ORIGINAL ARTICLE

TIKTOK USE INTENSITY AND LEARNING BEHAVIOR AMONG JUNIOR SECONDARY STUDENTS: A CORRELATIONAL STUDY

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ABSTRACT
Short-video social media has become embedded in adolescents' daily routines, raising questions about whether intensive use is compatible with productive learning behavior. This quantitative cross-sectional correlational study examined the association between TikTok use intensity and learning behavior among 128 Grade VIII students at SMP Negeri 4 Comal, selected from a population of 244 students through a probability-based random approach. Data were collected using paper-based four-point Likert questionnaires that were piloted before the main study and analyzed using descriptive statistics and simple linear regression in IBM SPSS Statistics 27. The reported model indicated a positive and statistically significant association, $F(1, 126) = 26.610$, $p < .001$, $R = .418$, and $R2 = .174$, showing that TikTok use intensity accounted for 17.4% of the variance in learning behavior. Because the design was observational and cross-sectional, the finding should be interpreted as an association rather than a causal effect. The results suggest that high TikTok use is not necessarily incompatible with favorable learning behavior, but they also underscore the importance of self-regulation, purposeful media use, digital literacy, and balanced time management. The context-specific design and self-report measures limit generalization beyond the study setting.

Keywords: correlational study, learning behavior, social media, TikTok use intensity

INTRODUCTION

Learning behavior comprises the observable and self-regulated actions through which students organize participation in learning, sustain attention, complete academic tasks, review material, and manage study time. These actions are important because academic functioning is not determined only by cognitive ability; it also depends on how learners plan, monitor, and regulate their behavior in response to competing demands. Self-regulated learning theory frames effective learners as active agents who set goals, select strategies, monitor progress, and regulate motivation and behavior (Zimmerman, 2002). Later syntheses similarly emphasize that self-regulated learning integrates cognitive, metacognitive, behavioral, motivational, and affective processes (Panadero, 2017). In the Indonesian school context, studies have likewise linked learning behavior with classroom routines, self-management, and educational outcomes (Aulia & Sylvia, 2025; Pratiwi et al., 2022; Septian & Wibisono, 2021).

The contemporary learning environment, however, extends beyond classrooms and textbooks. Adolescents move continuously between schoolwork, messaging, entertainment, and social-media platforms, creating a learning ecology in which digital media can either support or disrupt academic routines. Evidence concerning digital-media exposure is mixed. A systematic review and meta-analysis found that some screen activities were inversely associated with academic performance, although the association varied by type of activity rather than reflecting a uniform effect of all screen media (Adelantado-Renau et al., 2019). A meta-analysis of social-network-site use likewise reported only a small overall negative association with academic achievement and showed that estimates differed according to how social-media use was measured (Huang, 2018). A literature review focused on secondary school students reached a similar conclusion: social networking can have both positive and negative academic consequences depending on patterns and purposes of use (Astatke et al., 2023).

This heterogeneity is theoretically important. Social media can be academically useful when it facilitates access to information, peer communication, explanations, or learning resources, yet the same platforms can compete for time and attention. Context-sensitive findings illustrate this duality. Luo et al. (2020) found that adolescents' social-media behavior outside school and inside school showed different relationships with academic performance, suggesting that the educational meaning of use cannot be inferred from exposure alone. In a large adolescent sample, Sampasa-Kanyinga et al. (2019) also showed that heavier social-media use was associated with poorer school outcomes, whereas more limited use was not uniformly detrimental. More recent experience-sampling evidence indicates that social media can reduce time devoted to school-related obligations without necessarily translating into lower academic performance in every context (Mayen et al., 2025). These findings caution against a simple assumption that more digital-media use is always beneficial or always harmful.

TikTok adds a more specific layer to this debate because its short-video format, personalized recommendation system, rapid content turnover, and continuous scrolling can generate intensive engagement. Psychological research on TikTok has emphasized the importance of platform affordances and user motives rather than treating all use as equivalent (Montag et al., 2021). Uses-and-gratifications research among pre-adolescents and adolescents found that entertainment and affective gratifications are prominent motives for TikTok engagement, alongside participatory and contributory behaviors (Bucknell Bossen & Kottasz, 2020). A large survey of TikTok users also identified motives such as novelty, trend participation, socially rewarding self-presentation, and escapist use (Scherr & Wang, 2021). Consequently, two students with similar daily intensity scores may be engaging with very different content and may experience different educational consequences.

