The Effect of Social Media Usage on the Academic Performance of Grade 12 Students of Addis Ketema Preparatory School, Addis Ababa, Ethiopia

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Abstract

Social networking sites (SNSs) have become an integral part of the daily lives of people across all age groups, especially among students. This study sought to determine how social media affected the academic performance of Addis Ketema Preparatory School's grade 12 pupils. The study combined qualitative and quantitative research methods with a descriptive and explanatory research design. The data were collected using a questionnaire and analyzed using STATA 14 software, employing regression and correlation analyses. To make sure the data adhered to the fundamental presumptions of the linear regression model, diagnostic tests were carried out. The study used the student's academic performance (national exam score) as the dependent variable and the student's and their parents' demographic variables and the time spent by the student on social media per day as independent variables. The regression analysis revealed that the time spent by the student on social media had a negative impact on their academic performance. Additionally, gender was found to have a significant impact on students' academic performance. Based on the findings, it is suggested that students be made aware of the adverse effects of excessive use of social media and encouraged to use it for productive engagement. Parents, teachers, and government officials also have a responsibility to train and educate students on the proper and disciplined use of social media, particularly for educational purposes.

Keywords: social media, academic performance, impact, Addis Ketema, Ethiopia

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Introduction

In today's society, social media has become an integral part of our lives, making it challenging for people who are not on any social media platforms to socialize and network easily. The production and distribution of smart cell phones are increasing all over the world, which is leading students to no longer visit internet cafés to access social networking sites since they can easily use their smartphones. Moreover, social media provides students with multiple ways to connect virtually with family, friends, peers, members of their interest group, and even strangers. According to Dean (2021), people spend an average of 2 hours and 24 minutes per day on social media, and this includes students who are also part of the wider social media community. Social media platforms are major factors leading to distraction and hindrance of the mind. These days, students tend to lose their focus on studying. Rather, they enjoy browsing social media. According to a study by Upadhayay and Guragain (2017) on medical students, reduced academic performance is one of the major consequences of the overuse of social networking by students. The results of the study showed that students who used social networks more frequently than the average student had poor academic achievement and a low level of concentration in the classroom.

While social media provides numerous ways to communicate, its misuse can negatively impact academic performance. Mim, Faijun, and Islam (2018) found that time spent on social networking sites has a detrimental effect on academic performance, despite its advantages in enabling students to communicate with people worldwide without interfering with their work schedules. Moreover, internet addiction resulting from excessive use of social media has been linked to poor mental health and academic performance among students (Sandeep & Amit, 2018). The distraction caused by social media is also leading to reduced academic performance among students (Upadhayay & Guragain, 2017; Madhusudan, Chaluvaraj, and Preethi, 2016; Junco, 2012; Tsitsika et al., 2014; Sandeep and Amit, 2018).

Despite the growing concern about the impact of social media on academic performance, there is a gap in research on its effects on students' academic performance. The major gap in the previous studies is the fact that the academic performance of the students considered was not based on standardized national exam scores and appropriate methods. For instance, Rachael (2018) used Likert scale subjective measurements to measure the effect of time spent on social media on the academic performance of students in Uganda. Similarly, Alam and Aktar (2021) employed

descriptive statistics while dealing with the impact of social media on students' academic performance in Bangladesh.

According to the Social bakers Gala (2022), there were 6.35 million active social media users in Ethiopia in 2022. Despite such growing numbers of social media users, studies are rather scanty, particularly in the Ethiopian context. While there are various studies on the effects of social media usage, the academic performance of students is not based on standardized national exam scores and appropriate methods. Hence, this study aims to fill this gap by investigating the impact of social media usage on grade 12 students' academic performance in Ethiopia's Addis Ababa city. This is particularly important as the number of active social media users in Ethiopia is rapidly increasing (Socialbakers Gala, 2022).

This study investigates the effect of social media usage on the academic performance of students and young people, drawing on Gripenstraw's (2022) essay in the Harvard Business Review on social media addiction. Young people have gotten used to utilizing social media to keep their dopamine behavior balance (DBB), which could have long-term repercussions on their brain activity and, consequently, their academic performance, according to the thesis. In light of the aforementioned disparities, this study looks at the level of social media usage among grade 12 students, patterns of social media use, and the gendered impact of social media use on academic achievement.

