

The Effectiveness of Self-Regulation-Based Group Guidance in Reducing Students' Tendency Towards Excessive Digital Device Use

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Submitted: 2026-06-30 Revised: 2026-07-11 Published: 2026-08-01 Keywords: Adolescents, Digital Device Use, Group Guidance, Self-Regulation Copyright holder: © Author/s (2026) This article is under:  How to cite: Nisa, F. K., Widiharto, C. A., & Rakhmawati, E. (2026). The Effectiveness of Self-Regulation Based Group Guidance in Reducing Students' Tendency Towards Excessive Digital Device Use. <i>Bulletin of Counseling and Psychotherapy</i>, 8(2). https://doi.org/10.51214/002026082103000 Published by: Kuras Institute E-ISSN: 2656-1050	ABSTRACT: Excessive digital device use has become an increasing concern among students due to its negative effects on concentration, social interaction, and self-regulation. This study investigated the effectiveness of self-regulation-based group guidance in reducing students' tendency toward excessive digital device use. A quantitative quasi-experimental pretest–posttest control-group design was employed involving 16 junior secondary school students, who were equally assigned to experimental and control groups. Data were collected using the Digital Device Use Tendency Scale (Cronbach's $\alpha = .931$) and analysed using tests of normality and homogeneity, paired-samples <i>t</i>-tests, and independent-samples <i>t</i>-tests. The experimental group demonstrated greater improvement than the control group, as reflected in a higher normalized gain score (50.38% vs. 43.49%) and a statistically significant difference between groups ($p = .039$). These findings suggest that self-regulation-based group guidance is effective in reducing students' tendency toward excessive digital device use and offers a promising school-based preventive intervention for promoting healthier digital behavior.
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INTRODUCTION

The rapid advancement of digital technology has fundamentally transformed how adolescents communicate, access information, establish social relationships, and engage in academic activities. Widespread internet access, coupled with increasing smartphone ownership, has made digital devices an integral part of everyday life. Within educational settings, digital devices serve not only as communication tools but also as learning resources, providing access to a wide range of digital learning materials, learning management systems, and collaborative applications. These technological developments enable students to obtain information more efficiently, interact in real time, and experience learning that is increasingly flexible, independent, and learner-centered (Bond et al., 2021; Crompton & Burke, 2018; Tong et al., 2023).

This phenomenon has become increasingly evident worldwide as internet penetration and mobile device use among adolescents have grown rapidly. The Digital 2024 Global Overview Report revealed that more than 5 billion people worldwide are connected to the internet, with adolescents among the most active user groups. Globally, the average daily internet usage now exceeds six hours, while smartphones have become the primary means of accessing social media, entertainment, communication, and various educational activities (Kemp, 2024). Similarly, data published by the Indonesian Internet Service Providers Association (*Asosiasi Penyelenggara Jasa Internet Indonesia*) indicate that internet penetration among adolescents aged 13–18 years has

surpassed 87% (Asosiasi Penyelenggara Jasa Internet Indonesia, 2024). These figures demonstrate that digital devices have become deeply embedded in students' daily lives, functioning not only as educational tools but also as essential media for communication, entertainment, and social interaction.

Despite their considerable educational and communicative benefits, uncontrolled use of digital devices may lead to a range of adverse consequences. Previous studies have consistently demonstrated that excessive digital device use is associated with increased learning distractions, procrastination in completing academic tasks, reduced concentration, and diminished self-control. Siebers et al. (2024) reported that fragmented patterns of digital device use contribute to greater distraction and task delay. Likewise, Hartanto et al. (2023) found that excessive digital device use is associated with impaired executive functioning, particularly in behavioral regulation, attentional control, and decision-making. Furthermore, Rodman et al. (2024) demonstrated that increased digital device use among adolescents is linked to changes in emotional regulation that may adversely affect psychological well-being.

Collectively, these findings suggest that excessive digital device use extends beyond an academic concern and has important implications for adolescents' psychological and social development. More broadly, psychological challenges experienced by adolescents often influence their capacity for adaptive self-management and educational adjustment. Evidence from psychoeducational research indicates that strengthening psychological competencies through preventive educational interventions can promote healthier behavioral outcomes and improve students' capacity to cope with developmental challenges (Rakhmawati et al., 2024; Widiarto et al., 2022).

