Screentime Activity and Academic Productivity of Students

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Abstract

With the advancement of technology, young generations are becoming more dependent on them. Globally, children's screen time is increasing and this issue is often interrelated with students' academic productivity. Screen time activity refers to activities done in front of a screen. Academic productivity, on the other hand, is simply the state of efficiency. In this study, a descriptive-correlational research design and a quantitative approach were used to evaluate the relationship between screentime activity and students' academic productivity. Further, a Likert Scale was used to collect data from 200 respondents from Senior High School and Junior High School at Jagobiao National High School. The targeted segment was provided with questionnaires. Moreover, results indicate that there is no relationship between screentime activity and academic productivity of students. Additionally, students use screens mostly for a variety of academic purposes, including writing essays, presenting PowerPoint presentations, researching, and studying. Consequently, this study suggests that screentime activity is not as detrimental to academic productivity. Nonetheless, it is critical to exercise moderation because excessive screentime activity can negatively affect mental and physical health. With this, it is key to remember that all activities, including screentime, should be done in moderation.

Keywords: Academic Productivity, Screentime Activity, Students, Philippines.

INTRODUCTION

In today's modernized world, young generations are gaining more exposure and becoming reliant on the advanced technologies that emerged in this century. According to Sinnarajah (2019), the issue of children's screen time is getting worse globally. As the name implies, screen time refers to activities done in front of a screen, including watching television and using technological devices such as smartphones, tablets, computers, etc. (Screen Time and Children, 2021).

This issue was often interrelated with the current issue concerning students' academic productivity. In fact, according to Australian research conducted by Domingues-Montanari (2017), there is evidence that young children's cognitive development is negatively impacted by screen use. In the Philippines, teenagers who used screens for more than 7 hours per day had a 40% lower chance of excelling in school, while those who used screens for 2 to 4 hours per day had a 1.23 times higher chance of getting good marks (Micael et al., 2017).

In light of this, this issue is extremely alarming. This study, therefore, was conducted to determine if there is a relationship between the screen time activity of students and their academic productivity. Specifically, this study aimed to determine whether screentime activity negatively or positively impacts students' academic productivity in Jagobiao National High School S.Y. 2022-2023.

THEORETICAL BACKGROUND

This study was anchored on the "Behavioral Learning Theory" by Burrhus Frederic Skinner (1938). According to Reimann (2018), this theory states that all learning is influenced by personal experience. Furthermore, according to Drew (2022), this theory primarily focuses on observable and quantifiable aspects of human behavior. In this regard, actions are the proper subject for study rather than ideas or feelings.

Screentime Activity

In light of the emerging issue regarding the use of screens among students, it is critical to examine how their academic productivity is affected. Screentime activity, according to Ramírez (2021), is the leading factor in why students have poor academic performance. Additionally, according to Pediatrics (2022), there

are two different kinds of screen time: non-recreational and recreational. Non-recreational screen time is defined as time spent on a computer, tablet, phone, or television with an educational or activity component (Murray, 2020). As a matter of fact, according to Hwang (2020), non-recreational screen time encourages education, creativity, curiosity, mobility, and fitness. The students benefit from screen time during school and homework because it helps them with mathematical difficulties, essay writing, science fact investigation, art creation, and cultural awareness (Bringula et al., 2021). This is further evidenced by Simoes et al. (2022) which stated that students who have access to technology for educational purposes tend to have higher grades and are more engaged in their learning. Further, several studies by Arundell et al. (2022), Ponti et al. (2017), and DeWeese (2014), have shown that technology can help students understand abstract concepts more easily, allowing them to better retain and apply what they learn. It also gives them access to a wide range of tools and resources they wouldn't otherwise have. These include online databases, educational apps, and virtual reality. This helps them further their knowledge of various subjects, as well as develop critical thinking and problem-solving skills (Dauw, 2016).

Conversely, according to Wagner et al. (2021), recreational screen time, which is the "screen time" that experts are concerned about, does not encourage exercise or actual education. This screen time rewires children's brains, impairing cognitive development and resulting in obesity, behavioral issues, academic difficulties, lack of sleep, melancholy, and mood swings. Hence, it is recommended that parents monitor their children's recreational usage of television and set limits on their use (Stiglic & Viner, 2019).

Moreover, according to Adelantado-Renau et al. (2019a), this type of screen time includes any social media use, the majority of movies and T.V. shows, the majority of video or computer games, and anything else that is not useful for their education or physical exercise. On top of this, during recreational use, the children will often be lying down or sitting. Therefore, screen usage has been associated with issues with mental health, social development, and poorer levels of physical fitness (Schmidt et al., 2020). In a study conducted by Twenge & Campbell (2018),

additional hours per day of screen time activity were linked to even worse psychological well-being, including decreased interest, less self-control, increased distractibility, difficulty making friends, decreased emotional stability, difficulty getting cared for, and inability to complete activities. These effects, according to Tang et al. (2021) and Twenge (2019), were found to be especially pronounced among adolescents, leading to a decrease in their overall mental health. The researchers suggest that digital technology should be limited to protect young people's mental health. In addition, Vidal et al. (2020), Odgers and Jensen (2020), Boers et al. (2019) emphasize that the more time adolescents spend on digital technology, the more likely they are to experience depression, anxiety, and suicidal thoughts. Furthermore, Limone and Toto (2021) also indicated that increased usage of digital technology can lead to difficulty forming relationships and an overall decrease in mental wellbeing.