Review of Related Literature

Theoretical Literature:

Since its inception in the 1970s, the Internet has transformed commerce and communication worldwide. Via a variety of applications, such as social media, which lets users share and edit user-generated information, it enables people to interact and work together. A platform for online engagement, communication, and cooperation known as social media gives users a way to connect and exchange information with others. The term "social networking" refers to the interpersonal connections inside a network that can be visualized to better understand information flows and teamwork. Social media offers a venue for creative thinking and participatory education, fostering dialogue between pupils, instructors, and communities.

To better understand how media characterizations, affect learning and behavior, social cognitive theories of observational learning have been applied to the study of media. According to the social cognitive theory, people who pay attention to and reflect on media content either learn new information or change their pre-existing mental representations. According to Bandura's theory, the exhibited model determines the traits that are taught or done (2002; as cited in Lerner & Stienberg, 2004). The social information processing theory, developed by Joseph Walther in 1992 (Asemah, 2011), explains how online information influences interpersonal relationships. The theory suggests that although online relationship development may take longer than face-to-face interaction, once established, it has an equivalent impact. Therefore, as students use social media more frequently, their study habits can be influenced by their online friends, creating a mutually reinforcing cycle (Asemah, 2011).

The Ball-Rokeach and Defleur (1976, as quoted in Alpizar, 2010) dependence model, which focuses on people's reliance on media, is the foundation of the media dependency theory, which investigates the effects of media on society. According to the theory, determining how much an audience relies on media messages to inform their opinions, emotions, or behavior is essential. As social networking and society advance, media are anticipated to assume more responsibility for delivering specialized information services (Alpizar, 2010). The media dependency theory, which is defined as a relationship in which one party's needs and goals are dependent on the resources of another party, according to Melvin Defleur (1976, cited in Atoni 2021), offers a systematic method for examining the effects of mass media on audiences and their interactions with social systems.

In the 1940s, the Uses and Satisfactions Theory was created to explain why individuals consume various forms of media (Vinney, 2019). In the 1970s, researchers started to investigate the social and psychological requirements that media satisfied, diverging from earlier study that concentrated on the gratifications sought by media consumers (Vinney, 2019). The 1974 work by Jay Blumler and Elihu Katz is frequently cited as having developed the notion. This idea contends that rather than being passive consumers, media users actively seek out media to meet certain goals and requirements (Vinney, 2019). This idea is especially pertinent to student use of social media since it recognizes that they have control over their media consumption and utilize social media for a variety of purposes.

Empirical Literature

Students' use of social media has been demonstrated to affect their academic performance in both positive and negative ways. Mehmood and Tawir (2013) draw attention to the potential for technology, in particular social media, to have a beneficial or bad impact on academic performance. While Ahmed and Qazi (2011) discovered little link between the amount of time spent on social media and academic achievement among students in six Pakistani universities, Negussie and Ketema (2014) in Ethiopia found no significant correlation between social media usage and GPA. Faraj (2021), on the other hand, focuses on the dangers of using social media and how they could have a negative impact on education. Similar research by Kirschner and Karpinski (2013) revealed a poor correlation between Facebook use and academic success, with Facebook users reporting poorer GPAs and fewer time spent studying than non-users.

Research has indicated that individuals use social media for a range of purposes. Charlene et al. (2007) suggest that the primary reason for students' use of social networking sites is communication (as cited in Khan, 2013, p. 62). Lenhart et al. (2007) note that social networking websites provide opportunities for both real and virtual contact, enabling students to expand their social networks. In Ghana, Mingle and Adams (2015) found that high school students primarily use social media for socializing, making friends, and discussing school-related topics with friends. Similarly, Morallo (2014) found that most students use social media to interact with friends and family, watch videos, like and share images, and communicate ideas, with only a small percentage using it for educational purposes.

Many studies have examined the effect of social media on academic performance, with varying results. According to a study by Chand (2012) on the use of Facebook by college students, the chosen social media platform affected their academic achievement. The study also paid particular attention to gender comparisons and found that male students utilized social networking more frequently than female students. In contrast, a study by Tufekci (2008) indicated that women were four to five times more likely than men to use social networking sites. According to a study by Gina (2017), both men and women use social media, but for different things depending on their gender, with women mainly using it to strengthen already-existing friendships, while men mainly use it to facilitate sexual activities, make new friends, and focus on tasks.