Short-video research further demonstrates why intensity should be interpreted carefully. Xu et al. (2023) reported that more intensive short-video application use predicted poorer academic performance and some aspects of cognitive functioning among adolescents, with younger users showing particular susceptibility. Chao et al. (2023), however, found an important distinction between moderate and addictive use: adolescents classified as addictive users displayed poorer psychosocial and school-related outcomes, while moderate users did not uniformly differ from non-users in school performance. Indonesian studies also document associations between TikTok or social-media use and learning behavior, motivation, addictive tendencies, and educational outcomes (Agustiah et al., 2020; Hadith & Rahmat, 2023; Rahmayani et al., 2021; Shiddiq & Taufik, 2024). Taken together, this literature suggests that intensity is meaningful but insufficient by itself to explain whether TikTok is educationally supportive, neutral, or disruptive.

One plausible risk mechanism is attentional fragmentation. Media multitasking has been associated with weaker cognitive control and academic functioning in youth (van der Schuur et al., 2015). Experimental and observational work has shown that heavy media multitaskers can be more susceptible to interference from irrelevant information (Ophir et al., 2009), while adolescents who multitask with social media may show poorer academic performance partly through reduced attention control (Kokoç, 2021). Similar patterns have been reported when adolescents multitask with media while completing homework (Martín-Perpiñá et al., 2019). Among university students, social-media multitasking has also been negatively associated with academic performance (Lau, 2017), and direct observation of students' study behavior showed frequent technology-induced task switching (Rosen et al., 2013). Earlier work on Facebook use likewise raised concerns about lower study time and academic performance among users (Kirschner & Karpinski, 2010). These studies do not prove that TikTok intensity causes poor learning behavior, but they provide a credible competing explanation based on displacement and interruption.

A second mechanism points in the opposite direction: students may use social media purposefully and regulate its place within their learning routines. From a uses-and-gratifications perspective, media users actively select platforms to satisfy information, entertainment, social, and identity-related needs (Bucknell Bossen & Kottasz, 2020; Scherr & Wang, 2021). From a self-regulated learning perspective, students differ in their capacity to control attention, schedule study, monitor progress, and manage digital distractions (Panadero, 2017; Zimmerman, 2002). Thus, high TikTok intensity might coexist with favorable learning behavior among students who can separate entertainment from study time or who selectively use the platform for informational and motivational purposes. This possibility is consistent with evidence that the academic implications of digital-media use depend on context, user characteristics, and specific patterns of engagement rather than total exposure alone (Astatke et al., 2023; Luo et al., 2020; Mayen et al., 2025).

The existing literature therefore leaves a contextual and measurement gap. First, evidence on social media and academic functioning is heterogeneous across platforms, age groups, educational settings, and outcomes. Second, short-video studies often focus on problematic or addictive use, cognitive outcomes, or academic achievement, whereas learning behavior includes broader day-to-day routines such as attention, task completion, study discipline, and time management. Third, there remains value in examining platform-specific associations among junior secondary students in local school contexts rather than generalizing from university samples or from social media as an undifferentiated category. The present study addresses this narrower gap by examining whether TikTok use intensity is statistically associated with learning behavior among Grade VIII students at SMP Negeri 4 Comal. The study does not test whether TikTok causes changes in learning behavior; instead, it estimates the direction and magnitude of the relationship and interprets the finding against competing perspectives of media displacement, uses and gratifications, and self-regulated learning. The objective of this study is therefore to determine the association between TikTok use intensity and learning behavior among Grade VIII students in the study setting.

METHOD

This study employed a quantitative, cross-sectional correlational design. The design was selected because the objective was to estimate the statistical association between TikTok use intensity and learning behavior without manipulating exposure or assigning students to experimental conditions. The study population comprised 244 Grade VIII students at SMP Negeri 4 Comal. The target main sample was 128 students, while a separate group of 32 students with characteristics similar to the target participants was used for instrument piloting and was not included in the main analysis.