A similar pattern was identified at SMP Negeri 4 Pemalang, Indonesia. Preliminary observations revealed that many students spent a considerable proportion of their leisure time playing online games, browsing social media, and engaging in prolonged scrolling activities rather than completing school assignments. Consequently, several students postponed their academic work for several days, and in some cases for up to one week. These behaviors indicate difficulties with time management, controlling the urge to use digital devices, and prioritizing academic responsibilities. These observations were further supported by the results of the Student Needs Assessment (Asesmen Kebutuhan Peserta Didik/AKPD) for the 2024/2025 academic year. Among 32 students in Class VIII H, 28 students (87.50%) demonstrated a high tendency toward excessive digital device use, while 23 students (71.88%) exhibited low levels of self-regulation. These findings indicate that the majority of students continue to experience difficulties in independently regulating their digital device use, highlighting the need for interventions that systematically strengthen students' self-regulatory capacities.

Self-regulation is widely recognized as one of the key psychological factors underlying individuals' ability to control their digital device use. Zimmerman (2000) defined self-regulations as an individual's capacity to consciously manage thoughts, emotions, and behaviors to pursue specific goals. In the context of digital device use, self-regulation enables students to resist the impulse to engage continuously with digital technologies, regulate the duration of their device use, and prioritize activities that support their academic objectives. Panadero (2017) further argued that self-regulation is a significant predictor of academic success because it enables individuals to continuously monitor, evaluate, and adjust their behavior.

Accordingly, self-regulation is a protective factor that helps prevent excessive use of digital devices among adolescents. This protective role of self-regulation is further supported by psychoeducational intervention studies demonstrating that improvements in self-regulated learning are accompanied by significant reductions in maladaptive academic behaviors, including procrastination, while simultaneously enhancing students' learning motivation and adaptive learning behaviors (Winey et al., 2024).

Previous studies have consistently reported an inverse relationship between self-regulation and excessive digital device use. Servidio (2021) demonstrated that lower levels of self-regulation are associated with a greater tendency to use digital devices excessively. Similarly, Xu et al. (2022) found that individuals with poor self-regulatory abilities are more susceptible to developing smartphone dependence.

In addition, Zhang et al. (2023) identified self-control as a protective factor against mobile phone addiction among adolescents, while Zhao et al. (2024) reported, in a longitudinal study, that improvements in self-control were associated with sustained reductions in problematic digital device use over time. Although these studies have established the importance of self-regulation, most have focused on examining associations between variables or on evaluating individually delivered self-regulation interventions.

Consequently, relatively little attention has been devoted to integrating self-regulation strategies into guidance and counseling services. Within school guidance and counseling, group guidance is an intervention that capitalizes on group dynamics to help students develop behavioral management skills, enhance self-awareness, and strengthen problem-solving abilities through discussion, reflection, constructive feedback, and shared learning experiences (Favini et al., 2024; Marmarosh, 2021). Interactions among group members provide opportunities to exchange experiences, reflect on personal behaviors, and receive social support, all of which facilitate positive behavioral change.

Incorporating self-regulation strategies into group guidance enables students to establish behavioral goals, monitor their digital device use, evaluate their progress, and strengthen essential self-regulatory processes, including self-monitoring, self-evaluation, and self-reinforcement, thereby supporting sustainable behavioral change (Panadero, 2017). Similar findings have been reported in other psychoeducational interventions that focus on strengthening psychological competencies. For example, web-based parenting interventions have been shown to enhance mindful parenting by promoting parents' self-regulatory capacities, thereby supporting more adaptive developmental outcomes among children (Handayani et al., 2023). Although these findings were obtained in a different population, they reinforce the importance of self-regulation as a central mechanism underlying behavioral change.

This perspective is supported by Busch and McCarthy (2021), who argued that interventions targeting internal psychological resources, such as self-regulation and self-control, are more effective in reducing problematic digital device use than approaches that rely solely on restricting access to digital technologies. Likewise, previous research has consistently shown that poor self-regulation is associated with higher levels of problematic digital device use and addictive digital media behaviors (Marino et al., 2021; Servidio, 2021).

Despite the growing body of evidence on the importance of self-regulation, studies investigating the integration of self-regulation strategies into group guidance interventions to reduce excessive digital device use among lower secondary school students remain limited, particularly within the context of school guidance and counseling services in Indonesia. Most previous studies have focused primarily on the relationship between self-regulation and digital device use or on individually delivered self-regulation interventions. This gap highlights the need for empirical research examining the effectiveness of self-regulation-based group guidance as a preventive intervention to promote healthy, adaptive, and responsible digital device use among adolescents.