Academic Productivity

Academic productivity, on the other hand, is simply the state of efficiency (Way et al., 2019). According to Paul and Jefferson (2019), academic productivity involves more than the total number of hours spent studying; it also involves learning habits and behaviors that maximize learning both inside and outside the classroom. This includes developing efficient study strategies, such as active reading and note-taking, as well as managing time and resources effectively. Additionally, Darling-Hammond et al. (2020a) emphasize that academic productivity is a long-term process that requires a deliberate effort to be mindful of one's learning process and constantly strive for improvement.

In the study conducted by Nokelainen et al. (2017), they found that the factors that affect students' academic productivity can be divided into two categories: internal factors and external factors. Internal factors include background, mental health, and financial status. External factors, in contrast, include the housing environment, the classroom environment, groups of friends or communities, and the school environment.

1. Internal Factors

1.1 Personal Background

People have unique histories, families, and backgrounds. According to Wardleigh (2019), a person's past may reveal many things about them, including their values and family history. In some cases, people go through challenging circumstances, some people come from broken homes, and some people's cultures and beliefs shape their conduct.

In research by Li & Qiu (2018), many people are ridiculed due to their different backgrounds and ideals. As a result, this influences students' academic achievement and productivity levels. Furthermore, based on Creanza et al. (2017), some people are constrained by other cultural norms that hinder them from learning more about specific subjects. These norms force them to drift toward a predetermined career path. Because they feel pressured to adhere to specific regulations, students struggle to participate fully and achieve well in their assigned topics. Steinmayr et al. (2019) and Sivrikaya (2019) found that when students are not given the opportunity to decide what they want to learn or pursue, their academic performance and productivity suffer. Additionally, Nagashibaevna (2019) revealed that students might be hampered by a lack of resources and support, which leads to a lack of interest in their studies and an inability to reach their full potential.

Nevertheless, this factor is too broad since it encompasses socioeconomic and cultural factors, as well as values and beliefs (Hanel et al., 2018). As a matter of fact, Alyahyan and Düştegör (2020) stated that due to the complexity of this factor, it is very difficult to accurately assess how a person's personal background affects academic productivity. Furthermore, Southwick et al. (2014) found that personal backgrounds can change constantly as life circumstances evolve; thus, making it difficult to measure its exact effect over time. Additionally, it can also be influenced by external events, making it even harder to predict its effect.

1.2 Mental Health

A person's psychological, emotional, and social welfare are all characterized by mental health (Felman, 2022). According to Grøtan et al. (2019), it may also refer to how you act and think. As many people struggle to keep their mental health

under control, it affects everything from everyday activities to relationships with others to students' academic productivity.

In the same way that mental health may be linked to poor academic performance and productivity, according to Pascoe et al. (2019a), academic stress may lead to mental health decline. Mental health issues, including depression, stress, and worry, might make it difficult to concentrate in class (Deng et al., 2022). In fact, Mofatteh (2021) and Pascoe et al. (2019b) found that mental health issues are associated with poor academic performance, low grades, and reduced motivation to learn. In a study by Gallé-Tessonneau et al. (2019), poor mental health can also lead to increased absenteeism, less extra-curricular engagement, and decreased social relationships. These issues can cause a student to feel overwhelmed and unable to cope with school pressures, leading to a spiral of negative emotions. This can have a significant impact on academic performance, as well as the overall well-being (Valiente et al., 2012).

Despite how evident it is that mental health can affect academic productivity, mental health, according to Dekker et al. (2020), cannot accurately be measured or quantified. Additionally, there is often stigma and reluctance to discuss mental health issues, making it difficult to obtain reliable data (Javed et al., 2021). As such, it is difficult to accurately assess mental health's impact on academic productivity.

1.3 Financial Status

Academic productivity, according to Lodge et al. (2018), may be challenging for those who are struggling financially. In addition to tuition and living costs, students also need money for stationery, textbooks, and other supplies. Some students struggle through parts of their education without textbooks due to financial difficulties, which might significantly disadvantage them in the classroom.