The source manuscript states that a probability-based random sampling approach was used, but earlier versions alternated between proportional random sampling and simple random sampling. The sample size of 128 was retained from the revised source manuscript and should be interpreted within the defined single-school population rather than as a nationally representative sample.

Data were collected using paper-based self-report questionnaires. TikTok use intensity and learning behavior were measured with four-point Likert-type response options: Strongly Agree, Agree, Disagree, and Strongly Disagree. The pilot study was used to evaluate item validity through corrected item-total correlations and internal consistency through Cronbach's alpha. Providing these psychometric details is necessary because reliability and construct representation affect the interpretation of the regression results.

Data analysis was conducted using IBM SPSS Statistics 27. Descriptive statistics were calculated for TikTok use intensity and learning behavior, followed by diagnostic checks

reported in the source manuscript. Residual normality was assessed using the Kolmogorov-Smirnov test, and linearity was examined through the deviation-from-linearity statistic. A Levene test was also reported as a supplementary variance check. The principal inferential analysis was simple linear regression, with learning behavior as the outcome and TikTok use intensity as the predictor. Statistical significance was evaluated at alpha = .05. The revised manuscript uses one consistent set of model statistics throughout: $F(1, 126) = 26.610$, $p < .001$, $R = .418$, $R2 = .174$, and the regression equation $Y = 50.732 + 0.267X$.

Because the participants were Grade VIII students, ethical safeguards for research involving minors should be stated explicitly. No ethical approval details are available in the supplied manuscript, so they cannot be reconstructed without author documentation.

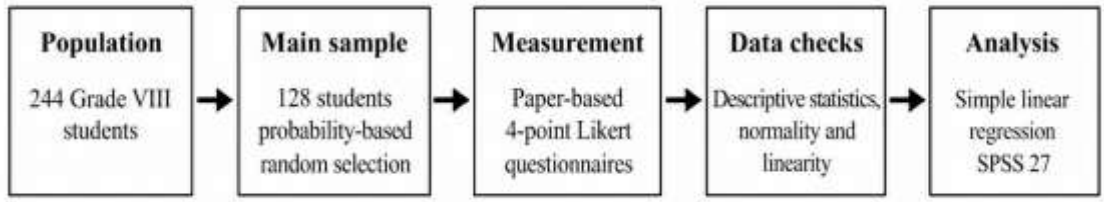

Figure 1. Research Procedure

RESULTS AND DISCUSSION

Results

The final analytic sample comprised 128 Grade VIII students, including 58 male students (45.3%) and 70 female students (54.7%). Table 1 presents the descriptive statistics. Learning behavior scores ranged from 49 to 87, with a mean of 69.12 (SD = 7.463), whereas TikTok use intensity scores ranged from 38 to 91, with a mean of 68.73 (SD = 11.651).

Table 1. Descriptive Statistics of the Research Variables

Variable	N	Minimum	Maximum	Mean	SD
Learning behavior	128	49	87	69.12	7.463
TikTok use intensity	128	38	91	68.73	11.651

For TikTok use intensity, the revised source manuscript retained the verified statement that 83 students (64.84%) were classified in the high category. Because the original category table contained frequencies and percentages that did not sum correctly, the remaining 45 students (35.16%) are presented as a combined group until the original dataset is checked. This conservative presentation avoids assigning students to unverified category intervals.

Table 2. Distribution of TikTok Use Intensity

Category	Frequency	Percentage
High (reported interval: 66-85)	83	64.84%
Other categories combined	45	35.16%
Total	128	100.00%

Learning behavior showed a concentration in the higher categories. Eighty-three students (64.8%) were in the high category, 40 students (31.3%) were in the very high category, five students (3.9%) were in the low category, and no students were in the very low category. The distribution shown in Table 3 sums to the full sample of 128 students.

Table 3. Distribution of Learning Behavior Scores

Score interval	Frequency	Percentage	Category
22-38	0	0.0%	Very low
39-55	5	3.9%	Low
56-72	83	64.8%	High
73-88	40	31.3%	Very high
Total	128	100.0%	-

The Kolmogorov-Smirnov test of the unstandardized residual yielded a statistic of .051 with p = .200 (Table 4). On the basis of the reported test, the residual distribution did not show a statistically significant departure from normality. The linearity analysis also supported use of a linear model because the deviation-from-linearity test was not statistically significant, F = 1.405, p = .095 (Table 5).

