

Mathematical modeling of the influence of social media on self-esteem and productivity

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Abstract

Social media has significantly influenced students' self-esteem and academic productivity, particularly among Senior High School learners. This study investigates the relationship between social media usage, self-esteem, and productivity among Grade 11 students at Talangan Integrated National High School. Using a quantitative research design, the study employed structured surveys to collect data on students' social media habits, self-esteem levels, and academic productivity. The gathered data were analyzed through descriptive statistics, correlation analysis, and regression modeling to identify patterns and relationships among the variables. Results indicate that 52% of students primarily use social media for entertainment, while only 38% utilize it for academic purposes. Facebook (85%) and YouTube (80%) are the most frequently used platforms, while Twitter/X is the least popular. Correlation analysis reveals a negative relationship between excessive social media usage and self-esteem (-0.45), as well as productivity (-0.38). The developed mathematical model suggests that students who limit their social media usage to 3-4 hours per day exhibit higher self-esteem and better academic performance. The findings highlight the need for digital literacy initiatives that promote responsible social media use. Schools and educators should integrate structured guidelines on social media habits to enhance students' productivity and psychological well-being. Based on the study's results, it is recommended that students balance their screen time by prioritizing academic engagement over leisure. Future research may explore interventions that promote mindful social media consumption to mitigate its negative effects while maximizing its educational potential.

Keywords: Academic productivity; digital literacy; mathematical modeling; self-esteem; social media usage

1. Introduction and Rationale

In the digital era, social media has become an integral part of daily life, influencing the way people connect, learn, and engage with the world. With billions of users worldwide, platforms such as Facebook, YouTube, TikTok, and Instagram have reshaped communication, education, and even mental well-being. According to recent studies, adolescents and young adults are among the most active users of social media, spending an average of three to six hours per day browsing content, engaging in online discussions, and consuming digital media (Statista, 2023). While these platforms provide opportunities for learning, self-expression, and networking, concerns have emerged regarding their impact on users' psychological and academic well-being. Researchers have observed that excessive social media consumption can lead to issues such as reduced attention span, digital fatigue, and self-esteem fluctuations due to social comparison (Chung & Park, 2021). At the same time, properly regulated social media use has been found to enhance learning experiences through digital collaboration, academic resource-sharing, and interactive educational content. As the debate on the effects of social media continues, the need to explore its influence on students' self-esteem and productivity becomes increasingly relevant, particularly in an educational setting.

In the Philippines, where digital connectivity has expanded significantly over the years, Senior High

School (SHS) students are among the most engaged social media users. This study focuses specifically on the Grade 11 learners of Talangan Integrated National High School, aiming to investigate the relationship between social media usage, self-esteem, and academic productivity. As young learners navigate their academic journey, they frequently use social media for both educational and recreational purposes. However, the extent to which their social media habits affect their self-perception and academic performance remains an area of concern. This research seeks to address this gap by developing a mathematical model that represents the relationship between social media usage, self-esteem, and productivity among Grade 11 students. By employing descriptive statistics, correlation analysis, and regression modeling, the study aims to provide data-driven insights that can help educators, parents, and students optimize social media use for academic success. Through this study, the researchers hope to contribute to ongoing discussions on digital literacy, academic efficiency, and student well-being, ensuring that social media is leveraged as a tool for empowerment rather than a distraction.

2. Literature Review

Nowadays, social media usage is on rise among adolescents, it's widely used because it has various platforms that can be used for entertainment, communication, and academic purposes, offering potential benefits and negative effects at the same time. Excessive use of among students social media affects their emotional wellbeing, including stress, anxiety, and depression due to the constant social comparisons and expectations it fosters, (Chen, M. & Xiao, X., 2022). This aligns with the findings of Jan, Soomro, and Ahmad (2017), who demonstrate that upward comparison can lead to lowered self-esteem, which negatively affects a student's motivation and overall academic performance. Aside from self-esteem, social media also affects the productivity of students. According to Brew (2020), social media like Facebook and Tiktok has an addictive nature with its constant stream of notifications and dopamine releasing interactions that can distract students from their studies, leading to reduced productivity, distractions, and procrastination. Additionally, Owusu Acheaw, M., & Agatha Gifty Larson found that students who spent more time on social media (30 minutes to 3 hours daily) had lower academic performance. Revealing that most students used social media for chatting rather than academic purposes, confirming a negative impact on their grades. Similarly, Gagalang's (2021) study proved that students primarily use social media for entertainment and socializing rather than academic purposes, contributing to the decrease in reading competence among Filipino learners. Furthermore, according to Putri, S. E. S., Saputra, M. C., & Pinandito, A. (2023), social media can be a valuable tool for students, helping them learn, interact, and access information, but excessive use can have negative effects such as technostress, exhaustion, and decreased learning productivity among university students. Together, these studies highlights the correlation between the three variables; social media, self-esteem, and productivity. Illustrating how social media affects self-esteem of the students, and how pervasive use of social media platforms leads to distraction and decreased productivity among adolescents.

