

Impact of Digital Consumption on Focus and Attention Span

Farhan Armandy Rasyid
Computer Science and Statistics
Universitas Bina Nusantara
Jakarta, Indonesia
farhan.rasyid@binus.ac.id

Tubagus Zakki Ibrahim Ahmad
Computer Science and Statistics
Universitas Bina Nusantara
Jakarta, Indonesia
tubagus.ahmad001@binus.ac.id

Joevan Alezka
Computer Science and Statistics
Universitas Bina Nusantara
Jakarta, Indonesia
joevan.alezka@binus.ac.id

Abstract—Digital consumption refers to how people use their digital devices, either to browse the internet, using social media like Facebook, Instagram, and TikTok, watch videos, play games, and many more. With the dramatic increase in social media usage from 4.76 billion people to 5.24 billion people, excessive digital consumption has become a growing concern affecting cognitive functions, particularly focus and attention span. This study investigates the relationship between digital consumption patterns and focus and attention span among students at Bina Nusantara University, Indonesia. A survey methodology was employed to collect data from university students, examining five dimensions of digital consumption and five aspects of focus level. The study utilized Canonical Correlation Analysis to determine the relationship between these variable sets. Validity and reliability testing confirmed the instrument adequacy with construct reliability of 0.976 and variance extracted of 0.576. Wilks Lambda test revealed statistically significant canonical correlations, with the first canonical function showing p-value of 0.000 and the second function showing p-value of 0.045. Results demonstrated strong negative canonical loadings for both variable sets in the primary function, indicating that increased digital consumption is significantly associated with decreased focus and attention span. The analysis identified multitasking while working and using digital media before bedtime as the most influential factors contributing to attention difficulties, while daily productivity level and task completion capacity emerged as the most affected focus-related outcomes.

Keywords—digital consumption, attention span, focus, canonical correlation analysis, social media, multitasking

I. INTRODUCTION

A. Background

Digital consumption refers to how people use their digital devices, either to browse the internet, using social media like facebook, instagram, and tiktok, watch videos, play games, and many more. Digital consumption started to occupy people leisure time, from 2023 the use of social media has drastically increased from 4.76 billion people, which is 59% of the global population, to 5.24 billion people, which is 63.9% of the global population, meaning that it has risen more than 4% in the last 2 years.

Excessive use of digital consumption can also decrease our knowledge multitasking skills, this is because media multitasking behavior is associated with higher impulsiveness, meaning that either we cannot consume more information at in the same period of time because we are too impulsive on the uptake of every information we watch or read, or the more media we consume all together can make us gullible and believing in everything that we watch or read.

Many people are also more interested in using social media through digital technology than studying or gaining

knowledge from books or classes. They often get distracted by their phone's notification about new uploaded videos, new chapters of the book they are reading, things like that will decrease their focus and attention span on something. They can also tire their eyes out because of excessive consuming social media, it will make them more lazy to study and lessen their focus and attention span when it comes to studying.

It can be concluded that digital technology has two opposing sides in relation to human focus and attention. On one hand, technology provides easy access to information and promotes efficiency in various aspects of life; however, on the other hand, excessive and uncontrolled use can lead to serious cognitive disruptions, including decreased concentration, increased stress, and the risk of digital addiction. Therefore, it is important for individuals and society to build strong digital awareness and literacy, and to apply technology use wisely[3]. We will conduct a research on what type of digital usage that is included in unwisely digital use.

This research utilizes a real-life dataset collected from respondents through an online form. The study aims to examine whether digital consumption affects focus and attention span. Multivariate statistical analysis will be used to determine if a correlation exists between the two variables and to measure the strength of that correlation. A higher correlation would indicate that increased digital consumption is associated with a shorter attention span.

B. Problems

As digital consumption becomes more embedded in our daily routines, it has shifted from being a tool for convenience to something that dominates much of our free time. People often spend hours scrolling through social media, binge-watching videos, or engaging in online games sometimes without even realizing how much time has passed. While digital platforms offer entertainment and access to vast information, their excessive use may be interfering with our cognitive functions. This issue is especially relevant for students who find it increasingly difficult to stay focused on academic tasks or even complete simple readings without checking their phones.