Table 4. Normality Test of Regression Residuals

Statistic	Unstandardized residual
N	128
Kolmogorov-Smirnov statistic	.051
Asymp. Sig. (2-tailed)	.200

Table 5. Linearity Test

Source	Sum of squares	df	Mean square	F	p
Between groups (combined)	3541.535	41	86.379	2.103	.002
Linearity	1233.321	1	1233.321	30.032	< .001
Deviation from linearity	2308.214	40	57.705	1.405	.095
Within groups	3531.707	86	41.066	-	-
Total	7073.242	127	-	-	-

The Levene test based on the mean was not statistically significant (p = .081), with the alternative median and trimmed-mean versions also exceeding .05 (Table 6). This statistic is retained as a supplementary diagnostic because homogeneity of group variances is not the central assumption of a simple regression with a continuous predictor; the behavior of regression residuals and the linearity of the relation are more directly relevant to model interpretation.

Table 6. Variance Homogeneity Check

Basis	Levene statistic	df1	df2	p
Mean	2.300	3	124	.081
Median	2.197	3	124	.092
Median (adjusted df)	2.197	3	106.637	.093
Trimmed mean	2.210	3	124	.090

Simple linear regression indicated a positive and statistically significant association between TikTok use intensity and learning behavior, F(1, 126) = 26.610, p < .001. The reported regression equation was Y = 50.732 + 0.267X. The correlation coefficient was R = .418 and the coefficient of determination was R2 = .174, indicating that TikTok use intensity accounted for

17.4% of the observed variance in learning behavior. The null hypothesis of no linear association was therefore rejected. Tables 7 and 8 summarize the model. The effect should be interpreted as a context-specific predictive association rather than a causal effect.

Table 7. Simple Linear Regression Model

Model information	Reported value	Interpretation
Intercept (constant)	50.732	Regression constant
Slope for TikTok use intensity	.267	Positive slope
F(1, 126)	26.610	Model test
p	< .001	Statistically significant
Regression equation	Y = 50.732 + 0.267X	Learning behavior predicted from TikTok intensity

Table 8. Model Summary

R	R2	Variance explained	Variance not explained
.418	.174	17.4%	82.6%

Discussion

The principal finding was a positive association between TikTok use intensity and learning behavior in this sample. Students who reported greater TikTok use intensity also tended to report more favorable learning behavior, although the model explained only 17.4% of the variance. This direction differs from the simple expectation that greater digital-media exposure necessarily undermines academic functioning. Meta-analytic and review evidence already indicates that the relationship between social-media use and academic outcomes is generally small and heterogeneous (Adelantado-Renau et al., 2019; Astatke et al., 2023; Huang, 2018). The present result is therefore best understood as another context-specific pattern rather than as evidence that intensive TikTok use is educationally beneficial in itself.

Several comparisons with prior research help clarify the finding. Luo et al. (2020) showed that social-media behavior can have divergent academic associations depending on whether and how it occurs inside or outside school. Mayen et al. (2025) similarly found that some forms of digital-media use displaced time devoted to schoolwork without producing uniformly poorer academic outcomes. Chao et al. (2023) distinguished moderate short-video users from addictive users and reported that adverse school and psychosocial outcomes were concentrated among the addictive group rather than among all users. These studies suggest that a single intensity score may combine different user profiles. In the present study, students with high intensity could include those who use TikTok for entertainment, those who consume informational or motivational content, and those who simply integrate the platform into otherwise well-regulated routines.