Dickler (2021), Sosu et al. (2021), and Gennetian et al. (2018) research shows that students may even have to temporarily cease attending school if they are unable to afford tuition or maintain the associated costs. Additionally, if students have academic difficulty, they may need to look at additional resources, such as

taking extra classes or working with tutors. These resources, however, cost money. Hanushek and Woessmann (2020) stated that sustaining these costs depends on financial circumstances; if they cannot do so, their academic productivity may suffer. This lack of financial support often forces students to take on extra jobs to support themselves. This reduces the amount of time they have available to focus on their studies (Perna & Odle, 2020). As a result, their ability to absorb and retain knowledge is hindered and their grades may suffer.

But, assessing financial status and its influence on academic productivity requires accurate measurement and quantification. This can be difficult to achieve due to financial complexity (Usman & Banu, 2019). According to Goertzen (2017), effective assessment of financial status requires a comprehensive approach that takes into account a variety of factors. This includes income, debt, savings and investments, and access to resources. As a consequence, it is difficult to determine a person's exact financial status in such circumstances. This can be even more difficult to determine when considering the varying financial situations of different households (Kim et al., 2017).

2. *External Factors*

2.1 Housing Environment

Several studies have shown that living situation affects productivity and academic achievement. In fact, Cooper (2020) found that a student's housing environment might have a 25% impact on their academic productivity. Lindberg (2023) also stated that poor housing conditions can lead to increased stress, decreased concentration, and lack of motivation. Vanner (2022), on the other hand, also found that a safe and comfortable home environment can help students feel more relaxed and focused, enabling them to be more productive academically. This is because students focus better when they feel secure and at ease in their home environment (Khan et al., 2019).

Poor housing conditions can decrease concentration and motivation. In contrast, a safe and comfortable environment can provide the student with the necessary resources to be more productive academically (Akomolafe & Adesua, 2016). Even so, this factor, according to Đurišić and Bunijevac (2017), is beyond

students' control because of its high dependence on families' financial situation and resources. Therefore, an accurate estimate of its impact on students' academic productivity is difficult.

2.2 Classroom Environment

A student's primary learning environment is a classroom. If a student finds it difficult to function in the classroom, it may be difficult in other academic settings. As a matter of fact, according to Kassarnig et al. (2017), the student's regular attendance in class indicates interest in learning and participation in the educational environment. Punctuality and preparedness for class reflect a student's willingness to learn and attitude toward improvement. Lateness, in contrast, can have a variety of causes. However, when it occurs frequently, it can indicate a lack of enthusiasm, ultimately resulting in poor academic results.

Moreover, according to Li & Yang (2016), students who refrain from talking out of turn, daydreaming, or engaging in other activities during class are more likely to succeed academically and be more productive. Essentially, concentration allows students to devote more time to understanding the topic instead of relearning it. On top of this, teachers also play an essential role in an educational setting. In research from Sullivan (2019), providing students with an environment where they feel comfortable asking questions, learning, or seeking assistance may improve academic results. Several researches by Lei et al. (2018), Mora-Ruano et al. (2019), and Burroughs et al. (2019) have found that teachers have a positive influence on student performance. Thus, teachers should take the time to create an environment that encourages students to learn and ask questions. This will help students to be more focused, engaged and motivated, leading to better academic results.

Indeed, the classroom environment impacts academic productivity. It is difficult, however, to measure this factor accurately in research because it is so broad and uncontrollable for students. According to Maxwell et al. (2017), the classroom environment is a complex and dynamic system that is constantly changing, and it can be difficult to control or accurately measure its impact on academic productivity. Additionally, Malik and Rizvi (2018) indicated that the

classroom environment is influenced by a number of factors, including the size of the class, the teaching style of the teacher, and the school culture, making it difficult to evaluate its impact on academic productivity. As well, these factors can interact with each other, further complicating the task of assessing the impact of the classroom environment.

2.3 Groups of Friends or Communities

Several studies by O'Brien et al. (2021), Maier et al. (2017), and Alam (2015) have revealed that the community may have a significant impact on students' academic performance. However, Filade et al. (2019) found that it can be both a positive and negative influence. Positive influences can include motivating each other to work hard, providing academic support, and helping each other stay on track. Negative influences can include procrastinating together, comparing each other's grades, and distracting each other from studying.

Although students cannot control this factor, it is exceedingly difficult to measure this factor accurately. As a matter of fact, Korir and Kipkemboi (2014) and Golsteyn et al. (2021) emphasize that this factor is difficult to measure because it is largely based on the individual's perception of the influence and can vary greatly from person to person. Additionally, it is often difficult to identify the source of the influence. For instance, it can be difficult to tell if a student is procrastinating due to a negative influence or their own lack of motivation. As a result, it is difficult to measure the impact of external influences on academic productivity.

2.4 School Environment

Schools have several departments, and effective teaching may only last if these departments are doing well (Darling-Hammond et al., 2020b). The absence of helpful academic resources, for instance, restricts the academic productivity of teachers, which in turn restricts the academic productivity of students (Cavilla, 2017). Furthermore, according to Hall (2017), schools must implement anti-bullying, anti-hate, and anti-discrimination policies because existing bullies and prejudice can interfere with a person's ability to study and have a negative impact. Schools must, therefore, be able to recognize and address such problems.

