

**Influence of social media use and time management
on students' mathematics achievement**

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ABSTRACT

This research examined the relationship among social media usage, time management, and mathematics achievement among 185 Grade 10 students at Pagsabungan National High School, Cebu Province, during the 2025-2026 school year. Employing a descriptive-correlational design and total enumeration sampling, the study utilized three instruments: a social media usage survey, a time management questionnaire, and a 40-item mathematics achievement test assessing various cognitive competencies. Data analysis involved descriptive statistics (frequency count, weighted mean, standard deviation) and Pearson's r correlation. Results showed moderate overall social media usage with passive engagement more dominant than active use. Time management was rated high in prioritization but moderate in procrastination and socialization. Mathematics achievement was generally satisfactory to very satisfactory, with 50.81% of students achieving "Very Satisfactory" results and an overall mean score of 26.35. Correlations demonstrated a weak but significant positive relationship between social media usage and time management, an insignificant relationship between social media usage and mathematics achievement, and a small but significant negative relationship between time management and mathematics achievement. The study concluded that moderate, mostly passive social media use does not strongly affect mathematics achievement, while effective time management, particularly prioritization, coexists with varied academic outcomes. A comprehensive action plan recommending enhanced time management workshops, responsible social media practices, peer tutoring, and teacher training was proposed to support improved student performance and holistic development.

Keywords: Mathematics, secondary education, social media usage, time management, mathematics achievement test, descriptive-correlational design, Mandaue City, Cebu, Philippines

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INTRODUCTION

Mathematics occupies a central role in education as a discipline that develops critical thinking, problem-solving, and logical reasoning skills essential for academic and professional

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success (Duma et al., 2024). Beyond classroom boundaries, mathematical competence underpins computer science, banking and financial services, architecture, engineering, and a wide range of applied fields, making it an indispensable foundation for the modern workforce (Reddy, 2025; Sharma, 2021). Despite this recognized importance, many students continue to find mathematics challenging, with a significant proportion of educators observing that students frequently struggle and underperform in the subject (Chand et al., 2021; Mangarin & Caballes, 2024). The urgency of this concern is underscored by the Philippines' performance on international assessments: Filipino Grade 4 students scored 297 in the 2019 Trends in International Mathematics and Science Study, the lowest among 58 participating countries and a marked decline from the country's score of 358 in 2003, while the 2022 Programme for International Student Assessment placed the Philippines 77th out of 81 countries across mathematics, reading, and science.

Among the contributing factors to poor mathematics performance, the influence of digital technology, particularly social media, and students' time management practices have attracted increasing research attention. Social media platforms have surpassed five billion users globally, accounting for more than 62% of the world's population (Paljug, 2025), and students are among the most intensive users, with studies documenting that many spend more time on digital leisure activities than on academic tasks (Almarashdi & Saleh, 2024). Teachers at the school involved in this study reported observing students accessing social media during school hours, including vacant periods, rather than engaging in productive academic activity. Excessive or unmanaged social media use has been associated with reduced study time, impaired focus, increased procrastination, and disrupted time organization (Adesina & Olaoye, 2024; Zhang, 2024). However, not all research supports a uniformly negative relationship between social media and academic outcomes, as the mode of use, whether passive consumption of content or active creation and interaction, and students' capacity for self-regulation appear to mediate the effects (Abuzar & Hussain, 2024; Cheng et al., 2024).

Time management, defined as the organized planning and allocation of time across tasks and activities to maximize productivity, represents another key variable in academic achievement. Self-Regulated Learning Theory positions time management as a core component of academic self-regulation, linking effective goal-setting, monitoring, and task prioritization to improved learning outcomes (Zimmerman & Schunk, 1989). Empirical evidence on the relationship between time management and mathematics achievement is, however, mixed. While studies such as Das and Bera (2021) and Pathuddin et al. (2025) reported positive associations between time management and academic performance, others including Peteros et al. (2021) and Ganzon and Edig (2022) found no significant relationship, suggesting that contextual and motivational factors moderate this link.