At the same time, the positive coefficient should not be used to dismiss evidence of risk. Xu et al. (2023) found that heavier short-video application use predicted poorer academic performance and cognitive functioning among adolescents, particularly younger users. Studies of broader media multitasking also report attentional and academic costs (Kokoç, 2021; Martín-Perpiñá et al., 2019; van der Schuur et al., 2015). Heavy media multitaskers may have greater difficulty filtering irrelevant information (Ophir et al., 2009), and direct observation of study sessions shows that social media and messaging can induce frequent task switching (Rosen et al., 2013). Comparable negative associations have been reported among university students for social-media multitasking (Lau, 2017) and in earlier work relating social-network use to academic performance (Kirschner & Karpinski, 2010). The current study did not measure

multitasking during study, cognitive control, or addictive use, so it cannot determine whether such mechanisms were present among the participants.

The Uses and Gratifications perspective provides one plausible interpretation of why high use intensity can coexist with favorable learning behavior. TikTok users engage with the platform for multiple gratifications, including entertainment, novelty, self-expression, social recognition, and information seeking (Bucknell Bossen & Kottasz, 2020; Montag et al., 2021; Scherr & Wang, 2021). If a subset of students uses TikTok for tutorials, study motivation, explanations, or peer-oriented learning content, intensity may reflect both entertainment and potentially useful exposure. However, the present instrument measured intensity rather than content type or purpose, so this mechanism remains an interpretation rather than a tested explanation. Indonesian studies that have connected TikTok or social-media use with learning behavior and academic motivation similarly indicate that the educational meaning of use should be examined rather than inferred solely from access frequency (Agustiah et al., 2020; Hadith & Rahmat, 2023; Shiddiq & Taufik, 2024).

Self-regulated learning offers a second explanatory lens. Effective self-regulation involves planning, goal setting, strategic action, monitoring, and control over environmental distractions (Panadero, 2017; Zimmerman, 2002). Students with stronger self-regulation may be able to maintain study routines while also using TikTok frequently, whereas students with weaker attention control may be more vulnerable to digital interruption. Kokoç (2021) found that attention control mediated the association between social-media multitasking and academic performance among adolescents, and Ning and Inan (2024) reported that self-control was important in explaining the academic consequences of social-media addiction among college students. Although the populations and measures differ from the present study, these findings reinforce the need to examine regulation as a potential moderator or mediator in future research.

The descriptive results also warrant careful interpretation. Nearly two thirds of participants were categorized as high-intensity TikTok users, while most students simultaneously reported high or very high learning behavior. This coexistence is important because it challenges a deterministic framing in which digital-media intensity automatically implies weak learning routines. Yet it should not be taken as proof that TikTok strengthens learning behavior. The single-school, cross-sectional design cannot establish temporal ordering, and common-method self-report measurement may inflate associations if students respond consistently across both questionnaires. In addition, 82.6% of variance in learning behavior remained unexplained by TikTok use intensity, indicating that motivation, family support, teacher practices, peer context, socioeconomic resources, self-regulation, and other factors are likely to be influential. Studies of school connectedness and digital use likewise show that associations depend on age, intensity, and contextual conditions (Sampasa-Kanyinga et al., 2019).

The practical implication is therefore one of balanced digital guidance rather than either prohibition or encouragement of greater TikTok use. Schools and families can emphasize purposeful selection of content, boundaries around study periods, attention management, and digital literacy. Evidence linking screen-time patterns and media multitasking to academic outcomes supports the value of considering how, when, and alongside what activities digital media are used (Marciano & Camerini, 2021). Research on addictive or problematic patterns also suggests that educators should distinguish ordinary or moderate use from compulsive engagement (Chao et al., 2023; Rahmayani et al., 2021). Because the current study did not test an intervention, educational-content exposure, or parental supervision, these recommendations should be treated as plausible applications rather than demonstrated treatment effects.

Future studies should move beyond a single global intensity score. Multi-school and longitudinal designs could distinguish directionality and improve transferability. Measures should separate duration, frequency, active versus passive use, entertainment versus educational

content, algorithmic reliance, and multitasking during study. Including self-regulation, attention control, motivation, parental support, and school connectedness would permit multivariable models that test whether these factors mediate or moderate the relationship between TikTok use and learning behavior. Such designs would also make it possible to reconcile the current positive association with studies reporting adverse associations for short-video use, media multitasking, or addictive social-media engagement (Chao et al., 2023; Xu et al., 2023).