In this way, a more productive and academically stimulating learning environment can be created.

Additionally, since this factor falls under the external aspect, it is also beyond the students' control. Further, Tapia-Fonllem et al. (2020) stated that based on this factor, it can be difficult to obtain reliable data, since individual perceptions may differ greatly. In fact, several studies by Harinarayanan and Pazhanivelu (2018), Baafi (2020), and Adewale et al. (2021) revealed that measuring school environments' impact on academic productivity is highly subjective and difficult to quantify. As a result, it is not recommended to rely on this factor in measuring academic productivity.

Certainly, academic productivity is impacted by many factors. However, the degree of impact can vary significantly from one person to another. Furthermore, in research from Uju and Paul (2017), a student's regular study habits and dedication were also significant factors affecting academic productivity.

Students' Regular Study Habits

In a study by Maiyo and Siahi (2015), it was found that regular study habits influence academic productivity because they allow students to form a routine that helps them focus and stay on track. In fact, Magulod (2019) stated that good study habits ensure that students are prepared for exams and other assessments and help maximize their academic performance. This is because good study habits can help students improve their focus and comprehension, enabling them to better remember and understand the material they are studying. Additionally, Wong (2023) affirmed that good study habits provide students with a sense of structure and discipline which can help them stay motivated and productive on a task.

Based on research from Jafari et al. (2019), the study habits of students can be quantified and measured accurately since students can control them. Accordingly, Mendezabal (2013) and Yusefzadeh et al. (2019) indicated that regular study habits include the amount and quality of time spent studying, the number of materials reviewed and how often, the amount of effort put into preparing for tests, and the degree of concentration and focus when studying.

By measuring these variables, students can accurately assess their study habits and determine if further improvements are needed to improve their academic productivity.

Dedication

Similarly, academic productivity is influenced by dedication. As a matter of fact, the more dedicated an individual is to their studies, the more likely they are to put in the required effort and time to achieve academic success (Gbollie & Keamu, 2017). This dedication, according to Altun (2017), can be seen in the amount of time someone spends on their studies, the quality of their work, and their commitment to meeting deadlines.

Moreover, Coman et al. (2020) stated that dedication is also manifested through an individual's capacity to stay focused and motivated even when faced with obstacles and distractions. As such, dedication is an essential component of any successful academic career.

Dedication is a critical factor to consider when evaluating academic productivity (Oruc, 2021). In the studies by Rajabalee and Santally (2021) and Castro et al. (2022), dedication is measured by course completion, effort level, and deadline compliance. This data can be used to determine the extent to which dedication impacts academic productivity.

Research Gap

Since numerous studies have widely reported that screen time activity can adversely affect a student's mental and physical health and academic performance, this study, unlike the previous studies, determined if screen time activity affects a student's academic productivity. Consequently, this study grounded the types of screentime activity, which were non-recreational and recreational screentime activities. In addition, this study also grounded into students' academic productivity. Specifically, these chosen factors aided in determining the relationship between screentime activity and academic productivity of students in Jagobiao National High School S.Y. 2022-2023.

STATEMENT OF PURPOSE

This study aimed to determine the relationship between screentime activity and academic productivity of students in Jagobiao National High School S.Y. 2022-2023. Specifically, it sought to answer the following questions:

1. What is the level of exposure of students screentime activity in terms of:
   1.1 non-recreational screentime activity; and
   1.2 recreational screentime activity?
2. What is the level of academic productivity of students?
3. Is there a significant relationship between screentime activity and academic productivity?

Hypothesis

The following were the hypotheses of the study:

Ho: There is no significant relationship between screentime activity and academic productivity of students in Jagobiao National High School S.Y. 2022-2023.

Ha: There is a significant relationship between screentime activity and academic productivity of students in Jagobiao National High School S.Y. 2022-2023.

RESEARCH METHODOLOGY

This section presents the intended research design, environment, respondents, instrument, research procedure, data gathering, and data collection. Further, this tackles the data analysis to be used and the treatment of the data. This defines the methods used in the study on conducting and gathering the data for interpretation.

Design

This study followed a descriptive-correlational research design under a quantitative approach. A descriptive research study provides an overview of the current state of affairs. These studies describe the variables and the relationships between and among them as they occur naturally (Stangor, 2019). This research design was appropriate for this study because it evaluates the

relationship between screen time activity and the academic productivity of the respective respondents.