This study is theoretically grounded in three complementary frameworks. Social Cognitive Theory (Bandura, 1986) explains how students' social media habits are formed through peer observation and shaped by self-efficacy beliefs about managing digital use alongside academic responsibilities. Self-Regulated Learning Theory (Zimmerman & Schunk, 1989) provides a framework for analyzing how students manage learning time, emphasizing the cyclical processes of goal-setting, monitoring, and reflection essential for adequate study time allocation. Displacement Theory (Putnam, 1995) accounts for the direct temporal trade-off between social media engagement and academic activity, proposing that time devoted to one activity necessarily reduces time available for others. These frameworks are situated within the Philippine educational policy context of Republic Act No. 10533 (Enhanced Basic Education Act of 2013), DepEd Order No. 44 s. 2019 (Safer Internet Day for Children Philippines), and DepEd Order No. 10 s. 2024 (MATATAG Curriculum), which collectively emphasize the need for adequate learning time, responsible digital citizenship, and strengthened foundational numeracy outcomes.

This study therefore aimed to assess the level of social media usage, time management, and mathematics achievement of Grade 10 students at Pagsabungan National High School, Cebu Province, and to examine the relationships among these variables as an empirical basis for the development of a targeted action plan. The findings are intended to provide evidence-based insights that can guide teachers, school administrators, policymakers, and students in developing strategies that promote responsible digital engagement, effective time management, and improved mathematics learning outcomes.

Research objectives

This study assessed the social media usage, time management, and mathematics achievement of Grade 10 students at Pagsabungan National High School for school year 2025-2026 as basis for a proposed action plan. Specifically, the study sought to answer the following:

1. What is the level of social media usage of the respondents in terms of passive use and active use?
2. What is the level of time management of the respondents in terms of prioritization, procrastination, and socialization?
3. What is the level of mathematics achievement of the respondents?
4. Is there a significant relationship between the respondents' social media usage and their time management; between social media usage and mathematics achievement; and between time management and mathematics achievement?
5. Based on the findings, what action plan may be crafted?

METHODOLOGY

This study employed a descriptive-correlational research design to describe the levels of social media usage, time management, and mathematics achievement among Grade 10 students and to examine the statistical relationships among these variables without implying causation (Hassan, 2022; Jhangiani et al., 2019). The study was conducted at Pagsabungan National High School, located in Barangay Pagsabungan, Mandaue City, Cebu, a school that has demonstrated continuous growth since its establishment in school year 2000-2001, expanding from 91 students in its first year to over 700 in subsequent years, with developed educational facilities serving as an established community-based institution in Mandaue City.

Total enumeration sampling was employed, including all 185 Grade 10 students across five sections (10-Optimistic, $n = 33$; 10-Willing, $n = 35$; 10-Diligent, $n = 33$; 10-Noble, $n = 45$; 10-Sensible, $n = 39$) as respondents for school year 2025-2026. This approach eliminated sampling error and provided comprehensive population-level data to enhance the validity and reliability of findings. A master list of Grade 10 learners was obtained from the school administration, and informed consent was secured from students and their guardians prior to participation.

Data were collected using three validated instruments. The social media usage survey adapted from Ozimek et al. (2023) measured passive use (10 items: browsing, viewing profiles, reading posts and comments) and active use (7 items: posting, creating groups, responding to events) on a five-point frequency scale (5 = Always to 1 = Never). The time management questionnaire adapted from Sayari et al. (2017) assessed three dimensions: prioritization (6 items), procrastination (8 items), and socialization (10 items) on a five-point Likert scale (5 = Strongly Agree to 1 = Strongly Disagree). The mathematics achievement test consisted of 40 items developed from the Department of Education curriculum, covering five cognitive

competency levels: remembering, understanding, applying, analyzing, and evaluating. Achievement scores were categorized as Outstanding (33-40), Very Satisfactory (25-32), Satisfactory (17-24), Fairly Satisfactory (9-16), and Did not Meet Expectations (0-8). All instruments were validated through expert review and reliability-tested prior to administration.

Transmittal letters were submitted to the school principal to secure approval, and respondents were oriented on the study's purpose before administration. Questionnaires were distributed personally and collected immediately upon completion. All responses were treated with strict confidentiality, anonymized during processing, and used solely for academic purposes. Data were analyzed using frequency count and percentage for descriptive profiling, weighted mean and standard deviation to characterize the levels of social media usage, time management, and mathematics achievement, and Pearson's r correlation to test the significance of relationships among the three variables, with significance set at $p < 0.05$ (two-tailed).