CONCLUSION

This study found a positive and statistically significant association between TikTok use intensity and learning behavior among 128 Grade VIII students in the study setting, with the reported model explaining 17.4% of the variance in learning behavior (R = .418, R2 = .174). The result indicates that intensive TikTok use was not automatically incompatible with favorable learning behavior in this sample, but the cross-sectional correlational design does not establish that greater TikTok use causes better learning behavior. The finding should instead be interpreted alongside evidence that the educational implications of social media depend on purpose, content, self-regulation, attentional control, and the distinction between moderate and problematic use. Schools and families may use the result to support purposeful media selection, digital literacy, and balanced time management rather than to encourage greater platform exposure. Transferability is limited by the single-school setting, self-report measurement, unverified content or purpose of TikTok use, and the large proportion of unexplained variance. Future research should employ multi-school and longitudinal designs and include self-regulation, motivation, family and peer factors, content type, and multitasking behavior to clarify when intensive short-video use is associated with productive or disruptive learning patterns.

REFERENCES

Adelantado-Renau, M., Moliner-Urdiales, D., Cavero-Redondo, I., Beltran-Valls, M. R., Martínez-Vizcaíno, V., & Álvarez-Bueno, C. (2019). Association between screen media use and academic performance among children and adolescents: A systematic review and meta-analysis. *JAMA Pediatrics*, *173*(11), 1058-1067. https://doi.org/10.1001/jamapediatrics.2019.3176

Agustiah, D., Fauzi, T., & Ramadhani, E. (2020). The impact of social media use on student learning behavior. *Islamic Counseling: Jurnal Bimbingan Konseling Islam*, *4*(2), 181-190. https://doi.org/10.29240/jbk.v4i2.1935

Astatke, M., Weng, C., & Chen, S. (2023). A literature review of the effects of social networking sites on secondary school students' academic achievement. *Interactive Learning Environments*, *31*(4), 2153-2169. https://doi.org/10.1080/10494820.2021.1875002

Aulia, M., & Sylvia, I. (2025). Analysis of changes in the learning behavior of Gen Z students in the sociology learning process. *Education: Journal of Education and Pedagogy*, *4*(2), 371-382. https://doi.org/10.24036/nara.v4i2.345

Bucknell Bossen, C., & Kottasz, R. (2020). Uses and gratifications sought by pre-adolescent and adolescent TikTok consumers. *Young Consumers*, *21*(4), 463-478. https://doi.org/10.1108/YC-07-2020-1186

Chao, M., Lei, J., He, R., Jiang, Y., & Yang, H. (2023). TikTok use and psychosocial factors among adolescents: Comparisons of non-users, moderate users, and addictive users. *Psychiatry Research*, *325*, 115247. https://doi.org/10.1016/j.psychres.2023.115247

Hadith, S., & Rahmat, T. (2023). The effect of social media use on mathematics learning achievement of grade VII students of SMP N 2 Payakumbuh. *Journal of Educational Management and Strategy*, *2*(1), 1-10. https://doi.org/10.57255/jemast.v2i1.228

Huang, C. (2018). Social network site use and academic achievement: A meta-analysis. *Computers & Education*, *119*, 76-83. https://doi.org/10.1016/j.compedu.2017.12.010

Kirschner, P. A., & Karpinski, A. C. (2010). Facebook and academic performance. *Computers in Human Behavior*, *26*(6), 1237-1245. https://doi.org/10.1016/j.chb.2010.03.024

Kokoç, M. (2021). The mediating role of attention control in the link between multitasking with social media and academic performances among adolescents. *Scandinavian Journal of Psychology*, *62*(4), 493-501. https://doi.org/10.1111/sjop.12731

Lau, W. W. F. (2017). Effects of social media usage and social media multitasking on the academic performance of university students. *Computers in Human Behavior*, *68*, 286-291. https://doi.org/10.1016/j.chb.2016.11.043

Luo, J., Liang, L., & Li, H. (2020). The divergent roles of social media in adolescents' academic performance. *Journal of Research in Childhood Education*, *34*(2), 167-182. https://doi.org/10.1080/02568543.2019.1703124

Marciano, L., & Camerini, A.-L. (2021). Recommendations on screen time, sleep and physical activity: Associations with academic achievement in Swiss adolescents. *Public Health*, *198*, 211-217. https://doi.org/10.1016/j.puhe.2021.07.027