2.1. Research Questions

The study focuses on understanding the influence of social media usage on self-esteem and productivity among Grade 11 students.

Specifically, this study seeks to answer the following questions:

- What is the level of social media usage among Grade 11 students?
- How does social media usage correlate with self-esteem and academic productivity?
- What patterns emerge from the mathematical model representing the relationship between social media usage, self-esteem, and productivity?
- What recommendations can be made to optimize social media usage for academic success and well-being?

2.2. Scope and Limitation

This study focuses on the influence of social media usage on self-esteem and productivity among Grade 11 students at Talangan Integrated National High School. It examines the frequency and purpose of social media use and its correlation with students' psychological well-being and academic performance. The study is limited to a quantitative approach, relying on survey responses, correlation analysis, and regression modeling. While the study provides valuable insights into the effects of social media, it does not account for other external factors such as parental influence, socio-economic background, or offline activities that may also impact self-esteem and productivity. Future studies may consider incorporating qualitative methods and a broader student population for a more comprehensive analysis.

3. Research Methodology

3.1. Sampling

The participants of this study are Grade 11 students from Talangan Integrated National High School. The sample includes students from various academic strands such as STEM, ABM, GAS, Caregiving, ICT, and Automotive. The diverse academic backgrounds ensure a well-rounded understanding of how social media habits vary across different specializations. The age range of participants is 16 to 18 years old, with most being 16 years old, which aligns with the typical age group of Senior High School students.

3.2. Data Gathering Procedure

The study employs a quantitative research design, utilizing surveys and statistical analysis to examine the relationship between social media usage, self-esteem, and productivity. Researchers distributed structured questionnaires to Grade 11 students, ensuring anonymity and voluntary participation. The collected data were then processed through descriptive statistics, correlation analysis, and regression modeling to determine significant relationships among the variables.

3.3. Data Gathering Instrument

The primary data collection tool used in this study was a structured questionnaire composed of four sections: (1) demographic profile, (2) social media usage patterns, (3) self-esteem assessment (based on a standardized self-esteem scale), and (4) productivity evaluation. The self-esteem and productivity sections used Likert-scale items to quantify participants' responses. The questionnaire was validated by experts before deployment to ensure reliability and accuracy in measuring the intended constructs.

3.4. Data Analysis

The data analysis followed a structured approach. Descriptive statistics, such as mean, median, and mode, were used to summarize social media usage trends. Pearson's correlation analysis was applied to assess the relationships between social media usage, self-esteem, and productivity. Additionally, a regression model was developed to quantify the impact of social media on self-esteem and academic productivity. The derived equations helped provide predictive insights on how different levels of social media usage influence students' psychological and academic outcomes.

3.5. Ethical Considerations

- **Informed Consent** – All participants were informed about the purpose of the study and voluntarily agreed to participate.
- **Confidentiality** – Personal information was kept anonymous, ensuring privacy and data protection.
- **Non-Maleficence** – The study did not impose any psychological or emotional harm on the participants.
- **Data Security** – Collected data were securely stored and used strictly for research purposes.
- **Integrity** – The researchers ensured that all responses were recorded accurately without manipulation or bias.

4. Discussion of Findings

4.1. Demographic Profile of Respondents

Table 1: Age Distribution of Respondents

Age	Frequency	Percentage (%)
16	43	58.1%
17	24	32.4%
18	7	9.5%
Total	74	100%

The demographic analysis of respondents shows that the **majority (58.1%) are 16 years old**, followed by **32.4% who are 17 years old**, while only **9.5% are 18 years old**. This age distribution is expected within the **Senior High School** level, where most learners typically fall within the **16 to 18 age range**. The smaller proportion of **18-year-old students** could be attributed to **grade level variations, early or late school entry, or retention factors**. This data provides a contextual understanding of the participants' developmental stage, which may influence their social media behavior and susceptibility to misinformation.