Also, the majority of Facebook users, both male and female, believe that social media has a significant impact on academic performance, according to a report by Ellison (2007). Although some research implies a favorable association between social media use and academic achievement, others suggest a negative correlation, there isn't a clear consensus regarding the effect of social media on academic performance. Overall, it appears that using social media can affect academic performance in both positive and negative ways, depending on a variety of variables such as the type of platform used, usage frequency, and individual characteristics.

Sampling, Data and Methods

This article used an explanatory research design. In addition, descriptive and inferential statistics were applied as deemed appropriate. This helps explain the pattern of social media usage by students. In terms of the sampling procedure followed, Addis Ketema preparatory school was randomly chosen for this study from among several public preparatory schools in Addis Ababa. Using the classroom roster as a sampling frame, 290 students were randomly selected from among the 1052 active students attending grade 12 in the academic year 2020–21 based on the Yamane statistical formula to draw representative samples, which is specified as follows:

$$n = \frac{N}{1 + N(e)^2}$$

Where, N stands for population, n represents sample size, and e stands for the sampling error

To generate data, both primary and secondary sources were used. Questionnaire was used to solicit primary data from students using questionnaire, while checklist was used to gather data from secondary sources.

Once the data were collected and managed, regression analysis is used along with descriptive and inferential statistics as appropriate to the objectives set. To analyze the extent usage of social media effect on grade 12 students' academic performance, a multiple regression method used.

$$Y = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \beta_4 x_4 + \beta_5 x_5 + \beta_6 x_6 + \beta_7 x_7 + \beta_8 x_8 + \beta_9 x_9 + \beta_{10} x_{10} + \varepsilon$$

Where Y= the dependent variable (student academic performance), β0 = constant term, ε = error term, β1, β2, β3, β4, β5, β6, β7, β8, β9 & β10= the beta coefficient of student gender, student age,

student mother age, student father age, student mother educational background, student father educational background, time student spent on Instagram, time student spent on Facebook, time student spent on TikTok per day and using of social media in the classroom respectively. X1, X2, X3, X4, X5, X6, X7, X8, X9 & X10= the predictors or the independent variables student gender, student age, student mother age, student father age, student mother educational background, student father educational background, time student spent on Instagram, time student spent on Facebook, time student spent on TikTok per day and using of social media in the classroom respectively.

Validity and Reliability Test

The validity of the appropriateness and meaningfulness of the researcher data obtained through the instrument is ensured by consulting professors and subject matter experts. A reliability test, on the other hand, was conducted to assess the overall reliability and consistency of respondents' responses to all the items in the measure. The Cronbach Alpha test was used to demonstrate reliability (0.69, which is a sufficient value).

Results and Discussion

Descriptive Statistics

From the respondents, 100(34.13%) use social media for educational purposes (obtain tutorial videos for courses) 89(30.38%) use social media to keep in touch with their friends and 104 (35.19%) use it for entertainment purposes (to watch music video, movies, etc.). Results of the descriptive analysis shows that the average age of the students who participated in the study is 19. However, there is a significant difference between the ages of the mothers and fathers of the students. The standard deviation for the mother's ages is 8.1, with a minimum age of 35 and a maximum age of 77. Similarly, the standard deviation for the father's ages is 8.1, with a minimum age of 30 and a maximum age of 80. This indicates that there is a wide range of ages among the parents of the students. Furthermore, the educational backgrounds of the parents differ significantly. On average, fathers have pursued education for 2.5 more years than mothers. This suggests that fathers are more likely to have higher levels of education than mothers.

The study also revealed that the monthly income of the families of the students varied greatly. The minimum monthly income was 1,000 birr, while the maximum was 40,000 birr. The income disparity suggests that the families have different economic backgrounds and may face different challenges in supporting their children's education. Overall, the study indicates that there are significant differences in the ages, educational backgrounds, and income levels among the parents of the students who participated. These differences may have implications for the students' educational outcomes and opportunities.