Based on these considerations, the present study aimed to examine the effectiveness of self-regulation-based group guidance in reducing students' excessive use of digital devices. The findings are expected to contribute to the development of self-regulation-based guidance and counseling interventions and to expand the empirical evidence on the effectiveness of group guidance services in addressing problematic digital behaviors among adolescents in school settings. Although previous

studies have demonstrated the effectiveness of psychoeducational programs, parenting interventions, and group guidance in promoting adaptive psychological and behavioral outcomes (Handayani et al., 2023; Winei et al., 2024; Rakhmawati et al., 2024), limited empirical evidence has investigated self-regulation as the principal theoretical framework underpinning group guidance interventions designed specifically to reduce excessive digital device use among junior secondary school students. Consequently, further investigation is required to determine whether integrating self-regulation strategies into school group guidance programs can effectively address adolescents' problematic digital behaviors.

Rationale of the Study

Although excessive digital device use among adolescents has attracted increasing research attention, existing interventions have primarily emphasized behavioral restriction, digital literacy, or psychoeducational approaches. Comparatively little empirical evidence has examined counseling interventions that strengthen adolescents' self-regulation to promote sustainable behavioral change, particularly in school settings in Indonesia. Given that self-regulation is recognized as a key protective factor against problematic digital behavior, investigating its application in structured group guidance services is both timely and necessary. Therefore, this study evaluates the effectiveness of self-regulation-based group guidance in reducing students' excessive use of digital devices. By integrating self-regulation strategies, including goal setting, self-monitoring, behavioral control, and self-evaluation, the study contributes empirical evidence to school counseling practice. It offers a practical preventive approach for fostering healthier digital behavior among adolescents.

Research Aim and Hypothesis

This study aimed to examine the effectiveness of self-regulation-based group guidance in reducing students' tendency toward excessive use of digital devices. It further sought to determine whether students who participated in the intervention demonstrated greater improvement than those who received conventional school guidance services. The hypothesis of this study was that students who participated in self-regulation-based group guidance would demonstrate a significantly greater reduction in their tendency toward excessive digital device use than students who received conventional school guidance services.

METHODS

Design

This study employed a quantitative, quasi-experimental pretest–posttest control-group design to evaluate the effectiveness of self-regulation-based group guidance in reducing students' tendency toward excessive use of digital devices (Figure 1). Participants were allocated to either an experimental group or a control group according to predetermined inclusion criteria. Both groups completed pretest and posttest assessments, whereas only the experimental group received the self-regulation-based group guidance programme; the control group continued to receive the school's regular guidance services. As illustrated in Figure 1, this design enabled comparisons of changes in students' digital device use before and after the intervention while accommodating the practical constraints of conducting research in a natural school setting, where random assignment was not feasible (Creswell & Clark, 2017; Gopalan et al., 2020).

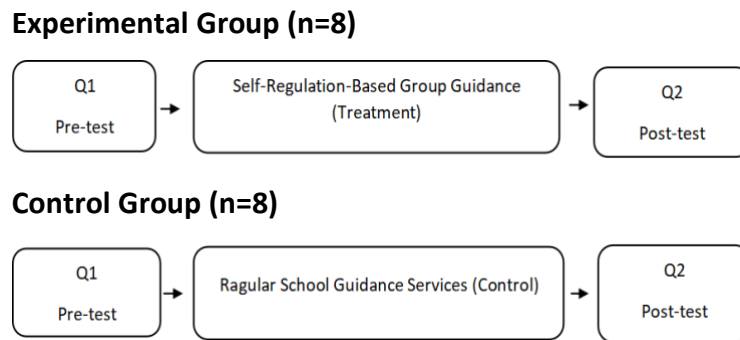


Figure 1. Flow Diagram of the Quasi-Experimental Pretest–Posttest Control-Group Design.

Participants

The participants were year 8 students enrolled at SMP Negeri 4 Pemalang, Indonesia, during the 2025/2026 academic year. The target population comprised 315 students distributed across ten classes. Participants were selected using purposive sampling, in which individuals were recruited based on characteristics relevant to the study's objectives (Gopalan et al., 2020). Participant selection was based on the results of the Student Needs Assessment, classroom observations, and recommendations provided by the school guidance and counseling teacher.

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Sixteen students were identified as demonstrating a high tendency toward excessive digital device use accompanied by low self-regulation. They were subsequently allocated equally to an experimental group ($n = 8$; six females, two males) and a control group ($n = 8$; five females, three males). All participants were between 13 and 15 years old, corresponding to the early adolescent developmental stage.