Martín-Perpiñá, M. M., Viñas Poch, F., & Malo Cerrato, S. (2019). Media multitasking impact in homework, executive function and academic performance in Spanish adolescents. *Psicothema*, *31*(1), 81-87. https://doi.org/10.7334/psicothema2018.178

Mayen, S., Reinhardt, A., & Wilhelm, C. (2025). The complexities of digital media use in adolescents' learning and academic performance: An experience sampling study. *Computers & Education*, *238*, 105411. https://doi.org/10.1016/j.compedu.2025.105411

Montag, C., Yang, H., & Elhai, J. D. (2021). On the psychology of TikTok use: A first glimpse from empirical findings. *Frontiers in Public Health*, *9*, 641673. https://doi.org/10.3389/fpubh.2021.641673

Ning, W., & Inan, F. A. (2024). Impact of social media addiction on college students' academic performance: An interdisciplinary perspective. *Journal of Research on Technology in Education*, *56*(5), 616-631. https://doi.org/10.1080/15391523.2023.2196456

Ophir, E., Nass, C., & Wagner, A. D. (2009). Cognitive control in media multitaskers. *Proceedings of the National Academy of Sciences of the United States of America*, *106*(37), 15583-15587. https://doi.org/10.1073/pnas.0903620106

Panadero, E. (2017). A review of self-regulated learning: Six models and four directions for research. *Frontiers in Psychology*, *8*, 422. https://doi.org/10.3389/fpsyg.2017.00422

Pratiwi, E. Y. R., Nursalim, M., & Sujarwanto, S. (2022). The application of neuropsychology to solving learning behavior problems of elementary school students. *Jurnal Basicedu*, *6*(4), 5918-5925. https://doi.org/10.31004/basicedu.v6i4.3165

Rahmayani, M., Ramdhani, M., & Lubis, F. O. (2021). The effect of using the TikTok application on student addictive behavior. *Syntax Literate: Jurnal Ilmiah Indonesia*, *6*(7), 3327. https://doi.org/10.36418/syntax-literate.v6i7.3563

Rosen, L. D., Carrier, L. M., & Cheever, N. A. (2013). Facebook and texting made me do it: Media-induced task-switching while studying. *Computers in Human Behavior*, *29*(3), 948-958. https://doi.org/10.1016/j.chb.2012.12.001

Sampasa-Kanyinga, H., Chaput, J.-P., & Hamilton, H. A. (2019). Social media use, school connectedness, and academic performance among adolescents. *The Journal of Primary Prevention*, *40*(2), 189-211. https://doi.org/10.1007/s10935-019-00543-6

Scherr, S., & Wang, K. (2021). Explaining the success of social media with gratification niches: Motivations behind daytime, nighttime, and active use of TikTok in China. *Computers in Human Behavior*, *124*, 106893. https://doi.org/10.1016/j.chb.2021.106893

Septian, N., & Wibisono, A. (2021). Review of factors that shape the learning behavior of Generation Z students in the classroom. *Research and Development Journal of Education*, *7*(2), 316. https://doi.org/10.30998/rdje.v7i2.9434

Shiddiq, S., & Taufik, M. (2024). The effect of instant gratification of the TikTok application on student learning behavior. *Journal of Management in Islamic Education*, *5*(3), 299-306. https://doi.org/10.32832/idarah.v5i3.16625

van der Schuur, W. A., Baumgartner, S. E., Sumter, S. R., & Valkenburg, P. M. (2015). The consequences of media multitasking for youth: A review. *Computers in Human Behavior*, *53*, 204-215. https://doi.org/10.1016/j.chb.2015.06.035

Xu, Z., Gao, X., Wei, J., Liu, H., & Zhang, Y. (2023). Adolescent user behaviors on short video application, cognitive functioning and academic performance. *Computers & Education*, *203*, 104865. https://doi.org/10.1016/j.compedu.2023.104865

Zimmerman, B. J. (2002). Becoming a self-regulated learner: An overview. *Theory Into Practice*, *41*(2), 64-70. https://doi.org/10.1207/S15430421TIP4102_2