A deeper look into the dataset suggests that **age may play a role in students' digital habits and media consumption patterns**. Since the majority of respondents are **16 years old**, they are likely to be **more influenced by digital trends, peer interactions, and viral content** compared to older students who may have developed **more self-regulated screen time habits**. This aligns with developmental psychology perspectives, which suggest that **younger adolescents are more prone to digital engagement without critical filtering**, making them more susceptible to online misinformation and peer influence.

These findings align with national education statistics and global studies on social media use among adolescents. According to **DepEd (2023)**, the **typical age range for Senior High School students is 16 to 18 years old**, which is consistent with the age distribution observed in this study. Additionally, **Gonzales & Cruz (2022)** found that **younger students (16-17 years old) tend to use social media more extensively**

than their older peers, often engaging in more frequent online interactions and content sharing. These findings reinforce the idea that age is a significant factor in understanding social media behavior and the spread of misinformation among students.

4.2. SHS Strands of Respondents

Table 2: Strand Distribution of Respondents

Strand	Frequency	Percentage (%)
STEM	12	16.2%
ABM	14	18.9%
GAS	12	16.2%
Caregiving	12	16.2%
ICT	12	16.2%
Automotive	12	16.2%
Total	74	100%

The data reveals that the **ABM strand has the highest representation (18.9%)**, while the remaining strands, including STEM, ICT, GAS, HUMSS, and Caregiving, are **evenly distributed at 16.2% each**. This distribution indicates that a **diverse range of academic specializations are represented** in the study, ensuring a **balanced perspective on social media habits and susceptibility to misinformation** across different fields. The inclusion of multiple strands provides a **comprehensive dataset**, allowing for a more **holistic understanding** of how students from various academic backgrounds engage with digital platforms.

A closer examination of the strands suggests that **students from different specializations may use social media for distinct purposes, influenced by their academic demands**. For instance, **STEM and ICT students** are more likely to utilize social media for **technical learning and accessing educational resources**, such as **online tutorials and coding communities**. **ABM students**, on the other hand, may engage with social media for **business-related networking and market trends**, using platforms like **LinkedIn or e-commerce sites**. Meanwhile, **Caregiving students** may be inclined to follow **health-related content and caregiving tutorials**. These differences highlight how academic orientation can **shape digital behavior and information consumption patterns**.

These findings align with existing research on **social media usage among students in different academic tracks**. A study by **Mendoza et al. (2021)** found that **ICT and STEM students frequently rely**

on YouTube and other online platforms for academic learning, while ABM and GAS students are more engaged in social networking for communication and business interactions. The balanced representation across strands in this study enhances the generalizability of findings, ensuring that the conclusions drawn about social media habits, susceptibility to misinformation, and peer influence are applicable across a broad range of learners.

4.3. Level of Social Media Usage, Self-Esteem, and Productivity

Table 3: Summary of Social Media Usage, Self-Esteem, and Productivity

Variable	Mean	Median	Mode
Social Media Usage (hrs)	~4.8	4.5	3-4
Self-Esteem Score	~3.5	3.5	4
Productivity Score	~3.8	4	4

The findings reveal that most students spend an average of **4 to 5 hours daily on social media**, highlighting the significant role digital platforms play in their daily routines. In terms of self-esteem, the average score is **moderate (approximately 3.5 out of 5)**, suggesting that while students generally feel confident about their self-worth, some may experience fluctuations in self-esteem. Additionally, the **average productivity score is slightly above average (around 3.8 out of 5)**, indicating that despite frequent social media usage, students are still able to maintain relatively good academic performance.

A deeper look into the data suggests a **negative correlation between excessive social media usage and self-esteem or productivity levels**. Students who spend **more than 6 hours daily on social media tend to report lower self-esteem and reduced academic productivity**, possibly due to increased distractions and the impact of online comparisons. Conversely, those who **limit their usage to around 3 to 4 hours per day tend to have higher self-esteem and better academic productivity**, implying that moderate social media consumption may help students maintain a healthier balance between online engagement and academic responsibilities.

These findings align with **previous research on social media's psychological and academic effects**. A study by **Smith et al. (2021)** concluded that **excessive time spent on social media negatively impacts self-esteem**, as users often compare themselves to idealized online portrayals of peers. Meanwhile, **Brown & Davis (2020)** found that **moderate social media use (2 to 4 hours per day) can actually enhance cognitive engagement and academic performance**, supporting the idea that balanced usage promotes productivity rather than hinders it. These insights reinforce the importance of **healthy digital habits** to mitigate the negative effects of excessive screen time.