Table 1. Characteristics of the Participants

Characteristics	Experimental Group	Control Group	Total (N)
Gender	6 females; 2 males	5 females; 3 males	16
Age (years)	13–15	13–15	13-15
School year	Year 8	Year 8	Year 8
Inclusion criteria	Low self-regulation and a high tendency towards excessive digital device use	Low self-regulation and a high tendency towards excessive digital device use	Met the inclusion criteria

Participant Inclusion Criteria

Participants were selected through purposive sampling based on the results of the Student Needs Assessment, classroom observations, and recommendations from the school guidance and counseling teacher.

Instruments

Data were collected using questionnaires and documentation. The questionnaires were designed to measure self-regulation and students' tendency toward excessive use of digital devices.

The self-regulation instrument was developed based on self-regulation theory and Panadero's (2017) the self-regulated learning framework. It comprised five dimensions: planning, self-control, self-monitoring, self-evaluation, and self-reflection.

The digital device use instrument was developed based on Billieux (2012) the conceptualization of problematic smartphone use, behavioral addiction theory, and recent studies investigating problematic smartphone use among adolescents (Wang et al., 2024). Before administration, both instruments underwent expert review involving two university lecturers in guidance and counseling and one practicing school guidance and counseling teacher. The review evaluated content relevance, conceptual appropriateness, language clarity, and the suitability of each indicator.

Following the revision, the instruments were piloted with Year 8 students from Class VIII C at SMP Negeri 4 Pemalang. The validity analysis indicated that 26 of the 30 items for each instrument met the required validity criteria, while four items were removed. Internal consistency reliability was subsequently examined using Cronbach's alpha, yielding a coefficient of 0.931, indicating excellent reliability and confirming the suitability of the instruments for data collection (Taber, 2018).

Data Analysis

The data were analyzed using IBM SPSS Statistics version 26. Descriptive statistics were first employed to summarise participants' levels of self-regulation and excessive digital device use before and after the intervention. Before hypothesis testing, the assumptions of parametric analysis were examined using the Shapiro–Wilk test for normality and Levene's test for homogeneity of variance (Razali & Wah, 2011; Pallant, 2020).

Changes in pretest and posttest scores within each group were analyzed using paired-samples *t*-tests. In contrast, differences in intervention effectiveness between the experimental and control groups were examined using independent-samples *t*-tests. All statistical analyses were conducted at the 5% significance level ($\alpha = .05$). These analytical procedures were considered appropriate for comparing mean differences between two groups within a quasi-experimental pretest–posttest control-group design (Pallant, 2020).

RESULTS AND DISCUSSION

Result

Table 2 presents the descriptive statistics for the pretest and posttest scores of the experimental and control groups.

Table 2. Descriptive Statistics for the Pretest and Posttest Scores

Group	N	Pretest (M $\pm$ SD)	Posttest (M $\pm$ SD)	Gain
Experimental	8	54,88 $\pm$ 3,52	77,13 $\pm$ 6,13	22,25
Control	8	53,63 $\pm$ 2,88	71,50 $\pm$ 10,43	17,88

As shown in Table 2, both groups demonstrated improvements in their scores following the intervention period. The experimental group showed a mean score increase from 54.88 to 77.13, a gain of 22.25 points. In comparison, the control group showed an increase from 53.63 to 71.50, corresponding to a gain of 17.88 points. Descriptively, the experimental group showed greater improvement than the control group, suggesting that the self-regulation-based group-guidance program contributed to a greater reduction in students' tendency towards excessive digital device use.

Assumption Testing

Before hypothesis testing, the data were examined for normality and homogeneity to ensure that the assumptions underlying parametric statistical analyses were satisfied.

Table 3. Results of the Assumption Tests

Test	Significance	Interpretation
Pretest Normality (Control)	0,082	Normally distributed
Posttest Normality (Control)	0,399	Normally distributed
Pretest Normality (Experimental)	0,263	Normally distributed
Posttest Normality (Experimental)	0,748	Normally distributed
Homogeneity of Variance	0,822	Homogeneous

The Shapiro–Wilk normality test indicated that all p-values exceeded 0.05, confirming that the data were normally distributed. In addition, Levene's test yielded a p-value of .822 ($> .05$), indicating homogeneity of variance between the two groups. These findings confirm that the assumptions required for parametric statistical analyses were met.

Paired-Samples *t*-Test

Paired-samples *t*-tests were conducted to examine differences between the pretest and posttest scores within each group.