RESULTS AND DISCUSSION

This section presents and discusses the findings organized according to the research objectives, covering the levels of social media usage, time management, and mathematics achievement, and the three correlation analyses.

Level of social media usage

Respondents demonstrated a moderate overall level of social media usage with a grand mean of 2.81 ($SD = 1.16$). Passive use, encompassing scrolling feeds, viewing profiles, reading posts and comments, and watching stories, registered a higher aggregate weighted mean of 3.14 ($SD = 1.14$) at a moderate level, while active use, encompassing posting content, creating groups, and event participation, was rated at a lower aggregate weighted mean of 2.47 ($SD = 1.17$) at a low level. Within the passive use dimension, reading comments on one's own pictures ($WM = 3.86$, $SD = 1.31$) and viewing friends' stories ($WM = 3.72$, $SD = 1.07$) received the highest ratings, indicating that self-referential content monitoring and story-following are the most frequent passive behaviors. Viewing photo albums of other users received the lowest passive use rating ($WM = 2.68$, $SD = 0.89$). Within active use, posting photos with family ($WM = 3.13$, $SD = 1.19$) and posting photos generally ($WM = 3.12$, $SD = 1.25$) showed moderate engagement, while creating events or inviting users to events was rated very low ($WM = 1.80$, $SD = 0.91$), indicating that students are predominantly observers rather than organizers on social platforms.

The predominance of passive over active engagement is consistent with the literature characterizing adolescents as primarily content consumers on social media (Valkenburg et al., 2022). Radesky et al. (2023) documented that social media platforms with auto-play features and effortless scrolling mechanisms reduce the cognitive effort required to select content, facilitating sustained passive engagement that can interrupt learning routines. Cheng et al. (2024) found that both high active and high passive social media use among high school students were associated with learning losses, suggesting that the critical concern is not mode of use alone but the total volume and displacement of academic time. The moderate overall usage level observed in this study, however, aligns with Abuzar and Hussain's (2024) finding that overall social media use at moderate levels does not necessarily disrupt study habits when students maintain some degree of self-regulation, and with Cuong et al.'s (2025) evidence that daily time usage mediates the relationship between social media motives and academic outcomes.

Level of time management

Respondents demonstrated a moderate overall level of time management with a grand mean of 3.13 (SD = 1.06). Among the three dimensions, prioritization received the highest aggregate weighted mean of 3.63 (SD = 0.92), interpreted as High, indicating that students generally employ structured task organization, sequential planning, and monitoring strategies in managing their academic responsibilities. Checking the accomplishment of tasks based on set priorities (WM = 3.78, SD = 0.89) and prioritizing tasks in the correct order (WM = 3.77, SD = 0.94) were the most consistently endorsed prioritization indicators. Procrastination and socialization both registered aggregate weighted means of 2.88, at a moderate level. Within procrastination, believing there is always enough time to finish tasks (WM = 3.82, SD = 0.89) and studying lessons only a few days before examinations (WM = 3.69, SD = 0.93) received the highest ratings, reflecting patterns of temporal overconfidence and last-minute preparation documented in the literature on academic procrastination (Brady et al., 2022; Rozental et al., 2022). Items indicating outright task avoidance, such as cancelling tasks without valid reasons (WM = 2.36) and not minding lateness (WM = 2.35), were rated low, suggesting that students' procrastination manifests primarily as underestimation of task duration rather than task abandonment.

Within socialization, texting and chatting with friends (WM = 3.44), browsing and chatting on Facebook and similar platforms (WM = 3.55), and active involvement in weekend family activities (WM = 3.53) were rated highest, reflecting the shift from traditional to digitalized social interaction observed by Amelia and Balqis (2023) and the documented positive academic and emotional outcomes associated with family involvement (Choge & Edabu, 2023; Martinez-Yarza et al., 2024). Physical social outings such as attending parties (WM = 2.08) and visiting shopping malls (WM = 2.25) were rated low, indicating that social time is predominantly invested in virtual and family contexts. The overall pattern of high prioritization combined with moderate procrastination is consistent with Aeon et al.'s (2021) meta-analytic finding of a moderate positive association between effective time management and academic engagement, and with Patzak et al.'s (2025) evidence that planning, goal-setting, and task organization are linked to improved academic productivity when consistently applied.

