuals focus more on comparison and competition to achieve success (Vogel et al., 2015). This situation may influence or support the motivations of

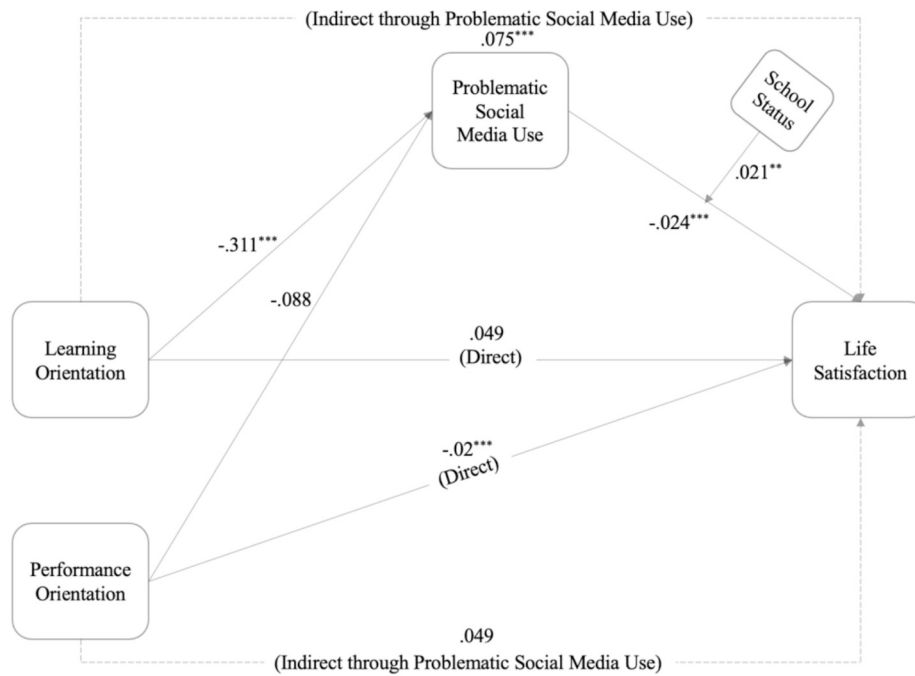


Fig. 3. The results of the proposed research model and hypotheses.

performance-oriented individuals. Therefore, the complex nature of these relationships may be a contributing factor to the lack of statistical significance in the outcomes.

H<sub>5</sub> predicts the negative impact of problematic social media use on life satisfaction, and the results of the current study support this prediction. Problematic social media use increases negative emotions, undermines subjective well-being, and leads to mental health problems. It acts as a hindrance to human development and pushes individuals towards a lack of motivation in life (Griffiths et al., 2014; Hormes, 2016; Lee et al., 2012; Marttila et al., 2021; Ryan et al., 2017; Savci et al., 2022; Wu et al., 2013). Therefore, it has a notable impact on life satisfaction (Yesilyurt & Solpuk Turhan, 2020).

### 8.2. Indirect effects

In the study, hypotheses H<sub>6</sub> and H<sub>7</sub> were formulated to determine the mediating effect of problematic social media use on the relationship between learning and performance orientations and life satisfaction. However, it was found that mediation only occurred in the relationship between learning orientation and life satisfaction. In this regard, H<sub>6</sub> is a supported hypothesis. When problematic social media use was included as a mediating variable between learning orientation and life satisfaction, the total effect decreased from  $B = 0.123$  to  $B = 0.049$ . In the case of mediation of problematic social media use between performance orientation and life satisfaction, the result was not significant (Sahin, 2017; Sengupta & Datta, 2023; Yesilyurt & Solpuk Turhan, 2020). As a result, even though there was no significant relationship between learning orientation and life satisfaction, the inclusion of problematic social media use in the relationship made the association both significant and reduced the positive effect. Thus, problematic social media use played a mediating role. Since there are no similar studies in the literature that consider these three variables together, the findings related to hypotheses H<sub>6</sub> and H<sub>7</sub> constitute one of the most important sections of this study. Changes in individuals' motivations and life satisfaction due to problematic social media use may explain the presence of this relationship.