Table 4. Results of the Paired-Samples *t*-Test

Group	Mean Pretest	Mean Posttest	<i>t</i>	Sig.
Experimental	54,88	77,13	-10,257	0,000
Control	53,63	71,50	-4,955	0,002

As presented in Table 4, statistically significant differences were observed between the pretest and posttest scores in both groups. The experimental group demonstrated a mean increase of 22.25 points ($t = -10.257, p < .001$), whereas the control group showed an increase of 17.88 points ($t = -4.955, p = .002$). These findings indicate that both groups improved over the course of the study; however, the magnitude of improvement was greater among students who participated in the self-regulation-based group guidance program.

Effectiveness of Self-Regulation-Based Group Guidance

The effectiveness of the intervention was evaluated using N-gain scores and an independent-samples *t*-test to compare improvements between the experimental and control groups.

Table 5. Effectiveness of the Self-Regulation-Based Group Guidance Programme

Group	N	Mean N-Gain (%)	<i>t</i>	SD
Experimental	8	50,38		15,60
Control	8	43,49		13,47
Independent-Samples <i>t</i> -Test			<i>t</i> 1,337	Sign 0,039

The experimental group achieved a mean N-gain of 50.38%, whereas the control group obtained a mean N-gain of 43.49%. The independent-samples *t*-test revealed a statistically significant difference between the two groups ($p = .039, p < .05$), indicating that the intervention produced greater improvements than those observed in the control group. These findings suggest that self-regulation-based group guidance was more effective than the standard guidance services received by the control group in reducing students' tendency towards excessive digital device use.

Overall, the findings indicate that self-regulation-based group guidance strengthened students' self-regulatory abilities, which, in turn, was associated with a reduction in excessive digital device use. Accordingly, the study supports the hypothesis that self-regulation-based group guidance is an effective intervention for reducing students' tendency towards excessive digital device use.

Discussion

The present study examined the effectiveness of self-regulation-based group guidance in reducing excessive digital device use among junior secondary school students. The findings indicate that the intervention enhanced students' ability to regulate their use of digital devices. This was reflected in the greater improvement observed in the experimental group compared with the control group, with mean score increases of 22.25 and 17.88 points, respectively. Furthermore, the independent-samples *t*-test revealed a statistically significant difference between the two groups ($p = .039$), indicating that self-regulation-based group guidance produced greater improvements than the guidance services received by the control group.

These findings suggest that integrating self-regulation strategies into group guidance effectively supports students in developing greater control over their digital device use. Throughout the intervention, students were encouraged to recognize their patterns of digital device use, understand the consequences of excessive use, establish behavioral goals, monitor their daily digital habits, and evaluate their progress toward behavioral change. This intervention process is consistent with Zimmerman's (2000) self-regulation theory, which conceptualizes behavioral change as occurring through three interrelated phases: forethought, performance, and self-reflection. Progressing through these stages enabled students to strengthen behavioral self-control and gradually reduce maladaptive patterns of digital device use.

The present findings are consistent with previous research highlighting the critical role of self-regulation in managing excessive digital device use. Li et al. (2021) reported a negative association between self-regulation and problematic digital device use among adolescents, indicating that higher self-regulation is associated with lower levels of excessive digital device use. Similarly, Sun et al. (2022) found that self-control functions as an important mediating mechanism in reducing problematic digital device use. Together, these studies suggest that self-regulation and self-control operate as protective psychological resources that help adolescents manage unhealthy patterns of digital engagement.

The findings are further supported by Hartanto et al. (2023), who demonstrated that problematic digital device use is associated with poorer executive functioning, particularly in attentional control, impulse inhibition, and goal-directed behavior. Adolescents with stronger self-regulatory abilities are therefore better able to resist the temptation to continuously engage with digital devices despite competing academic and social demands. Accordingly, the improvement in self-regulation observed during the group guidance program represents an important mechanism underlying the reduction in excessive digital device use.

Further support comes from longitudinal evidence indicating that improvements in self-regulation are associated with sustained reductions in problematic digital device use. Xiao et al. (2025) reported that adolescents with higher self-regulation were less likely to develop problematic digital device use than those with lower self-regulation. These findings suggest that self-regulation functions not only as a predictor of behavioral outcomes but also as a psychological mechanism that facilitates long-term behavioral change.

The distinctive characteristics of group guidance may also explain the effectiveness of the present intervention. Group dynamics provided opportunities for students to exchange experiences, receive constructive feedback, engage in self-reflection, and receive social support from peers. Such interactions encouraged participants to learn collaboratively, critically evaluate

their own behaviors, and develop a shared commitment to regulating their digital device use. Consequently, behavioral change was reinforced not only through individual awareness but also through the social learning processes that emerged within the group. These findings are consistent with Hamamura et al. (2023), who demonstrated that interventions incorporating self-monitoring and reflective practices significantly reduced adolescents' digital device use.