The descriptive analysis further shows that communication and socialization are the main reason students use social networking sites. Accordingly, over 70% of students use social media networks to socialize and make new friends. Similarly, the percentage of students who chat with their friends on social media is 87.84%. Almost half of them do this quite frequently. This finding is consistent with that of Charlene et al. (2007) which is cited in Khan,2013, p.62)

Inferential Statistics

This article used t-test to compare the mean scores of the national exam between two groups of students. The first group consists of students who do not have a social media account, denoted as 0, and the second group consists of students who have a social media account, denoted as 1. The analysis found that the mean score on the national exam for students who do not have a social media account is 402.6, while the mean score for students who have a social media account is 350.12. The calculated t-test value is 1.49 with a degree of freedom, and the corresponding two-tailed p-value is 0.1369, which is greater than the significance level of 0.05. Therefore, we fail to reject the null hypothesis, which states that there is no significant difference between the national exam scores of students who have a social media account and those who do not. In other words, the available evidence suggests that having a social media account does not have a significant impact on the national exam scores of students. A similar analysis was done to compare academic score of male and female students. Findings show that the former score 38 points higher than their counterparts.

From a scatter plot diagram, we can observe that there is a clear relationship between the age of the student's mother and the student's score. This demonstrates that when the student's mother is

younger, the student receives a high score on the national exam, whereas when the student's mother is older, the student receives a low score. From this, we can conclude that when the student's mother is younger, she can interact with her children and assist them with their education. Figure 5 also shows a clear relationship between the student's national exam score and the age of the student's father. When the student's father is younger, the student's national exam score improves, but when the father is older, the student's national exam score declines. This leads us to the conclusion that when student parents are younger, they pay attention to, help, and support their children's education. They also provide a pleasant environment for their children, which helps the student to focus on learning.

Figure 1.

Student Mother and Father Age and Student Academic Performance
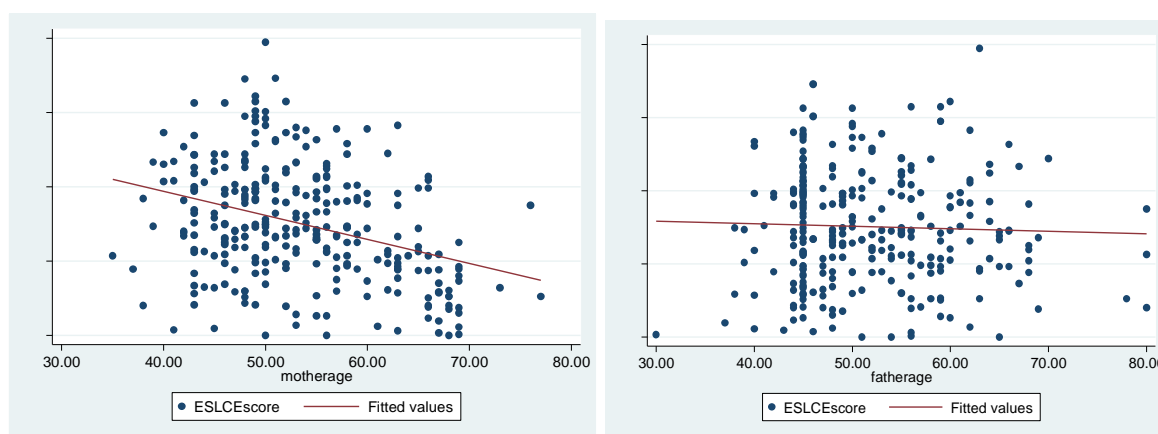
Source: Own compilation

Regression Results

According to Table 1, there is a noticeable difference in academic performance between male and female students, with female students scoring lower than male students do. One possible explanation for this gender difference is that female students may have additional responsibilities at home, such as helping with household chores, which could reduce their study time and negatively affect their academic performance. This finding is supported by a study conducted in Pakistan, which found that female students who were responsible for household chores had lower academic achievement than their male counterparts (Naz et al., 2021).

In addition to household responsibilities, the mother's age also appears to be a significant factor in determining students' academic performance. According to the results in Table 1, for each additional year of age of the mother, her children's academic performance decreased by 1.26 marks. This finding is consistent with previous research that has shown a negative relationship between maternal age and the academic performance of children (Borghans et al., 2011).

The level of education of the mother also plays a crucial role in the academic success of students, as evidenced by the results in Table 1. The study found that a mother's education level positively affects the academic performance of students. This finding corroborates with findings of several previous studies that have shown that mothers' education level is positively associated with the academic performance of their children (Frenette, 2007; Kim & De La Torre, 2017).