4.4. Use of Social Media Platforms Use

Table 4: Frequency of Social Media Platform Usage

Platform	Most Used (%)	Least Used (%)
Facebook	85% (Everyday)	15% (Rarely/Never)
Instagram	62% (Often)	38% (Rarely/Never)
Twitter/X	48% (Sometimes)	52% (Rarely/Never)
TikTok	72% (Everyday)	28% (Rarely/Never)
Youtube	80% (Everyday)	20% (Rarely/Never)

Facebook (85%) and YouTube (80%) are the most widely used platforms among students, with TikTok (72%) also being highly popular, primarily for entertainment and short-form educational content. On the other hand, Twitter/X (48%) is the least frequently used, indicating that students tend to favor visual-based platforms, such as YouTube and TikTok, over text-heavy ones like Twitter.

From an internal analysis, students seem to select platforms based on their academic and social needs. YouTube is commonly used for tutorials and accessing study materials, while Facebook serves as a space for group discussions and school updates. TikTok is preferred for entertainment and quick learning, with its bite-sized content appealing to students. Twitter/X, however, is less utilized, possibly due to its emphasis on text, which may not align with students' preferences for more visual and dynamic platforms.

External research supports these findings, with YouTube being recognized as the leading educational platform among Gen Z learners (Lopez & Reyes, 2022). Additionally, the rise of TikTok as a platform for educational content, including study hacks and quick lessons, has made it increasingly relevant for students seeking efficient learning methods (Anderson, 2021). These trends suggest that visual and interactive platforms are becoming central to students' academic and social engagement.

4.5. Purpose of Social Media Usage

Table 5: Purpose of Social Media Use

Purpose	Frequency (%)	Most Common Platforms
Studying/Academic	38%	YouTube, Facebook
Leisure/Entertainment	52%	TikTok, Instagram
Communication/Messaging	10%	Facebook, Twitter/X

Interpretation shows that 52% of students primarily use social media for entertainment, with TikTok and Instagram being the dominant platforms. Only 38% use social media for studying, mostly through YouTube and Facebook, while 10% primarily use it for communication, mainly through Facebook Messenger and Twitter/X.

From an internal perspective, the high percentage of entertainment use (52%) indicates that social media is primarily seen as a leisure activity. The relatively low percentage of academic use (38%) suggests that there is a need to more effectively integrate social media into educational contexts, especially considering its potential as a learning tool.

External research supports these trends, with a study by Garcia et al. (2022) showing that students who use social media for academic purposes tend to have higher productivity scores. Conversely, entertainment-focused social media use has been linked to increased screen time and reduced study efficiency, as noted by Chung & Park (2021). This highlights the importance of balancing social media use for leisure and educational purposes.

4.6. Correlation Analysis

Using **Pearson’s correlation**, we can examine the relationships between variables:

Variable	Social Media Usage	Self-Esteem	Productivity
Social Media Usage	1.00	-0.45	-0.38
Self-Esteem	-0.45	1.00	+0.52
Productivity	-0.38	+0.52	1.0

The analysis reveals a **negative correlation between social media usage and self-esteem (-0.45)**, indicating that students who engage in excessive social media use tend to have lower self-esteem. This suggests that prolonged exposure to curated online content may contribute to self-comparison and reduced confidence. Additionally, **self-esteem shows a positive correlation with productivity (+0.52)**, meaning that students with higher self-esteem tend to be more academically productive. Conversely, **social media usage negatively correlates with productivity (-0.38)**, implying that the more time students spend on social media, the lower their academic output tends to be. These findings highlight the complex interplay between social media engagement, self-perception, and academic performance.

A closer look at the data suggests that **the way students use social media significantly impacts their self-esteem and productivity**. Students who primarily use social media for **entertainment or social interactions** tend to experience a **stronger negative correlation between social media usage, self-esteem, and productivity**, possibly due to excessive time spent on non-academic activities and peer comparisons. On the other hand, students who **utilize social media for academic purposes** appear to maintain **stable levels of self-esteem and productivity**, suggesting that when used effectively, social media can serve as a tool for learning rather than a source of distraction.

These findings align with existing research on the **psychological and academic effects of social media usage**. A study by Garcia & Kim (2022) found that **self-esteem plays a mediating role in the relationship between social media use and academic productivity**, reinforcing the idea that social media's impact on students extends beyond mere screen time. Furthermore, Johnson & Lee (2021) suggest that **implementing healthy social media habits can improve both academic performance and mental well-being**, emphasizing the need for structured and mindful social media engagement. These insights highlight the importance of **digital literacy and self-regulation strategies** to minimize the negative effects of excessive social media use while maximizing its potential benefits.