One major concern is how this constant digital stimulation may be affecting our attention span. Notifications, short-form videos, and the fast pace of online content train our brains to expect instant gratification and quick changes, which can reduce our ability to concentrate for longer periods. Moreover, behaviors like media multitasking trying to study while checking social media, for example, are linked to impulsiveness and poor information retention. As this becomes a common pattern, it

raises the question of whether digital consumption is silently diminishing our focus and overall cognitive discipline.

C. Purposes

Based on these growing concerns, the main purpose of this research is to investigate whether there is a measurable link between digital consumption and attention span. Specifically, we aim to identify the types of digital activities that may be considered “unwise” or excessive, and how frequently engaging in those behaviors affects a person’s ability to maintain focus. This study will use real world data collected from an online survey with Bina Nusantara University students as respondents and apply multivariate statistical methods to determine whether the relationship between digital habits and attention span is significant.

By exploring this relationship, we hope to identify patterns that might explain why certain people struggle more with attention-related issues than others. We are particularly interested in whether high digital usage correlates with cognitive issues like reduced concentration or difficulty in maintaining attention on one task. Ultimately, this research wants to shed light on how our digital habits might be influencing our minds in subtle but important ways, especially in learning environments where focus is critical.

D. Significance

This research holds significance not only for students but for anyone living in an increasingly digital world. By understanding how our attention is affected by digital behaviors, we can begin to rethink our daily tech habits and make better choices about when and how we engage with digital content. For students and educators, these insights could help in designing better learning environments that acknowledge the challenges of digital distractions and promote healthier engagement with technology.

Moreover, the results of this study could encourage digital literacy initiatives that emphasize self-regulation and conscious media consumption. If we can recognize which digital habits are harmful to our focus, we can start building routines that protect our mental clarity and well being. In a time when productivity and mental resilience are more important than ever, learning to balance digital use responsibly could be a valuable step toward better cognitive health and academic success.

II. LITERATURE REVIEW

Each variable used in this study can serve as an indicator of attention span in everyday life. By reflecting on their responses to each item, individuals can assess whether they have a strong or weak attention span. This insight allows people to identify the factors that negatively or positively influence their ability to focus, and take steps to improve it. Furthermore, similar findings from other relevant studies can support and enrich our understanding of attention span development.

A. Paper: "Impact of Social Media Use on Student Learning Achievement"

Key Points:

- Social media has positive impacts including facilitating the learning process, as when students

experience obstacles or difficulties in learning, they can access information from social media.

- Negative impacts of social media use on education include students becoming lazy to study and frequently accessing content that is not for learning materials.
- Reduced student learning time as a consequence of excessive social media use
- Learning achievement is the learning outcome achieved after following the learning activity process, which can be shown in the form of numbers or scores covering affective, cognitive and psychomotor aspects.
- To achieve learning success, maximum effort and good cooperation from students, parents and teachers are required.

Relevance to Attention Span:

- Social media distractions can reduce concentration ability during learning
- Multitasking between social media and learning reduces attention span
- Good self-control is needed to maintain focus on academic activities

B. Paper: "Self-Control in Social Media Use Among Adolescents"

Key Points:

- 66.8% of adolescents have moderate self-control abilities in social media use, meaning they have not maximized their self-control capabilities
- Most adolescents have high cognitive control (62.9%), moderate decisional control (81.8%) and moderate behavioral control (76.2%)
- The longer the duration of social media use, the lower the self-control in social media usage
- Male adolescents have lower self-control than females in social media use
- Self-control is the ability to control desires and impulses from within oneself to achieve valuable long-term goals

Relevance to Attention Span:

- Cognitive control directly relates to the ability to maintain focus
- Decisional control affects the ability to prioritize tasks and avoid distractions
- Behavioral control determines the implementation of strategies to maintain attention span

C. Paper: "The Impact of Social Media Use on Social Interaction in Contemporary Society"

Key Points:

- Social media use has brought profound changes in social interaction patterns in contemporary society
- Social media has complex impacts, including increased global connectivity, changes in how individuals construct social identities, and providing a platform for social movements
- Negative impacts of social media present challenges such as social isolation, unhealthy

comparisons, and the spread of harmful information

- There are concerns related to "shared solitude" or feelings of social isolation that emerge among individuals who are increasingly glued to their digital devices
- Valuable aspects of face-to-face social interaction are increasingly being displaced by more superficial forms of online communication
- Users are often only exposed to content that aligns with their own views, triggering a confirmation effect that can reinforce pre-existing views

Relevance to Attention Span:

- Attention fragmentation due to constant connectivity reduces deep focus ability
- Information overload from social media can disrupt sustained attention
- Changes in communication patterns affect concentration ability in face-to-face interactions

III. METHOD

This section presents the dataset used for the analysis, Wilks' test, and canonical correlation to analyze the relationships and differences within the dataset.

A. Data Collection

For this study, data were gathered using a survey method. The survey was distributed to students of Bina Nusantara University, Indonesia. The table below provides a detailed list of all variables included in the research.

Y = Focus Level

Difficulty concentrating for long periods of time.	<i>Saya sulit mempertahankan fokus dalam waktu lebih dari 30 menit.</i>
	<i>Saya mudah kehilangan konsentrasi saat mengerjakan tugas dalam waktu lama.</i>
	<i>Saya sering beralih ke hal lain sebelum menyelesaikan satu tugas</i>
Ability to complete tasks without distraction.	<i>Saya tidak dapat menyelesaikan tugas tanpa tergoda membuka media sosial atau aplikasi lain.</i>
	<i>Saya sering terganggu oleh notifikasi saat sedang bekerja atau belajar.</i>
	<i>Saya sering tidak dapat menyelesaikan tugas saya karena teralih oleh media sosial</i>
Daily productivity level.	<i>Saya merasa tidak produktif dalam menjalani aktivitas sehari-hari dikarenakan bermain media sosial.</i>

Frequency of feeling disturbed by social media.	<i>Saya sering tidak dapat menyelesaikan sebagian besar tugas yang saya rencanakan dalam sehari.</i>
	<i>Saya sering menunda-nunda pekerjaan untuk diselesaikan.</i>
	<i>Saya merasa bahwa media sosial sering mengalihkan perhatian saya dari tugas penting.</i>
The number of tasks that can be completed in a day.	<i>Saya sering kehilangan fokus karena keinginan untuk mengecek media sosial.</i>
	<i>Saya sering terdistraksi oleh media sosial meskipun saya tahu saya harus bekerja atau belajar.</i>
	<i>Saya selalu mengecek ponsel saya ketika sedang mengerjakan tugas.</i>
	<i>Saya merasa kewalahan dengan jumlah tugas yang harus saya selesaikan.</i>
	<i>Saya merasa tidak puas dengan jumlah pekerjaan yang berhasil saya selesaikan setiap hari.</i>

X = Digital Consumption

Duration of social media usage per day.	<i>Saya menggunakan media sosial selama 3 jam per hari.</i>
	<i>Saya menghabiskan banyak waktu untuk scrolling media sosial setiap hari.</i>
	<i>Saya merasa sulit mengurangi durasi penggunaan media sosial saya</i>
Frequency of multitasking while working.	<i>Saya sering membuka media sosial saat sedang bekerja atau belajar.</i>
	<i>Saat mengerjakan tugas, saya sering tergoda untuk mengecek notifikasi di ponsel saya.</i>
	<i>Saya merasa kesusahan dan tidak fokus karena sering melakukan banyak hal sekaligus di perangkat digital.</i>
Types of content frequently consumed	<i>Saya lebih sering mengonsumsi konten hiburan dibandingkan konten edukasi atau berita.</i>
	<i>Saya menghabiskan lebih banyak waktu menonton video</i>