### 8.3. Moderating effects

In this study, a hypothesis (H<sub>8</sub>) was formulated to examine the moderating effect of school type on the relationship between problematic social media use and life satisfaction. The analyses revealed that school type moderates the relationship between problematic social media use and life satisfaction. When examining the negative relationship between problematic social media use and life satisfaction, it was observed that as problematic social media use increases, life satisfaction decreases more among high school students compared to university students. We did not encounter a similar model in the literature. However, most similar studies in this field show that both high school students and university students use problematic social media, and their life satisfaction decreases (Chen et al., 2022; Lin et al., 2024; McBride, 2011; Talan et al., 2024; Uysal, 2020). While our findings suggest that high school students may be more vulnerable to the effects of problematic social media use, we acknowledge that this vulnerability could be influenced by age-related factors rather than school type alone. Given that high school and university students naturally differ in age, it is possible that developmental differences, rather than institutional differences, contribute to the observed effects. However, our study did not explicitly test this by categorizing participants into age cohorts or examining age as a continuous moderator. Future research could address this limitation by incorporating an analysis of age-related effects, such as testing for interaction effects between age and school type or employing age-stratified analyses. This would help disentangle the potential confounding influence of age from the moderating role of school type, providing a clearer understanding of the underlying mechanisms.

### 8.4. Limitations and suggestions for future studies

In this research conducted using the online survey method, despite the possibility of participants not accurately completing the surveys, consistent results were obtained. Additionally, there are some limitations to the study. First, although family is an important factor in achievement orientation, problematic social media use, and life satisfaction, we did not gather information about participants' families in the research questions. Despite attempting to approach the variables from a broad perspective in the study, the relationships between these variables

can be influenced by other variables such as attachment, anxiety, and depression. It is also recommended to conduct longitudinal studies to understand the long-term effects of problematic social media use, which holds a significant place in the literature. In future studies, we believe that using these variables could lead to a better understanding of the model. Another limitation is that the study was conducted with participants from different cities in Türkiye, and despite problematic social media use being a global issue, there has not been a worldwide study. These relationships can vary from a cultural, a belief, and a religious perspective. Therefore, the research forms a limited generalization based on Türkiye. Finally, this study used a non-probability sampling method. Although this sampling limits generalizability, it allowed us to recruit students who met the inclusion criteria. To address this limitation, we highlight the need for future research to use probability sampling to improve representativeness.

## 9. Conclusion

Achievement orientations, influenced by both internal (learning) and external (performance) motivation, play an important role in personal development and psychological well-being. These orientations contribute to higher life satisfaction and help mitigate behavioural problems, reinforcing the importance of goal-setting and self-regulation. This study found no direct relationship between learning orientation and life satisfaction. However, PSMU significantly weakened this relationship, suggesting that excessive engagement with social media may disrupt goal-directed behaviors and emotional stability. The spread of disinformation and detachment from reality through social media platforms further exacerbates these negative effects, highlighting an urgent need for intervention models that foster resilience and digital literacy. An important finding is that high school students experience a greater decline in life satisfaction due to PSMU compared to university students, emphasizing the vulnerability of younger individuals to digital overuse. This suggests the importance of educational programs that promote responsible social media habits, ensuring that adolescents develop the necessary skills to navigate online spaces without compromising their well-being. Given the associations between achievement orientations, PSMU, and life satisfaction, future research should examine demographic variations, explore longitudinal patterns, and assess protective factors that may mitigate the negative impacts of excessive social media use. Integrating personalized intervention strategies could enhance individuals' ability to balance achievement goals with digital engagement, fostering both life satisfaction and academic success.

## CRedit authorship contribution statement

**Orçun Muhammet ŞİMŞEK:** Writing – review & editing, Writing – original draft, Methodology, Conceptualization. **Nurefşan GÜMÜŞÇÜ:** Writing – review & editing, Writing – original draft, Methodology, Conceptualization. **Orhan KOÇAK:** Writing – review & editing, Writing – original draft, Visualization, Validation, Supervision, Formal analysis, Data curation, Conceptualization. **Abdulmohsen Mohammed Abdullah Alkhulayfi:** Writing – review & editing. **Juan Gómez-Salgado:** Writing – review & editing. **Murat Yıldırım:** Writing – review & editing, Writing – original draft, Validation, Supervision.

## Informed consent

Consent was obtained from all participants included in the study.

## Ethics statement

All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and national research committee and with the 1964 Helsinki Declaration and its later amendments or comparable ethical standards. The study

protocol was approved by the Institutional Review Board of Istanbul University-Cerrahpasa (approval reference number: E-74555795-050.01.04-119,392).

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## Declaration of competing interest

The authors declare no conflict of interest.

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## Data availability

Data will be made available on request.

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