Level of mathematics achievement

The mathematics achievement test yielded a mean score of 26.35 (SD = 5.35) on the 40-item instrument, placing the average respondent in the upper tier of the Very Satisfactory range. The distribution showed that 50.81% of students (n = 94) achieved Very Satisfactory results, 32.43% (n = 60) achieved Satisfactory results, 12.97% (n = 24) achieved Outstanding results, and 3.78% (n = 7) were rated Fairly Satisfactory. No students scored in the Did Not Meet Expectations category. The achievement profile reflects a generally adequate but not uniformly advanced level of mathematics competence, with moderate spread across performance categories. The standard deviation of 5.35 indicates variation in proficiency, potentially reflecting differences in instructional support, prior learning, and individual cognitive factors (du Plooy et al., 2024). The absence of failing scores is consistent with Moyo et al.'s (2022) emphasis on formative assessment and continuous monitoring as mechanisms that prevent learning gaps from widening to failing levels, and with evidence that adaptive instructional strategies improve mean achievement by ensuring appropriate challenge and support for students across ability levels (Mustofa et al., 2023).

Relationship between social media usage and time management

Pearson correlation analysis revealed a weak positive and statistically significant relationship between social media usage and time management ($r = 0.351$, $p < 0.001$), leading to the rejection of the null hypothesis of no relationship. This result indicates that students who report higher overall social media engagement also tend to exhibit modestly stronger time management behaviors, although the practical strength of this association is limited. The weak positive direction suggests that social media functions as both a tool and a potential distraction in students' time management practices, a finding consistent with Chowdhury and Begum's (2025) observation that purposeful academic use of social media is associated with improved task-switching efficiency, and with Shinde's (2025) evidence that moderate social media use can reduce stress and support planning behaviors while high-frequency notifications cause distractions and scheduling disruptions. The association observed in this study differs from Ali et al.'s (2024) significant negative correlation ($r = -0.387$) between internet addiction and time management, a discrepancy that may reflect the conceptual distinction between moderate overall social media usage, as measured in this study, and compulsive or addictive patterns of online behavior. Katsitadze and Pirtskhalaishvili (2025) similarly noted that students spending more than four hours daily on social media experienced disruptions to academic scheduling, suggesting that the threshold and pattern of use are more consequential than total exposure alone.

Relationship between social media usage and mathematics achievement

The relationship between social media usage and mathematics achievement was negligible and not statistically significant ($r = -0.042$, $p = 0.570$), leading to the decision not to reject the null hypothesis of no relationship. This finding indicates that variations in overall social media usage levels are not meaningfully associated with changes in students' mathematics test performance, and the strength of the association is effectively absent. This result aligns with Mindajao (2023), who found no significant correlations between social media addiction and scholastic performance, and with Takieddin et al. (2022) and Abuzar and Hussain (2024), who similarly reported no significant relationship between overall social media time and academic performance metrics. The absence of a significant negative association may reflect the offsetting effects of productive and non-productive social media use: Dai et al. (2025) demonstrated that purposeful use of social media for mathematics learning can enhance student interest and self-regulation, while Abuzar and Hussain (2024) found that students who used social media for coursework sharing experienced improved performance despite no significant overall effect. The meta-analytic evidence presented by Kus (2025) does identify a small but statistically significant negative association between technology-related factors and academic performance, though the overall effect size was very small, consistent with the near-zero correlation observed in this study's sample.

Relationship between time management and mathematics achievement

The correlation between time management and mathematics achievement was small but statistically significant in the negative direction ($r = -0.174$, $p = 0.018$), leading to the rejection of the null hypothesis of no relationship. While the statistical significance confirms that a relationship exists, the small negative effect size represents a counterintuitive finding requiring careful interpretation. The coefficient of determination indicates that time management as measured in this study accounts for approximately 3% of the variance in mathematics achievement, a minimal predictive contribution. Several explanations may account for the