The habit of using digital media before going to bed.	<i>hiburan daripada membaca atau belajar.</i>
	<i>Saya merasa bahwa sebagian besar konten yang saya konsumsi bukanlah sesuatu yang produktif.</i>
	<i>Saya selalu menggunakan ponsel atau gadget sebelum tidur.</i>
Frequency of checking notifications in a day.	<i>Saya sering merasa sulit tidur karena menggunakan gadget sebelum tidur.</i>
	<i>Saya tidak bisa tidur tanpa mengecek ponsel terlebih dahulu.</i>
	<i>Saya sering mengecek notifikasi meskipun tidak ada pesan penting.</i>
	<i>Saya merasa cemas jika tidak segera mengecek notifikasi di ponsel saya.</i>
	<i>Saya mengecek ponsel saya beberapa kali dalam satu jam meskipun tidak ada keperluan mendesak.</i>

B. Validity and Reliability Testing

Based on a paper written by Tavakol and Dennick (2011) with the title "The Use of Cronbach's Alpha When Developing and Reporting Research Instruments in Science Education", validity and reliability are two important things in developing quantitative research, especially in surveys.

1) Validity Testing

Validity refers to the questions that measure what it is intended to measure. An instrument is said to be valid if its questions are able to represent the concepts that are being studied. One of the methods commonly used to test validity is Pearson's correlation. This correlation formula measures the relationship between the score of each question and the total score of the entire instrument. Use this formula:

$$r_{xy} = \frac{n\sum XY - \sum X \sum Y}{\sqrt{[n\sum X^2 - (\sum X)^2][n\sum Y^2 - (\sum Y)^2]}}$$

where r_{xy} is the correlation coefficient between item score (X) and total score (Y), and n is the number of respondents. If the value r_{xy} is greater than the critical value in the r table (Pearson table), then the item is considered valid.

2) Reliability Testing

Reliability is related to the consistency of a group of questions (instrument). An instrument is said to be reliable if it produces stable and consistent results when used repeatedly. In the paper, Tavakol and Dennick emphasize the importance of using Cronbach's Alpha as an indicator of internal reliability. The formula is:

$$\alpha = \frac{k}{k-1} \left(1 - \frac{\sum \sigma_i^2}{\sigma^2_{total}}\right)$$

With α as the reliability coefficient, k representing the number of items in the questionnaire, σ_i^2 as the variance of each item, and σ^2_{total} as the total score variance. The higher the value of alpha (approaching 1), the higher the reliability of the instrument. An alpha value above 0.7 is generally considered to indicate good reliability.

C. Wilks' Lambda

For unrestricted canonical correlations one can test the null hypothesis that all (p) canonical correlations, r_i , are zero by using the fact that the test statistic W , known as Wilks lambda, is asymptotically chi-square distribution with $n_1 - n_2$ degrees of freedom:

$$W = [N - 0.5(n_1 + n_2 + 3)] \sum_l^p \log(1 - r_l^2) \Rightarrow \chi^2(n_1 \times n_2)$$

where N is the number of time frames in the data and n_1 and n_2 are the number of spatial and temporal basis functions. However, the introduction of restrictions on the canonical coefficients and the fact that only the largest canonical correlation is retained in the current application it is likely that the shape of the Wilks lambda distribution will deviate somewhat from the χ^2 distribution. This means that a more flexible distribution is needed to accurately describe the data. Because the χ^2 distributions a special case of the χ^2 -distribution,

$$\chi^2(v) = \Gamma_{pdf}(v/2, 2)$$

it is more likely that the χ^2 -distribution will describe the data accurately. Therefore, we propose to use a general-distribution for the calculation of a threshold value. The two parameters of the χ^2 -distribution are determined by fitting the χ^2 -distribution to the actual data.