Interestingly, the study found that the father's education level negatively and significantly influences students' academic performances. This finding contrasts with previous research that has shown a positive relationship between the father's education level and the academic performance of students (Schultz, 2002).

Another significant factor that affects students' academic performance is the amount of time spent on social media. According to the results in Table 1, excessive use of social media, particularly Instagram, Facebook, and Tiktok, is associated with lower academic performance. This finding is supported by several studies that have shown a negative relationship between social media use and academic performance (Al-Bahrani et al., 2018; Kirschner & Karpinski, 2010).

Furthermore, the study found that age is a significant factor in determining the academic performance of female students. This finding could be attributed to the fact that females in Ethiopia have limited access to resources and depend on their spouse's income. As students grow older, they realize the importance of education for their future prospects.

From the aforementioned discussions, we could see that this study highlights the importance of considering various factors that influence the academic performance of students, including household responsibilities, parental education levels, and social media use. The findings also suggests that investing in the education of mothers can have a positive impact on the academic

performance of their children. However, further research is necessary to explore the complex relationships between these factors and academic achievement of students.

The regression analysis in Table 1 indicates that although student age has a positive sign, it has an insignificant impact on academic performance. Therefore, the study's findings suggest that age does not significantly influence students' academic performance. This conclusion is in line with Voyles' (2011) research, which found no relationship between students' age and academic performance. Additionally, Pozo-Burgos et al. (2022) examined sociocultural and demographic factors that affect academic success and found that demographic factors do not significantly affect academic achievement.

In this study, the impact of parents' educational background on their children's academic performance was examined. The results of the regression analysis in Table 1 show that the educational background of students' mothers has a positive effect on their academic performance. Specifically, an increase in the mother's education level by one-year leads to an increase in the student's academic performance. This finding supports Hanafi's (2006) argument that parents' educational qualifications are crucial to their children's academic attainment. Moreover, Goni and Bello (2016) found that parents with higher qualifications are more likely to engage in activities that promote their children's cognitive abilities and academic success.

Table 1
Determinants of Students' Academic Performance

Variables	(1) Model 1_pooled	(2) Model 2_for female students	(3) Model 3_for male students
Gender of the student (1= female)	-29.01***		
	(7.512)		
Age of the student	6.789**	17.07***	-2.071
	(3.272)	(4.501)	(4.941)
Mother's age	-0.902	-0.859	-1.153
	(0.549)	(0.716)	(0.864)
Father's age	0.428	0.649	0.443
	(0.478)	(0.612)	(0.774)
Mother's education	3.765***	3.980***	4.282**
	(1.200)	(1.520)	(1.995)
Father's education	-1.992**	-1.806*	-3.016*
	(0.856)	(0.974)	(1.762)
Time spent on Instagram	-37.65***	-26.03***	-47.46***
	(6.922)	(8.893)	(11.28)
Time spent on Facebook	-18.96***	-14.87***	-21.76***
	(4.489)	(5.686)	(7.529)
Time spent on Tiktok	-11.32**	-16.48**	-8.173
	(4.867)	(6.742)	(7.216)
Using social media in the classroom	-31.83***	-38.43***	-27.14
	(10.19)	(12.58)	(17.67)
Constant	329.7***	80.29	527.5***
	(70.87)	(98.69)	(100.5)
Observations	293	166	127
R-squared	0.401	0.377	0.419

Source: Stata Regression Result

According to the results of the regression analysis in Table 1, the amount of time students spend on social media per day has a negative effect on their academic performance. Specifically, when the amount of time spent on social media per day increased by one hour, the student's academic performance decreased. A study by Tarek's (2015) found that students share the same grade range average whether they spend less than one hour or more than six hours on social media. The current study supports the findings of Muhammad and Masood's (2021), which investigated the impact of social networking sites on academic performance at a private university in Karachi, and Al-Yafi, Mazen,

The findings of this study also go in tandem with the findings of Tsai's (2018) study on the effects of social networking sites on academic performance in Qatar. The study also aligns with Faijun and Mohammad's (2017) research, which showed that time spent on various social networking websites has a detrimental effect on academic performance, as well as with Sandeep and Amit's (2018) finding that internet addiction has a negative effect on academic performance. The study by Faraj (2021) also confirms that social networking sites are an integral part of student culture and may pose risks that negatively impact learning. Additionally, the study by Kirschner and Karpinski (2013) found a negative association between Facebook use and academic performance, with Facebook users having lower GPAs and spending fewer hours studying than non-users.