Although the control group also demonstrated improvements following the study, the magnitude of change was smaller than that observed in the experimental group. This finding suggests that behavioral improvement cannot be attributed solely to students' natural development or routine educational experiences but may also be associated with participation in self-regulation-based group guidance. Accordingly, this intervention may represent a promising preventive strategy for school guidance and counseling practitioners seeking to promote healthy, purposeful, and responsible digital device use among adolescents.

The present study contributes to the development of school guidance and counseling practice by demonstrating that self-regulation strategies can be systematically integrated into group guidance programs to address adolescents' digital behavioral problems. Nevertheless, several limitations should be acknowledged. First, the relatively small sample size and the inclusion of participants from only one school limit the generalisability of the findings. Second, the intervention's effectiveness was evaluated only in the short term, preventing conclusions about the sustainability of behavioral change after program completion. Future studies should therefore recruit larger and more diverse samples from multiple schools and adopt longitudinal research designs to examine the long-term effectiveness of self-regulation-based group guidance in reducing excessive digital device use among adolescents.

Implications

The findings provide both theoretical and practical implications for guidance and counseling in addressing excessive digital device use among adolescents. Theoretically, the study reinforces self-regulation as a key psychological mechanism for controlling digital device use and extends its application by demonstrating that self-regulation-based group guidance effectively promotes positive behavioral change. Practically, the findings suggest that self-regulation-based group guidance can serve as an effective school counseling intervention. Strategies such as goal setting, self-monitoring, behavioral contracts, and self-reflection may be integrated into group guidance programs to encourage healthier and more responsible digital device use. Schools may also incorporate self-regulation enhancement into broader guidance and counseling services alongside character education and digital literacy initiatives to support students' independent learning, decision-making, and responsible digital engagement.

Limitations and Further Research

This study has several limitations that should be considered when interpreting its findings. First, the relatively small sample of 16 participants, equally divided between the experimental and control groups, limits the representativeness and generalisability of the results. Second, excessive digital device use was measured using self-report questionnaires, which, despite demonstrating satisfactory validity and excellent reliability, remain susceptible to subjective response bias, including social desirability bias. Third, the study was conducted in a single school, restricting the generalisability of the findings across different educational settings. Future research should therefore involve larger samples from multiple schools and diverse educational contexts, employ longitudinal designs to examine the sustainability of intervention effects, and combine self-report measures with more objective assessments, such as behavioral observations, interviews, or screen-time monitoring. Further studies are also encouraged to evaluate the effectiveness of self-regulation-based group guidance across different educational levels, student characteristics, and

school contexts to strengthen the evidence for its role in promoting healthy digital behavior among adolescents.

CONCLUSION

This study demonstrates that self-regulation-based group guidance is effective in reducing students' tendency toward excessive digital device use among junior secondary school students. By integrating self-regulation strategies into group guidance sessions, students developed greater competence in setting behavioral goals, monitoring their own behavior, evaluating their patterns of digital device use, and regulating their digital behavior more purposefully and responsibly. These findings indicate that strengthening self-regulation represents an effective approach to reducing excessive digital device use among adolescents. The study also contributes to the development of school guidance and counseling by providing empirical evidence that self-regulation-based group guidance is a promising intervention for addressing adolescents' digital behavioral challenges. Beyond reducing excessive digital device use, this approach can promote independent learning, informed decision-making, and responsible engagement with digital technologies. Accordingly, self-regulation-based group guidance is a relevant preventive strategy for supporting students' academic, social, and psychological development within an increasingly digital educational environment.

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AUTHOR CONTRIBUTIONS STATEMENT

FKN, ER, and CAW agree to the final version of this article.