D. Canonical Correlation Analysis

Canonical Correlation Analysis (CCA) is a model designed to identify patterns in complex dataset. This model is used to identify the interrelationship between independent and dependent variables. Canonical correlation can be expressed analytically, as in:

$$Y_1 + Y_2 + Y_3 + \dots + Y_n = X_1 + X_2 + X_3 + \dots + X_n$$

Where Y is the dependent variable and X is the independent variable. And then we combined both variable linearly to produce pair synthetic variable yielding the max bivariate correlation. The procedure to create canonical correlation is beta weights multiplied with observed scores and then are summed.

$$\hat{Y} = \beta_1 X_1 + \beta_2 X_2$$

In the regression model shown by the equation $\hat{Y} = \beta_1 X_1 + \beta_2 X_2$, each variable plays a specific role in predicting the outcome. The symbol \hat{Y} represents the predicted value of the dependent variable, which is the variable being explained or estimated by the model. The terms X_1 and X_2 refer to the independent variables or predictors that are assumed to influence \hat{Y} . The coefficients β_1 and β_2 represent

the regression weights or parameters that quantify the contribution of each respective independent variable to the prediction of \hat{Y} . Specifically, β_1 indicates how much \hat{Y} is expected to change for a one-unit increase in X_1 , assuming X_2 remains constant, and likewise for β_2 with respect to X_2 . This model is fundamental in identifying the linear relationship between multiple factors and an outcome variable, allowing researchers to evaluate the relative importance of each predictor.

IV. RESULT

A. Validity and Reliability Testing

Construct Reliability	Variance Extracted
0.976074	0.576292

In validity and reliability testing, construct reliability should be greater than 0.7, and variance extracted should be greater than 0.5. Since the values of construct reliability and variance extracted are 0.97 and 0.57 respectively, both exceeding the required thresholds, this indicates that the survey questions in the dataset are valid. The next step is to determine whether there is a canonical correlation among the questions, which will be assessed using Wilks' Lambda.

B. Significance Test Of Canonical Function

	stat	approx	df1	df2	p.value
1 to 5	0.022	33.50	25	470	0.000
2 to 5	0.814	1.69	16	389	0.045
3 to 5	0.909	1.39	9	312	0.193
4 to 5	0.974	0.86	4	258	0.489
5 to 5	0.995	0.65	1	130	0.423

Based on the p-values in the table, statistical significance is determined using the common threshold of 0.05 ($\alpha = 0.05$). A p-value below this threshold indicates that the result is statistically significant. From the table, the first comparison (1 to 5) has a p-value of 0.00, which is significantly below 0.05. This suggests that there is a statistically significant canonical correlation between the variables in sets 1 and 5. Additionally, the second comparison (2 to 5) also has a p-value of 0.04516796, which is just below the 0.05 threshold, meaning this result is also statistically significant. The remaining comparisons (3 to 5, 4 to 5, and 5 to 5) have p-values above 0.05, indicating that they are not statistically significant.

In summary, the comparisons that show significant canonical correlation are 1 to 5 and 2 to 5, based on p-values 0.000 and 0.04516796 respectively. A significant p-value means that the canonical correlation observed is unlikely to have occurred by chance, and there is likely a meaningful relationship between the variable sets being compared.

C. Significance Test Of Canonical Function

$U1 = -0.05876407 * \text{Duration of social media usage per day} + (-0.28105151) * \text{Frequency of multitasking while working} + (-0.19091937) * \text{Types of content frequently consumed} + (-0.28098775) * \text{The habit of using digital media before going to bed} + (-0.21842146) * \text{Frequency of checking notifications in a day}$

$V1 = -0.1157935 * \text{Difficulty concentrating for long periods of time} + (-0.2098334) * \text{Ability to complete tasks without distraction} + (-0.3168142) * \text{Daily productivity level} + (-0.1423062) * \text{Frequency of feeling disturbed by social media} + (-0.2405636) * \text{The number of tasks that can be completed in a day}$

$U2 = 3.0957775 * \text{Difficulty concentrating for long periods of time} + (-2.0245157) * \text{Ability to complete tasks without distraction} + 0.1184507 * \text{Daily productivity level} + 0.6448411 * \text{Frequency of feeling disturbed by social media} + (-1.8239263) * \text{The number of tasks that can be completed in a day}$

$V2 = -0.5590148 * \text{Difficulty concentrating for long periods of time} + (-1.2465209) * \text{Ability to complete tasks without distraction} + 3.5101753 * \text{Daily productivity level} + (-2.1953745) * \text{Frequency of feeling disturbed by social media} + 0.4403164 * \text{The number of tasks that can be completed in a day}$

The results of the canonical correlation analysis suggest a strong relationship between patterns of digital media usage and an individual's ability to focus and maintain productivity. In the first canonical function, the negative weights for variables such as *duration of social media use*, *multitasking*, and *checking notifications* imply that higher engagement in these behaviors is associated with lower levels of concentration, task completion, and overall productivity. This shows that constant digital distractions can negatively impact cognitive focus and daily performance.