Environment

The research was conducted at Jagobiao National High School, which was located on North Road, Jagobiao, Mandaue City. Students in Junior High School were divided into four (4) grade levels: first year, second year, third year, and fourth year, with a population of 1,501 students. Further, approximately 361 students in the Senior High School are divided into two tracks: the Academic track and the Technical Vocational Livelihood (TVL) track. Accountancy, Business, and Management (ABM), Humanities and Social Sciences (HUMSS), Science, Technology, Engineering, and Mathematics (STEM), and the General Academic Strand (GAS) make up the academic track, whereas TVL-ICT makes up the TVL track. This research environment was appropriate for this study because the appropriate research respondents possessing certain qualities needed for this study can be found.

Respondents

The study's respondents consisted of Junior and Senior High School students from Jagobiao National High School. Junior High School had an approximately 1,501 students. In Senior High School, there were approximately 340 students divided into two tracks: the Academic track and the Technical Vocational Livelihood (TVL) track. The Academic Track consists of Accountancy, Business, and Management (ABM), Humanities and Social Sciences (HUMSS), Science, Technology, Engineering, and Mathematics (STEM), and the General Academic Strand (GAS) strands. In contrast, the TVL track consists of a TVL-ICT strand.

In addition, the sampling method used in this study was the convenience sampling technique. Accordingly, the researcher chose these respondents because they were 'convenient' to the researcher in terms of gathering data. Furthermore, students aged 12-24 were chosen to participate in the study. In addition, it was estimated that there would be a total of two hundred (200) respondents from different high school grade levels who participated in the

study. This was the total number of respondents since it could provide an acceptable and credible result.

Instrument

The researcher utilized a Likert Scale survey questionnaire as a research tool to gather the data for the level of screen time activity and students' academic productivity. It is a checklist-style questionnaire with two components. Part one measured the level of screentime activity in terms of non-recreational and recreational screentime activity. Part two measured the level of academic productivity of students. For each question, the respondents selected the best response. They rated each item by checking it, strongly agree (5), agree (4), neutral (3), disagree (2), and strongly disagree (1).

Additionally, the survey questionnaire underwent a pilot testing, which was conducted by the researcher. There were 15 respondents from Benedicto College Inc., Mandaue City, Cebu, who participated in the pilot testing. After getting their responses, the researcher calculated the questionnaire's Cronbach's Alpha Reliability Test to assess the reliability or internal consistency of survey items.

Research Procedure

This study was anchored on the Behavioral Learning Theory. Furthermore, the factors of the independent variable, screentime activity, would include the types of screentime activity, which were non-recreational and recreational. On the other hand, the dependent variable in this study would be the academic productivity of students. Additionally, the researcher formulated the null and the alternative hypotheses. The null hypothesis stated that there is no significant relationship between screentime activity and academic productivity, whereas the alternative hypothesis stated that there is a significant relationship between screentime activity and academic productivity. As part of this study, a Likert Scale survey questionnaire was utilized as a research tool to gather information about the level of screen time activity among students and their academic productivity.

Additionally, a pilot test was conducted at Benedicto College Inc., from which 15 respondents were selected. Following that, the researcher calculated the Cronbach's Alpha Reliability Test of the questionnaire to assess the reliability or internal consistency of survey items. As with the type of survey questionnaire used in pilot testing, a Likert Scale survey questionnaire was utilized. Once the data has been collected, the researcher computed the weighted mean of each question's response and the Pearson r to determine the relationship between the two. Afterward, the data were then interpreted by the researcher.

Data Gathering

To obtain clearance from the authorities, the researcher created a letter of consent and a transmittal letter to perform the study at Jagobiao National High School. The researcher also described the study's goal. To support the data required for this study, the researcher established the sample size required.

The researcher formulated a survey questionnaire and sought student involvement as study respondents. When the respondents were given a brief explanation of the study's purpose by the researcher, printed survey forms were handed out to respondents, which they filled out with utmost honesty and sincerity.

Furthermore, once all the respondents have completed their responses to the survey, the researcher gathered the data. The collected data were then tallied and tabulated to examine the intended outcomes.

Data Collection

Face-to-face survey was used to collect the data. In the case of respondents, the researcher helped the respondents complete the questionnaire and provide the necessary instructions. They also received guidance from the researcher, who clarified their inquiries so that the respondents will receive relevant information for the problem.

Data Analysis

For better interpretation of the collected data, the following formula and method was used. The data gathered was analyzed with these.

1. For each variable, the researcher calculated the weighted mean. The researcher used Google Sheets, a web-based application that enables users to create, modify and share data in real-time online spreadsheets (Chai, 2021). Since this application provided the researcher with accurate data, it was the best tool for determining the weighted mean required for this study.
2. Following that, the weighted mean of each question's responses was compared by the researcher.
3. After computing the weighted mean, the researcher computed the Pearson r to ascertain the correlation between the two variables.

Treatment of Data

Weighted mean and Pearson r were used.

RESULTS AND DISCUSSIONS

In order to present the data, the researcher used tables. In support of the interpretations, studies on the subject have also been included.