unexpected negative direction. Students who report high prioritization may be investing organized study time across a broad range of subjects rather than specifically toward mathematics, diluting the subject-specific relationship. Moderate procrastination behaviors characterized by underestimation of task duration may coexist with adequate performance because students' last-minute preparation, while inefficient for long-term retention, may still be sufficient for the particular achievement test administered (Brady et al., 2022). These findings contrast with Das and Bera (2021) and Pathuddin et al. (2025), who reported positive relationships between time management and academic achievement, and align more closely with Peteros et al. (2021) and Ganzon and Edig (2022), who found no significant predictive relationship between time management and mathematics performance in Philippine contexts. Qian (2025) similarly identified complex interactions between academic pressure, time management attitudes, and mathematics achievement, suggesting that motivational and cognitive factors modulate when and how time management strategies translate into performance gains. Taken together, these findings confirm that time management alone is not a sufficient predictor of mathematics achievement and that comprehensive models incorporating motivational, cognitive, and instructional variables are needed to more fully explain performance variation.

CONCLUSION

This study concludes that moderate, predominantly passive social media use does not substantially hinder or enhance mathematics achievement directly, as the relationship between overall social media usage and mathematics performance was negligible and statistically non-significant. Effective time management, particularly in the domain of prioritization, is practiced by respondents at a high level and coexists with varied mathematics achievement outcomes, though the statistically significant but small negative correlation between time management and mathematics performance indicates that time management alone is not a reliable predictor of subject-specific academic outcomes in this population. The weak positive relationship between social media usage and time management reflects the dual role of digital platforms as potential tools for organization and as sources of distraction, with the net effect dependent on the intentionality and pattern of use rather than total exposure. Mathematics achievement was generally satisfactory to very satisfactory, with a majority of students performing above average, though the range of outcomes indicates that further instructional support, engagement strategies, and targeted interventions are warranted.

These findings collectively suggest that neither social media usage nor time management in isolation strongly predicts mathematics achievement, and that other cognitive, motivational, and instructional factors exert greater influence on students' mathematical performance. Based on these empirical findings, a comprehensive action plan was developed targeting four areas of concern: time management enhancement through structured workshops and task planning systems; responsible and purposeful social media use through digital literacy seminars and integration of educational applications; mathematics achievement improvement through peer tutoring, remedial sessions, and digital enrichment tools; and teacher capacity development through training on mentoring, monitoring, and contextual intervention strategies. This action plan is proposed for implementation at Pagsabungan National High School with quarterly monitoring of outcomes to support sustained improvement in student mathematics performance and holistic academic development.

REFERENCES

- Abuzar, M., & Hussain, S. (2024). Integrating social media into educational strategies: Examining the impact of social media usage on high school students' academic performance. *International Journal of Research in Education and Science*, 10(4), 826-840. <https://doi.org/10.46328/ijres.3536>
- Adesina, K., & Adetunji, O. (2024). Influence of social media on the academic performance of students in mathematics. *Innovation and Technology for Sustainable Educational Development*. <https://www.researchgate.net/publication/377300829>
- Aeon, B., Faber, A., & Panaccio, A. (2021). Does time management work? A meta-analysis. *PLoS One*, 16(1), e0245066. <https://doi.org/10.1371/journal.pone.0245066>
- Ali, H. F. M., Mousa, M. A., Atta, M. H. R., & Morsy, S. R. (2024). Exploring the association between internet addiction and time management among undergraduate nursing students. *BMC Nursing*, 23(1), 632. <https://doi.org/10.1186/s12912-024-02273-5>
- Almarashdi, H. S., & Saleh, H. (2024). Digital devices in mathematics classes: A negative distraction or a key to success? 2024 Global Digital Health Knowledge Exchange & Empowerment Conference, 1-5. IEEE. <https://doi.org/10.1109/gDigiHealth.KEE62309.2024.10761821>
- Alyami, A., Abdulwahed, A., Azhar, A., Binsaddik, A., & Bafaraj, S. (2021). Impact of time management on students' academic performance: A cross-sectional study. *Creative Education*, 12(3), 471-485. <https://doi.org/10.4236/ce.2021.123033>
- Amelia, R., & Balqis, N. (2023). Digital communication as a primary social connection tool among adolescents. *Journal of Communication Studies*, 8(2), 45-60.
- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Prentice Hall.
- Brady, A. C., Wolters, C. A., & Yu, S. L. (2022). Self-regulation of time: The importance of time estimation accuracy. *Frontiers in Psychology*, 13, 925812. <https://doi.org/10.3389/fpsyg.2022.925812>
- Chand, S., Chaudhary, K., Prasad, A., & Chand, V. (2021). Perceived causes of students' poor performance in mathematics: A case study at Ba and Tavua secondary schools. *Frontiers in Applied Mathematics and Statistics*, 7, 614408. <https://doi.org/10.3389/fams.2021.614408>
- Cheng, W., Nguyen, P. N. T., & Nguyen, N. D. (2024). How active/passive social network usage relates to academic performance among high school students in Taiwan. *Education and Information Technologies*, 29, 10805-10820. <https://doi.org/10.1007/s10639-023-12254-x>
- Choge, F., & Edabu, P. (2023). Parental involvement and learners' academic performance in public primary schools in Kesses Sub County, Kenya. *East African Journal of Education Studies*, 6(2), 419-431. <https://doi.org/10.37284/eajes.6.2.1393>