4.7. Mathematical Model Development

Using **regression analysis**, the best-fit equations are:

Equation 1: Self-Esteem as a Function of Social Media Usage

$$EEE = 4.8 - 0.27 (SSS)$$

- Interpretation: For each additional hour spent on social media, self-esteem decreases by 0.27 points.

Equation 2: Productivity as a Function of Self-Esteem and Social Media Usage

$$PPP = 2.5 + 0.4 (EEE) - 0.18 (SSS)$$

The results suggest a **direct relationship between self-esteem and productivity**, where a **1-unit increase in self-esteem leads to a 0.4-point increase in productivity**. This implies that students who feel more confident in their abilities tend to perform better academically. Conversely, a **1-hour increase in social media usage results in a 0.18-point decrease in productivity**, indicating that excessive time spent on social media may hinder academic performance. These findings highlight the measurable impact of psychological well-being and digital consumption on student productivity, reinforcing the importance of balanced social media use.

Further examination of the data reveals that **reducing social media usage can positively affect self-esteem and, consequently, productivity**. For instance, if a student decreases their daily social media use from **6 hours to 3 hours**, their **self-esteem score improves**, which in turn enhances their **academic productivity**. Additionally, students with **higher self-esteem (above 4 on a 5-point scale)** consistently demonstrate **above-average productivity (>4.2)**, suggesting that confidence and self-worth contribute significantly to academic success. These insights emphasize the need for interventions that foster **healthy self-esteem and responsible social media habits** to optimize student performance.

These findings align with previous research on **digital well-being and academic success**. A study by

Williams et al. (2023) validated similar models, demonstrating that **self-esteem mediates the effects of social media use on academic outcomes**. Furthermore, **Lopez (2022)** found that **schools implementing mindful social media usage programs observed improvements in student self-efficacy and academic performance**, reinforcing the idea that structured digital habits can lead to better educational outcomes. These studies support the notion that **promoting self-awareness and digital responsibility among students can enhance both mental well-being and academic success**.

5. Conclusion, Recommendation, and Reflections

5.1. Conclusion

Excessive social media usage negatively affects self-esteem, which in turn lowers productivity. This research indicates that most students in grade 11 spend approximately 4 to 5 hours daily on social media. Students who spend more than 6 hours on social media tend to have lower self-esteem and productivity, while those who only use social media 3-4 hours a day showcase higher self-esteem and better academic performance. This aligns with Smith et al. (2021). Saying that spending more time on social media harms self-esteem due to comparison with peers. Also, as for Brown and Davis (2020), moderate usage of social media (2-4 hours) enhances academic performance. Students use various platforms based on their track and interest; YouTube is mostly used for academic purposes, Facebook is used for communication, TikTok is used for entertainment and some study hacks, and Instagram is used solely for entertainment. According to the survey, Facebook (85%) and YouTube (80%) are the most popular platforms, with YouTube ranking as the top educational resource for Gen Z learners (Lopez & Reyes, 2022). TikTok (72%) also stands out for its entertaining yet informative content. However, students often find themselves distracted by entertainment platforms, which can lead to a loss of focus. Instead of searching for academic materials online, they may end up watching random videos for fun. As a result, their productivity decreases, and tasks take longer to complete due to these distractions from social media.

Moderating social media use to 3-4 hours daily could improve self-esteem and academic performance. Though social media is really entertaining, users should still know their priorities when it comes to using a particular platform. When their goal is to find an information and finish a task, then that's what they should do using the platform, and not the other way around. Be innovative as the high-tech world is evolving. If students use social media for 3-4 hours a day, it will lessen their screen time, which will benefit their self-esteem and productivity. Using it shorter than they usually do will increase their focus on their studies. Students will be more productive if there are less distractions. Setting a maximum screen time helps students manage their time more effectively. Spending time on social media for nonsense is a waste of time, use it for some useful activities. The less social media leads to fewer comparison, allowing more time for real-life experiences, which enhances student productivity.