Table 1. Level of Exposure of Students in Screentime Activity in terms of Non-Recreational Screentime Activity

Indicators	Mean	Interpretation
1. I use technological devices for studying.	3.95	Exposed
2. I watch educational videos online.	3.40	Exposed
3. I read useful academic works using my gadgets.	3.52	Exposed
4. I use technological devices for doing academic-related tasks. (Example: Making essays, making PowerPoint presentations, etc.)	4.00	Exposed
5. I spend more time using gadgets for educational and useful purposes.	3.36	Moderately Exposed
Overall Weighted Mean	**3.64**	**Exposed**

LEGEND:1-1.79 (Slightly Exposed/Not at All);1.8-2.59 (Fairly Exposed); 2.6-3.39 (Moderately Exposed); 3.40-4.19 (Exposed); 4.20-5 (Highly Exposed)

Table 1 shows the level of screentime activity in terms of non-recreational screentime activity. As expressed in statement 4, students were exposed to technological devices while doing academic-related tasks (WM = 4.00). It shows that students are actively using technology for academic purposes. The results also show that students are exposed to non-recreational screentime activities. This indicates that technology is an important part of students' academic lives.

Contrary to statement 5, students moderately spend more time in gadgets for educational purposes (WM=3.36). This indicates that there are still some students who are moderately exposed to gadgets for educational and useful purposes.

Further, the overall weighted mean (3.64) is interpreted as "exposed ". It clearly indicates that significant number of students are exposed to screentime activity for educational or activity purposes.

In fact, according to Paulich (2021), findings revealed that students are spending more time on screens for educational purposes than ever before. This includes using technology for research, online learning, and other educational activities. This increased reliance on screens for educational activities demonstrates that students are recognizing the educational potential of technology, while relying on it to help them acquire knowledge and skills. Furthermore, Carstens et al. (2021), Nkomo et al. (2021), and D'Angelo (2018) revealed that this reliance on technology could potentially lead to improved academic performance and engagement as students become more comfortable and confident in their use of digital tools.

Table 2. Level of Exposure of Students in Screentime Activity in terms of Recreational Screentime Activity

Indicators	Mean	Interpretation
1. I use technological devices for online gaming.	3.16	Moderately Exposed
2. I often watch movies such as K-dramas.	2.97	Moderately Exposed
3. I often watch non-educational videos online. (Example: Watching music videos, video game livestreams, etc.)	3.48	Exposed
4. I spend more time using gadgets in social media.	3.46	Exposed
5. I spend more time using gadgets for non-educational purposes.	3.27	Moderately Exposed
Overall Weighted Mean	**3.26**	**Moderately Exposed**

LEGEND:1-1.79 (Slightly Exposed/Not at All);1.8-2.59 (Fairly Exposed); 2.6-3.39 (Moderately Exposed); 3.40-4.19 (Exposed); 4.20-5 (Highly Exposed)

Table 2 shows the level of screentime activity in terms of recreational screentime activity. As stated in statement 8, students were exposed to watching non-educational videos online (WM=3.48). This means that the majority of the respondents are engaging in recreational screentime activities. Furthermore, this statement can be used as a measure of how much people engage in non-educational activities online.

Conversely, in statement 7, students were moderately exposed to watching movies (WM=2.97). This suggests that students were not likely exposed to watching movies in engaging in recreational screentime activity.

As the overall weighted mean (3.26) is interpreted as “moderately exposed,” this indicates that students are moderately exposed to recreational screentime activity. This suggests that students spend a considerable amount of time on recreational screentime activities such as streaming videos, playing video games, and browsing websites.

In research from Adams and Blair (2019), some students use screens moderately to meet the needs of both their educational and non-educational pursuits. This balance of both educational and non-educational uses of screens has been found to benefit student engagement and overall development (Ventouris et al., 2021). However, when screen time usage is unbalanced, with students spending more time on non-educational activities than educational ones, there can be a significant decrease in overall academic performance (Mosley, 2021).

Table 3. Level of Academic Productivity of Students

Indicators	Weighted Mean	Interpretation
1. I can easily finish academic tasks at school.	3.21	Moderately Productive
2. I often participate in class actively.	3.47	Productive
3. I always study for an exam.	3.43	Productive
4. I submit my academic tasks before the said deadline.	3.35	Moderately Productive
5. I never had missing outputs.	3.42	Productive
6. I exert more effort when I do performance tasks.	3.67	Productive
7. I listen actively to every discussion.	3.73	Productive
8. I always finish my assignment at home.	3.34	Moderately Productive
9. I always try to look back on lessons that I have difficulty understanding.	3.63	Productive
10. I join study groups to keep myself motivated and understand lessons effectively.	3.24	Moderately Productive
Overall Weighted Mean	**3.45**	**Productive**

LEGEND:1-1.79 (Slightly Productive/Not at All);1.8-2.59 (Fairly Productive); 2.6-3.39 (Moderately Productive); 3.40-4.19 (Productive); 4.20-5 (Highly Productive)

Table 3 above shows the level of academic productivity of students. As stated in statement 7, students were productive to listen actively to every discussion (WM=3.73). This suggests that most students are paying attention to the teacher's discussions and are actively engaged in the learning process. In statement 6, students were also productive to exert more effort in doing performance tasks (WM=3.67). This indicates that students are motivated to strive for better academic performance. Further, in statement 9, students were productive to looking back on lessons that they have difficulty understanding (WM=3.63). This indicates that students are motivated to learn and are willing to take the time to reflect and review the material.