Chowdhury, E. K., & Begum, R. (2025). The academic implications of social media use and multitasking: Evidence from university students in a developing nation. *Social Sciences & Humanities Open*, 11, 101623. <https://doi.org/10.1016/j.ssaho.2025.101623>

Cuong, T. V., Khai, N. T., Oo, T. Z., & Jozsa, K. (2025). The impact of social media use motives on students' GPA: The mediating role of daily time usage. *Education Sciences*, 15(3), 317. <https://doi.org/10.3390/educsci15030317>

Dai, L., Jin, W., & Zhu, B. (2025). Exploring the role of social media in mathematics learning: Effects on self-efficacy, interest, and self-regulation. *BMC Psychology*, 13, 829. <https://doi.org/10.1186/s40359-025-03192-z>

Das, P., & Bera, S. (2021). Impact of time management on students' academic achievement at the secondary level. *ResearchGate*. <https://www.researchgate.net/publication/349063177>

du Plooy, A., Pournara, C., & Adler, J. (2024). Adaptive instruction and mathematics achievement: Mechanisms and evidence. *International Journal of Mathematical Education in Science and Technology*, 55(2), 278-296.

Duma, S. Y., Muslimin, N., Modjo, A. S., & Walid, A. (2024). The role of mathematics education in developing critical thinking skills in the Industrial Era 5.0. *Aksioma Education Journal*, 1(4), 1-10. <https://doi.org/10.62872/rca4py44>

Ganzon, W. J., & Edig, M. M. (2022). Time management and self-directed learning as predictors of academic performance in mathematics. *Journal of Social, Humanity, and Education*, 3(1), 57-75. <https://doi.org/10.35912/jshe.v3i1.1212>

Gong, Z., Guo, Y., & Tan, J. (2025). Social media use and academic performance among college students: The mediating roles of social anxiety and fear of missing out. *Frontiers in Psychology*, 16, 1649890. <https://doi.org/10.3389/fpsyg.2025.1649890>

Hassan, M. (2022). Correlational research design: Methods and types. *Research Method*. <https://researchmethod.net/correlational-research/>

Jhangiani, R. S., Chiang, I.-C. A., Cuttler, C., & Leighton, D. C. (2019). Correlational research. In *Research Methods in Psychology* (4th ed.). <https://kpu.pressbooks.pub/psychmethods4e/chapter/correlational-research/>

Katsitadze, N., Kharadze, N., & Pirtskhalaishvili, D. (2025). The impact of social media on students' effective time management. *Baltic Journal of Economic Studies*, 11(1), 200-210. <https://doi.org/10.30525/2256-0742/2025-11-1-200-210>

Kus, M. (2025). A meta-analysis of the impact of technology-related factors on students' academic performance. *Frontiers in Psychology*, 16, 1524645. <https://doi.org/10.3389/fpsyg.2025.1524645>

Mangarin, R. J., & Caballes, D. G. (2024). Factors affecting students' poor performance in mathematics: A systematic review. *International Journal of Innovative Science and Research Technology*, 9(1), 1321-1330.