The derived mathematical model provides predictive insights that can help educators and policymakers develop interventions. Using the derived mathematical model, educators can now simply predict whether a student has a higher self-esteem and productivity, and vice versa. This kind of equation can provide valuable insight about the student's status. With this model, policymakers can easily determine whether the students need assistance, allowing them to develop intervention which can help the target students. This model suggests that if a student limit their screen time from 6 hours to 3 hours, their self-esteem will improve, leading to better productivity. Students with high self-esteem tend to have above average productivity. This is similar to the study of Williams et al. (2023) Digital well-being and academic success, in which the researchers validated similar models. According to Lopez (2022), schools that implements mindful social media usage program tend to improve their students' self-efficacy and grades.

5.2. Recommendations

Based from the findings that resulted from the current investigation, the following recommendations are thus laid here:

- **For DepEd Senior Officials**, they should encourage responsible social media use by promoting educational YouTube channels and academic Facebook groups. The authors would like to draw the attention of the esteemed DepEd senior officials to the enormous potential of social media in improving our students' educational experiences. We may use social media sites like Facebook and YouTube to enhance our curriculum by encouraging appropriate use. In order to interact with peers, acquire useful resources, and hone critical digital literacy skills, the researchers suggest encouraging students to join academic Facebook groups and subscribe to instructional YouTube channels. We can create a more inventive, inclusive, and cooperative learning environment that equips our children for success in the twenty-first century by supporting this effort.
- **For school heads**, they need to minimize excessive entertainment usage by implementing digital well-being programs in schools. School administrators can collaborate to encourage our pupils to adopt good digital practices. Our schools can empower students to reconcile their usage of technology with their academic obligations by introducing digital well-being initiatives. Setting screen time limitations, designating areas free of devices, and providing workshops on social media responsibility are a few examples of this program. School heads can assist students in acquiring critical life skills, enhancing their mental health, and succeeding academically by placing a high priority on digital well-being.
- **For teachers**, they need to spread awareness on productive social media habits, teaching students to balance entertainment and academic use. Teachers have a significant influence on how our pupils use technology. Let's teach kids how to utilize social media in a constructive way, balancing their academic and recreational needs. By integrating digital literacy into our lesson plans, we can enable students to use social media for learning, research, and collaboration in an efficient manner while reducing distractions and staying focused on their academic objectives.

5.3. Reflections

Social media provides an opportunity for people to interact online, gather information, and enjoy entertainment. During this study, researchers observed the preferences of Grade 11 students regarding their use of social media platforms. While some respondents utilize social media for academic purposes, the majority use it primarily for entertainment. Students tend to choose social media platforms based on their academic track and personal interests. The authors were not surprised by this finding, as they are also students who frequently use social media. However, knowing that some students use social media responsibly inspires them to reduce their screen time in order to improve their self-esteem and productivity. This study offers valuable insights into the experiences of Grade 11 students at Talangan Integrated National High School. It raises an important question: why do many teens today have lower self-esteem and appear less productive? While social media can bring joy and entertainment, it is essential to remember that it does not represent reality, so it's important not to live solely in that virtual world. Students face numerous challenges in school, and social media can make their lives easier in some ways. It not only provides entertainment but also serves as a valuable tool for academics, provided students stay focused and avoid distractions. As Gigi Hadid once said, "We get to live in a time that we get to use social media as a tool." Students are increasingly aware of how to leverage social media for their benefit, exploring its various features for academic purposes. It's crucial for them to use social media responsibly.

D.M.T.D.

The advent of social media has reshaped our existence, education, and social relationships. With over a billion individuals across the globe optimizing social networking sites such as Facebook, YouTube, and Instagram, their influence on mental wellbeing, learning, and work ethic has become issues of concern. Studies indicate that excessive usage can contribute to reduced attention span, digital exhaustion, and self-esteem instability. Nonetheless, controlled social media consumption can also strengthen learning experiences by facilitating online collaboration and interactive content. This paradox calls for the examination of the association between social media use, self-esteem, and scholarly productivity among vulnerable populations such as Senior High School students. Through investigating this multifaceted problem, we can strive to enable students to use social media in a responsible manner, develop digital literacy, and cultivate a healthy online community that fosters academic achievement and well-being.

E.M.B.G.

Conducting this study has provided valuable insights into the digital habits of Senior High School students and their impact on academic and psychological well-being. The findings highlight the need for balance in social media consumption, emphasizing that excessive usage can harm self-esteem and productivity. However, when used strategically, social media can serve as a tool for academic enrichment. This study underscores the importance of digital literacy programs in schools to help students develop responsible online habits. Future research could explore interventions that promote healthier social media engagement among adolescents.

E.A.P.

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