On the other hand, as stated in statement 1, students were moderately productive in finishing academic tasks at school (WM=3.21). This suggests that students are able to complete their school work with moderate difficulty. This indicates that students have a reasonable level of academic productivity. Additionally, it shows that they are motivated to succeed and can effectively manage their workload. Similarly, in statement 10, students were moderately productive to join study groups to keep themselves motivated and understand lessons effectively (WM=3.24). This implies that the students feel moderately productive when working with peers. This suggests that collaborating with others can be beneficial for learning and productivity. Moreover, students were moderately productive in finishing their assignments at home (WM=3.34). This shows that most students are moderately productive when completing their assignments outside of the classroom. This result indicates that student productivity does not necessarily require in-person instruction. It can be achieved in other settings, such as at home or remotely.

As the overall weighted mean (3.45) is interpreted as "productive," most of the students are academically productive based on students' regular study habits and dedication. Several studies conducted by Walck-Shannon et al. (2021) and Rabia et al. (2017) have demonstrated that students who practice frequent study habits and dedication are likely to have higher academic performance and productivity. This result is in line with the findings of Tadese et al. (2022),

indicating that regular study habits and dedication are critical components of academic productivity, and are crucial to academic success.

Table 4. Screentime Activity and Academic Productivity of Students

Screentime Activity	r	Description
1. Non-recreational Screentime Activity	0.47	Moderate Positive Relationship
2. Recreational Screentime Activity	-0.03	No Relationship

*Correlation is significant at the 0.05 level (2-tailed).

The table above shows the output of the Pearson r correlation. In terms of non-recreational screentime activity and academic productivity, there had been a moderate positive correlation ($r=0.47$, $p>0.05$). This result indicates that non-recreational screentime activity can have a positive impact on academic productivity; however, the correlation was not statistically significant.

However, in terms of recreational screentime activity and academic productivity, there had been no relationship ($r=-0.03$, $p>0.05$). This result indicates that there is no significant correlation between recreational screentime activity and academic productivity. This suggests that recreational screentime activity does not necessarily lead to decreased academic productivity.

Consequently, the decision is to accept the null hypothesis. Therefore, there is no relationship between the two variables. In fact, Adelantado-Renau et al. (2019b) had the same findings, revealing that screen time had no significant impact on students' academic productivity. Moreover, this result was supported by the study of Tak and Catsambis (2023), Brown (2021), and Lepp et al. (2015), in which it was found that students who spent more time on screens were not less productive in their studies. Furthermore, May and Elder (2018) found that students who use screens the majority of the time do not exhibit a decline in academic productivity.

In light of this, this study suggests that screen time may not be as detrimental to academic productivity as previously thought. Even so, moderation is crucial. Too much screen time can still have negative consequences on health

and mental wellbeing. Ultimately, the most effective approach is to maintain a balanced approach to screen time.

Conclusion

In this study, nonrecreational screentime activity and academic productivity had a moderate positive correlation. Recreational screentime activity and academic productivity, in contrast, had no relationship. Nevertheless, both findings were not statistically significant. Moreover, it has also been found that the level of students' academic productivity is high based on students' regular study habits and dedication. Consequently, findings indicate that there is no significant relationship between screentime activity and academic productivity of students. Therefore, it is concluded that screentime activity and academic productivity does not associate one another as it was revealed that the two variables do not have any significant relationship.

Recommendations

In the context of the findings of the study, the researcher recommends:

A. Primary Recommendation

In this study, the results indicate that there is no significant relationship between screentime activity and the academic productivity of students. In light of this, the following recommendations may be helpful for students, teachers, parents, and the community in general:

To the students, the researcher recommends:

1. Limiting screen time to one hour a day and using it to enhance learning. The study showed that while screen time activity does not affect academic productivity, it is still imperative to limit time spent on screens. This can be detrimental to students' overall health and well-being if used in excess.
2. Focusing on activities that enhance their learning. This includes using educational apps or researching topics online.

To the teachers, the researcher recommends:

1. Providing guidance and support to ensure students use technology in a balanced and responsible manner.

2. Ensuring that students have access to the right tools and resources to help them learn.
3. Creating an environment that encourages collaboration, creativity, and critical thinking.