Interestingly, the second canonical function reveals a more complex dynamic, where variables like *difficulty concentrating* and *feeling disturbed by social media* interact in a different pattern, suggesting that some individuals may be more vulnerable to the cognitive impacts of digital media than others.

Variable	Canonical Loading	
	Weight (U1)	Loading (U1)
X1	-0.05876407	-0.9668444
X2	-0.28105151	-0.9709621
X3	-0.19091937	-0.9719068
X4	-0.28098775	-0.9712640
X5	-0.21842146	-0.9697985
Variable	Weight (V1)	Loading (V1)
Y1	-0.1157935	-0.9732196
Y2	-0.2098334	-0.9707003

Variable	Canonical Loading	
	Weight (U1)	Loading (U1)
Y3	-0.3168142	-0.9833426
Y4	-0.1423062	-0.9685912
Y5	-0.2405636	-0.9737499

Variable	Canonical Loading	
	Weight (U2)	Loading (U2)
X1	3.0957775	0.19120098
X2	-2.0245157	-0.11473227
X3	0.1184507	0.06326813
X4	0.6448411	0.08120066
X5	-1.8239263	-0.06357238
Variable	Weight (V2)	Loading (V2)
Y1	0.5590148	0.005197291
Y2	1.2465209	0.105812610
Y3	-3.5101753	-0.151912913
Y4	2.1953745	0.154043392
Y5	-0.4403164	0.014141825

For function 1 (U1-V1), it has the strongest relationship, Canonical loadings for both independent variables (X1–X5) and dependent variables (Y1–Y5) are all highly negative and close to -1. This indicates a strong negative relationship between the two variable sets.

From the weights (U1), variables X2 (Multitasking) and X4 (Using digital media before bed) have larger negative weights, suggesting they contribute more to the function. On the dependent side (V1), Y3 (Daily productivity level) and Y5 (Tasks completed) are also dominant contributors.

Unlike the first function, the loadings in U2 and V2 are much smaller in magnitude, mostly under 0.2 or even negative but close to 0. This means the second canonical function explains less variance and shows weaker relationships overall.

V. CONCLUSION

This research provides empirical evidence supporting the hypothesis that digital consumption patterns significantly impact students' focus and attention span. The canonical correlation analysis revealed a strong negative relationship between digital media usage behaviors and cognitive focus abilities, with correlation coefficients indicating that as digital consumption increases, attention span and focus capacity correspondingly decrease.

The study's most significant findings include:

Primary Relationship Discovery: The first canonical function demonstrated the strongest relationship ($p < 0.001$),

with canonical loadings approaching -1 for both digital consumption and focus variables. This indicates a robust inverse relationship where higher engagement in digital activities directly correlates with reduced attention capabilities.

Key Contributing Factors: Among digital consumption behaviors, multitasking while working (weight = -0.281) and using digital media before bedtime (weight = -0.281) emerged as the most detrimental factors to attention span. These findings align with existing literature suggesting that media multitasking impairs cognitive control and that pre-sleep digital exposure disrupts both sleep quality and subsequent cognitive performance.

Most Affected Outcomes: On the focus dimension, daily productivity level (weight = -0.317) and the number of tasks that can be completed in a day (weight = -0.241) showed the strongest negative associations with digital consumption patterns. This suggests that digital habits most significantly impact practical, measurable aspects of academic and daily performance.