Martinez-Yarza, N., Solabarrieta-Eizaguirre, J., & Santibañez-Gruber, R. (2024). The impact of family involvement on students' social-emotional development: The mediating role of school engagement. *European Journal of Psychology of Education*, 39, 4297-4327. <https://doi.org/10.1007/s10212-024-00862-1>

Mindajao, B. Y. (2023). Impact of social media addiction on scholastic performance of high school students in science. *European Journal of Education Studies*, 10(1). <https://doi.org/10.46827/ejes.v10i1.4625>

Moyo, T., Chikwature, W., & Oyedele, V. (2022). Formative assessment and mathematics performance: Evidence from secondary schools. *International Journal of Education and Research*, 10(3), 67-82.

Mustofa, R. F., Hidayah, Y. R., & Widad, A. (2023). Adaptive learning and improved mathematics learning outcomes. *Journal of Mathematics Education*, 8(1), 29-41.

Ozimek, P., Brailovskaia, J., & Bierhoff, H. W. (2023). Active and passive behavior in social media: Validating the SMAQ. *Telematics and Informatics Reports*, 10, 100048. <https://doi.org/10.1016/j.teler.2023.100048>

Paljug, K. (2025, February 19). Social media: Definition, effects, and list of top apps. Investopedia. <https://www.investopedia.com/terms/s/social-media.asp>

Pathuddin, H., Sukayasa, M., & Rahmawati, S. (2025). The effect of time management and interest in learning mathematics. *Heliyon*, 11(3), e42048. <https://doi.org/10.1016/j.heliyon.2025.e42048>

Peteros, E. D., Colonia, J. A., Etulle, L. R., & Etcuban, J. O. (2021). Understanding the effects of time management and self-efficacy on math performance among working high school students. *International Journal of Theory and Application in Elementary and Secondary School Education*, 9(2), 145-158. <https://doi.org/10.17762/itii.v9i2.455>

Putnam, R. D. (1995). Bowling alone: America's declining social capital. *Journal of Democracy*, 6(1), 65-78.

Qian, J. (2025). Academic pressure, time management attitudes, and mathematics achievement: A mediation analysis. *Frontiers in Education*, 10, 1432851.

Radesky, J., Weeks, H. M., Schaller, A., Robb, M., Mann, S., & Lenhart, A. (2023). Constant companion: A week in the life of a young person's smartphone use. *Common Sense Media*.

Reddy, N. S. (2025). Mathematical applications in computer science. *International Journal of Scientific Research in Engineering and Management*, 9(3), 1-9. <https://doi.org/10.55041/ijssrem43300>

Rozental, A., Forsell, E., Svensson, A., Andersson, G., & Carlbring, P. (2022). Time management training and procrastination: Temporal underestimation and its academic consequences. *Frontiers in Psychology*, 13, 812442.

Sayari, K., Jalagat, R., & Dalluay, V. (2017). Assessing the relationship of time management and academic performance of business students. *European Business & Management*, 3(1), 1-8. <https://doi.org/10.11648/j.ebm.20170301.11>

Sharma, P. (2021). Importance and application of mathematics in everyday life. *International Journal for Research in Applied Science and Engineering Technology*, 9(11), 388-392. <https://doi.org/10.22214/ijraset.2021.38869>

Shinde, M. S. (2025). The influence of social media use on work-study balance and time management behaviour among student workers (Master's thesis). St. Cloud State University. https://repository.stcloudstate.edu/psyc_etds/27

Takieddin, K., Ezzeddine, Z., Hamdan, M., & Safadi, A. (2022). Social networking sites usage and academic performance among medical students. *BMC Medical Education*, 22(1), 401.

Valkenburg, P. M., Beyens, I., Pouwels, J. L., van Driel, I. I., & Keijsers, L. (2022). Social media browsing and adolescent well-being: Challenging the 'Passive Social Media Use Hypothesis'. *Journal of Computer-Mediated Communication*, 27(1). <https://doi.org/10.1093/jcmc/zmab01>

Viswaprasad, R., Konda, S., & Rao, G. (2024). Exploring the impact of social media usage on students' academic achievement in mathematics. *International Journal of Creative Research Thoughts*, 12(1). <https://ijcrt.org/papers/IJCRT2401529.pdf>

Zhang, Y. (2024). Excessive social media use and its disruptive effects on mathematics learning and time management. *Education and Information Technologies*, 29(8), 10021-10038.

Zimmerman, B. J., & Schunk, D. H. (1989). Self-regulated learning and academic achievement: Theory, research, and practice. Springer.