To the parents, the researcher recommends:

1. Monitoring their children's usage of digital devices and ensure that they are using them in a way that will enhance the learning process.
2. Being mindful of the amount of time their children spend online and set limits if needed.

To the school and the community, the researcher recommends:

1. Establishing limits on the amount and type of technology used by students, as well as providing support and guidance on the responsible use of technology.
2. Encouraging students to use technology for educational purposes rather than for entertainment purposes.

B. Secondary Recommendation

The following recommendations are made for future studies pertaining to this topic:

1. Further studies should be conducted to examine the impact of technology on student learning rather than its association.
2. They are also encouraged to utilize other statistical treatment such as
   ANOVA (Analysis of Variance).
3. In addition, future research should include a larger number of respondents for a more reliable and objective outcome.

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APPENDICES

Appendix A: SCREENTIME AND ACADEMIC PRODUCTIVITY OF STUDENTS

Survey Checklist

Directions: This survey questionnaire is intended to gather data regarding the level of your screentime activity and academic productivity. Kindly read each statement carefully and put your honest answers. Rate the following indicators based on your experience. Follow the rating scale legend.

Rating Scale Legend:

1: Strongly Disagree **2**: Disagree **3**: Neutral **4**: Agree **5**: Strongly Agree

1.1 Level of Screentime Activity in terms of Non-Recreational and Recreational Activity

Indicators	1	2	3	4	5
Nonrecreational Screentime Activity					
1. I use technological devices for studying.					
2. I watch educational videos online.					
3. I read useful academic works using my gadgets.					
4. I use technological devices for doing academic-related tasks. (Example: Making essays, making PowerPoint presentations, etc.)					
5. I spend more time using gadgets for educational and useful purposes.					
Recreational Screentime Activity					
6. I use technological devices for online gaming.					
7. I often watch movies such as K-dramas.					
8. I often watch non-educational videos online. (Example: Watching music videos, video game livestreams, etc.)					
9. I spend more time using gadgets in social media.					
10. I spend more time using gadgets for non-educational purposes.					

2.1 Level of Academic Productivity of Students

Indicators	1	2	3	4	5
Regular Study Habits					
1. I always study for an exam.					
2. I often participate in class actively.					

3. I listen actively to every discussion.

4. I always try to look back on lessons that I have difficulty understanding.

5. I join study groups to keep myself motivated and understand lessons effectively.

Dedication

6. I can easily finish academic tasks at school.

7. I exert more effort when I do performance tasks.

8. I never had missing outputs.

9. I always finish my assignment at home.

10. I submit my academic tasks before the said deadline.

Appendix B: Tally of Pilot Testing

A. Screentime Activity

Respondent	I1	I2	I3	I4	I5	I6	I7	I8	I9	I10
1	4	4	4	5	4	4	2	2	4	3
2	4	3	3	4	3	2	2	3	4	4
3	4	4	4	4	4	1	5	3	2	2
4	4	5	5	5	5	3	3	3	3	3
5	5	4	3	5	2	2	5	5	5	5
6	4	4	4	4	4	4	4	4	4	4
7	2	3	4	5	3	5	5	5	5	5
8	4	5	4	4	4	4	3	4	3	2
9	1	2	2	1	3	2	2	3	1	1
10	2	4	4	4	3	3	3	3	3	3
11	5	3	5	5	3	3	5	5	5	3
12	4	3	3	4	4	2	2	2	4	3
13	3	4	4	5	1	5	3	2	3	4
14	5	3	4	5	3	5	2	4	5	5
15	2	3	3	4	3	5	3	3	3	3

Case Processing Summary			
		N	%
Cases	Valid	10	100
	Excluded	0	0
	Total	10	100

Reliability Statistics	
Cronbach's Alpha	N of items
0.771	10

B. Academic Productivity

Respondent	I1	I2	I3	I4	I5	I6	I7	I8	I9	I10
1	2	5	5	5	5	5	5	5	5	5
2	3	1	4	4	4	3	3	3	3	2
3	4	4	4	5	5	4	4	3	4	5
4	5	5	5	5	5	5	5	5	5	4
5	2	2	4	4	3	4	4	2	2	1
6	4	3	3	4	4	4	3	3	3	3
7	3	3	2	4	5	5	3	4	4	2
8	3	1	5	5	4	4	5	4	5	5
9	2	2	2	2	2	3	2	3	2	3
10	4	3	5	4	5	5	3	4	4	3
11	5	4	5	5	5	5	4	5	3	4
12	2	3	3	4	3	4	3	4	3	3
13	4	5	5	5	5	4	4	5	4	5
14	5	5	4	5	5	5	5	5	3	5
15	3	3	3	3	4	3	4	3	3	4

Case Processing Summary			
		N	%
Cases	Valid	10	100
	Excluded	0	0
	Total	10	100

Reliability Statistics	
Cronbach's Alpha	N of items
0.917	10