Educational Implications: For educational institutions like Bina Nusantara University, these findings underscore the need for digital literacy programs that emphasize conscious media consumption and self-regulation strategies. The results suggest that interventions targeting specific behaviors—particularly reducing multitasking during academic work and establishing digital curfews before bedtime—could yield significant improvements in student focus and academic performance.

Practical Applications: Students can utilize these findings to self-assess their digital habits and implement targeted changes. The strong correlation identified in this study provides a foundation for developing personal digital wellness strategies that protect cognitive resources while maintaining the benefits of digital connectivity.

Study Limitations and Future Research: While this study establishes a clear correlational relationship, future longitudinal research could explore causal mechanisms and test intervention effectiveness. Additionally, expanding the sample beyond university students could enhance generalizability across different demographics and age groups.

In conclusion, this research contributes valuable quantitative evidence to the growing body of literature concerning digital media's cognitive impacts. The findings support the need for conscious digital consumption practices and provide a framework for individuals and educational institutions to optimize technology use for enhanced cognitive well-being and academic success.

VI. REFERENCE

[1] H. K. Azzaakiyyah, "The Impact of Social Media Use on Social Interaction in Contemporary Society," *Technology and Society Perspectives (TACIT)*, vol. 1, no. 1, pp. 1–9,

Mar. 2023. [2] A. Nurhanifa, E. Widiarti, and A. Yamin, "KONTROL DIRI DALAM PENGGUNAAN MEDIA SOSIAL PADA REMAJA," *Jurnal Ilmu Keperawatan Jiwa*, vol. 3, no. 4, pp. 527–540, Nov. 2020. [3] R. Gunawan, S. Aulia, H. Supeno, A. Wijanarko, J. P. Uwiringiyimana, and D. Mahayana, "ADIKSI MEDIA SOSIAL DAN GADGET BAGI PENGGUNA INTERNET DI INDONESIA," *Jurnal Techno-Socio Ekonomika*, vol. 14, no. 1, pp. 1–14, Apr. 2020. [4] M. Tavakol and R. Dennick, "Making sense of Cronbach's alpha," *International Journal of Medical Education*, vol. 2, pp. 53–55, 2011. [5] M. S. Ningrum, "DAMPAK TEKNOLOGI TERHADAP KEMAMPUAN FOKUS DAN PERHATIAN," *Jurnal Psikologi*, vol. 12, no. 2, pp. 1–12, 2024. [6] M. Asmal, "HUBUNGAN PENGGUNAAN GADGET TERHADAP KONSENTRASI BELAJAR PADA ANAK USIA SEKOLAH," *Jurnal Riset Multidisiplin Edukasi*, vol. 2, no. 2, pp. 205–214, Feb. 2025. [7] Q. Wang, "The Impact of Social Media on the Attention Span of Chinese Highschool Students," *Dean&Francis*, vol. 2, no. 1, pp. 1–5, 2024. [8] M. Ragnehed, M. Engström, H. Knutsson, B. Söderfeldt, and P. Lundberg, "Restricted Canonical Correlation Analysis in Functional MRI—Validation and a Novel Thresholding Technique," *Journal of Magnetic Resonance Imaging*, vol. 29, no. 1, pp. 146–154, Jan. 2009. [9] S. Fauzia, A. N. Istirohmah, P. Lestari, and M. N. Azizah, "Dampak Penggunaan Media Sosial Terhadap Prestasi Belajar Peserta Didik," *Jurnal Belaindika: Pembelajaran dan Inovasi Pendidikan*, vol. 5, no. 1, pp. 21–27, Mar. 2023. [10] M. R. Uncapher, K. Thieu M, and A. D. Wagner, "Media multitasking and memory: Differences in working memory and long-term memory," *Psychon Bull Rev*, vol. 23, no. 2, pp. 483–490, Apr. 2016. [11] P. S. Moreira, N. C. Santos, N. Sousa, and P. S. Costa, "The Use of Canonical Correlation Analysis to Assess the Relationship Between Executive Functioning and Verbal Memory in Older Adults," *Gerontol Geriatr Med*, vol. 1, p. 2333721415602820, Aug. 2015.