REFERENCES

- Asosiasi Penyelenggara Jasa Internet Indonesia. (2024). *Laporan Survei Internet Indonesia 2024*. APJII. <https://apjii.or.id/>
- Billieux, J. (2012). Problematic Use of the Mobile Phone: A Literature Review and a Pathways Model. *Current Psychiatry Reviews*, 8(4), 299–307. <https://doi.org/10.2174/157340012803520522>
- Bond, M., Bedenlier, S., Marín, V. I., & Händel, M. (2021). Emergency Remote Teaching in Higher Education: Mapping the First Global Online Semester. *International Journal of Educational Technology in Higher Education*, 18(50), 1–24. <https://doi.org/10.1186/s41239-021-00282-x>
- Busch, P. A., & McCarthy, S. (2021). Antecedents and Consequences of Problematic Smartphone Use: A Systematic Literature Review of An Emerging Research Area. *Computers in Human Behavior*, 114(1), 1–47. <https://doi.org/10.1016/j.chb.2020.106414>
- Creswell, J. W., & Clark, V. L. P. (2017). *Designing and Conducting Mixed Methods Research* (H. Salmon (ed.); Third Edit). SAGE Publications. [Google Books](#)
- Crompton, H., & Burke, D. (2018). The Use of Mobile Learning in Higher Education: A Systematic Review. *Computers & Education*, 123(1), 53–64. <https://doi.org/10.1016/j.compedu.2018.04.007>
- Favini, A., Culcasi, F., Cirimele, F., Remondi, C., Plata, M. G., Caldaroni, S., Virzì, A. T., & Luengo Kanacri, B. P. (2024). Smartphone and social network addiction in early adolescents: The role of self-regulatory self-efficacy in a pilot school-based intervention. *Journal of Adolescence*, 96(3), 551–565. <https://doi.org/10.1002/jad.12263>

- Gopalan, M., Rosinger, K., & Ahn, J. Bin. (2020). Chapter 8. Use of Quasi-Experimental Research Designs in Education Research: Growth, Promise, and Challenges. *Review of Research in Education*, 44(1), 218–243. <https://doi.org/10.3102/0091732X20903302>
- Griffiths, M. (2005). A “components” model of addiction within a biopsychosocial framework. *Journal of Substance Use*, 10(4), 191–197. <https://doi.org/10.1080/14659890500114359>
- Hamamura, T., Kurokawa, M., Mishima, K., Konishi, T., Nagata, M., & Honjo, M. (2023). Standalone Effects of Focus Mode and Social Comparison Functions On Problematic Smartphone Use among Adolescents. *Addictive Behaviors*, 147(1), 1–8. <https://doi.org/10.1016/j.addbeh.2023.107834>
- Handayani, A., Yulianti, P. D., & Rakhmawati, E. (2023). Effectiveness of Web-based Parenting Intervention in Improving Mindful Parenting among Parents of Elementary School Aged Children. *Bulletin of Counseling and Psychotherapy*, 8(1), 1–10. <https://doi.org/10.51214/002026081756000>
- Hartanto, A., Chua, Y. J., Quek, F. Y. X., Wong, J., Ooi, W. M., & Majeed, N. M. (2023). Problematic smartphone usage, objective smartphone engagement, and executive functions: A latent variable analysis. *Attention, Perception, and Psychophysics*, 85(8), 2610–2625. <https://doi.org/10.3758/s13414-023-02707-3>
- Kemp, S. (2024). *Digital 2024: Global Overview Report*. DataReportal.
- Li, Y., Ma, X., Li, C., & Gu, C. (2021). Self-Consistency Congruence and Smartphone Addiction in Adolescents: The Mediating Role of Subjective Well-Being and the Moderating Role of Gender. *Frontiers in Psychology*, 12. <https://doi.org/10.3389/fpsyg.2021.766392>
- Marino, C., Canale, N., Melodia, F., Spada, M. M., & Vieno, A. (2021). The Overlap Between Problematic Smartphone Use and Problematic Social Media Use: A Systematic Review. *Current Addiction Reports*, 8(1), 469–480. <https://doi.org/10.1007/s40429-021-00398-0>
- Marmarosh, C. L. (2021). Ruptures and Repairs in Group Psychotherapy: From Theory to Practice. *International Journal of Group Psychotherapy*, 71(2), 205–223. <https://doi.org/10.1080/00207284.2020.1855893>
- Nengsih, W., Handayani, A., & Rakhmawati, E. (2026). Pengaruh Bimbingan Kelompok Teknik Talking Chips Terhadap Pengambilan Keputusan Karir Pada Siswa SMA. *Al-Isyraq: Jurnal Bimbingan, Penyuluhan dan Konseling Islam* 9(1), 213–224. <https://doi.org/10.59027/alisyraq.v%25vi%25i.1253>
- Pallant, J. (2020). *SPSS survival manual: A step by step guide to data analysis using IBM SPSS*. Routledge. <https://doi.org/10.4324/9781003117452>
- Panadero, E. (2017). A Review of Self-Regulated Learning: Six Models and Four Directions for Research. *Frontiers in Psychology*, 28(8), 1–10. <https://doi.org/10.3389/fpsyg.2017.00422>
- Rakhmawati, E., Yuliejatiningsih, Y., & Rakhmawati, D. (2024). Sexual Psychoeducation of Pre-School Children: Teachers’ Strategies and Barriers in Teaching Self-Protection. *Bulletin of Counseling and Psychotherapy*, 6(1), 1–12. <https://doi.org/10.51214/00202406839000>
- Razali, N. M., & Wah, Y. B. (2011). Power comparisons of shapiro-wilk, kolmogorov-smirnov, lilliefors and anderson-darling tests. *Journal of statistical modeling and analytics*, 2(1), 21-33.
- Rodman, A. M., Burns, J. A., Cotter, G. K., Ohashi, Y. G. B., Rich, R. K., & McLaughlin, K. A. (2024). Within-Person Fluctuations in Objective Smartphone Use and Emotional Processes During Adolescence: An Intensive Longitudinal Study. *Affective Science*, 5(4), 332–345. <https://doi.org/10.1007/s42761-024-00247-z>
- Servidio, R. (2021). Self-control and problematic smartphone use among Italian University students: The mediating role of the fear of missing out and of smartphone use patterns. *Current Psychology*, 40(8), 4101–4111. <https://doi.org/10.1007/s12144-019-00373-z>

- Siebers, T., Beyens, I., & Valkenburg, P. M. (2024). The Effects of Fragmented and Sticky Smartphone Use On Distraction and Task Delay. *Mobile Media and Communication*, 12(1), 45–70. <https://doi.org/10.1177/20501579231193941>
- Sun, R., Gao, Q., & Xiang, Y. (2022). Perceived parental monitoring of smartphones and problematic smartphone use in adolescents: mediating roles of self-efficacy and self-control. *Cyberpsychology, Behavior, and Social Networking*, 25(12), 784-792. <https://doi.org/10.1089/cyber.2022.0040>
- Tong, D. H., Nguyen, T.-T., Uyen, B. P., & Ngan, L. K. (2023). Using M-Learning in Teacher Education: A Systematic Review of Demographic Details, Research Methodologies, Pre-Service Teacher Outcomes, and Advantages and Challenges. *Contemporary Educational Technology*, 15(4), 1–17. <https://doi.org/10.30935/cedtech/13818>
- Wang, H., Li, X., Lok, G. K. I., Meng, C., Tan, Y., Lee, U. M., Lei, L. S. M., & Chan, N. (2024). Family-based therapy for internet addiction among adolescents and young adults: A meta-analysis. *Journal of Behavioral Addictions*, 13(2), 295–312. <https://doi.org/10.1556/2006.2024.00015>
- Widiharto, C. A., Kusdaryani, W., Fitriana, S., & Prasetyo, A. (2022). Academic resilience of students who are bullied. *KnE Social Sciences*, 289-298. <https://doi.org/10.18502/kss.v7i19.12449>
- Winej, A. A. D., Wahyuningrum, P. M. E., & Karisma, E. (2024). The Effectiveness of Emotional Intelligence Psychoeducation on Learning Motivation, Self-Regulated Learning, and Procrastination in Students. *Bulletin of Counseling and Psychotherapy*, 7(2), 1–14. <https://doi.org/10.51214/002025071406000>
- Xiao, B., Zhao, H., Hein-Salvi, C., Parent, N., & Shapka, J. D. (2025). Examining Self-Regulation and Problematic Smartphone Use in Canadian Adolescents: A Parallel Latent Growth Modeling Approach. *Journal of Youth and Adolescence*, 54(2), 468–479. <https://doi.org/10.1007/s10964-024-02071-x>
- Xu, L., Duan, P., Padua, S. A., & Li, C. (2022). The impact of self-regulated learning strategies on academic performance for online learning during COVID-19. *Frontiers in Psychology*, 13. <https://doi.org/10.3389/fpsyg.2022.1047680>
- Zhang, H., Chen, C., Zhang, L., Xue, S., & Tang, W. (2023). The association between the deviation from balanced time perspective on adolescent pandemic mobile phone addiction: the moderating role of self-control and the mediating role of psychological distress. *Frontiers in Psychology*, 14. <https://doi.org/10.3389/fpsyg.2023.1298256>
- Zhao, X., Lai, X., Huang, S., Li, Y., Dai, X., Wang, H., He, Y., & Wang, Y. (2024). Long-term protective effects of physical activity and self-control on problematic smartphone use in adolescents: A longitudinal mediation analysis. *Mental Health and Physical Activity*, 26. <https://doi.org/10.1016/j.mhpa.2024.100585>
- Zimmerman, B. J. (2000). *Attaining Self-Regulation*. Handbook of Self-Regulation, 13–39. <https://doi.org/10.1016/b978-012109890-2/50031-7>
- 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