Furthermore, the regression analysis in Table 1 also shows that student gender has a negative effect on academic performance. To avoid potentially obscuring important information, the researcher suggests conducting separate regression analyses for male and female students rather than using a dummy variable to compare the two genders.

Accordingly, Table 1 shows that five variables are significant: the age of the student, the age of the mother, the education level of the mother, and the time spent on social media by the student. For female students, the age of the student has a positive impact on their academic performance, while the age of the mother and the education level of the mother have a positive impact as well. However, the time spent on social media by the student has a negative impact on academic performance. It is reasonable to conduct a separate analysis for male students since not all variables are significant for them.

Table 1 further reveals that for male students, only four variables are significant: the mother's education, the father's education, the time spent on Instagram and Facebook by the student. The study finds that the educational background of the mother has a positive impact on the academic performance of male students, whereas the educational background of the father has a negative impact. This may be because highly educated fathers may have busy jobs or travel frequently, making it difficult for them to support their children academically. Additionally, the study finds that the time spent on social media (such as Instagram and Facebook) is detrimental to male

students' academic performance. This result is consistent with the findings of Hsu & Chuang (2008).

From the findings, we observe that conducting a separate analysis for male and female students has an important implication in developing policies that address the specific needs of male and female students thereby improve academic outcomes for both groups. The study found that some variables have different impacts on male and female students. Therefore, conducting separate analyses.

Conclusions and Recommendations

Conclusions

This study reveals that the majority of students spend most of their daily time on social media platforms. This result is consistent with the findings of other studies conducted by numerous researchers. The study also found that students tend to use social media more for socializing, making new friends, and posting content than for educational purposes. This suggests that social media is mostly used for entertainment rather than educational activities. Additionally, the study found that students who spend more time on social media tend to have lower academic performance.

The study further concludes that a student's parents or guardians' characteristics can significantly impact their academic performance. Specifically, the age of a student's mother has a negative impact on their academic performance, indicating that older mothers may be less able to pay attention to their children. However, the educational background of a student's mother has a positive impact on their academic performance, suggesting that an educated mother is more likely to provide support during assignments, tutorials, and exercises. On the other hand, the age of s student's father has a positive impact on their academic performance, while their educational background has a negative impact. This could be because fathers with a strong educational background may become overworked and have less time for their children.

Furthermore, the study found that male students' use of social media has a more significant negative impact on their academic performance than female students. According to the Uses and Gratifications theory, teenagers actively seek out media that satisfy their cognitive and social

interaction needs. Therefore, managing, monitoring, and following up on students' electronic media use at home, school, and other places can effectively promote their cognitive, social, and emotional development.

Implications for Policy

Based on the findings discussed, several policy recommendations can be made to improve the academic performance of students:

- Develop programs to reduce the burden of household responsibilities for female students. To address the gender gap in academic performance, schools and policymakers should work together to develop programs that help reduce the burden of household responsibilities for female students. This can be achieved by providing resources such as after-school programs, tutoring, and study groups to help female students balance their responsibilities.

- Promote parental education, particularly the education of mothers. Given the significant impact of maternal education on the academic performance of students, it is essential to promote parental education. This can be achieved through providing incentives such as scholarships and financial assistance to encourage mothers to pursue higher education. Additionally, targeted education campaigns can help raise awareness about the importance of maternal education.

- Educate students and parents about the negative effects of excessive social media use. To mitigate the negative effects of social media on academic performance, schools and parents should work together to educate students about responsible social media use. This includes setting limits on social media use during study time and encouraging students to use social media in moderation.

- Explore the potential of age-specific interventions for female students. Given the finding, that age is a significant factor in determining the academic performance of female students, policymakers should explore the potential of age-specific interventions. This could involve providing resources such as mentoring and counseling services to help older female students overcome the challenges, they face in accessing education.

- The government and schools should create alternative facilities such as sports, clubs, recreation, and educational facilities to entice students to spend their time on physical socializing such as volunteering and physical education.

- Encourage parents, especially mothers, to pursue higher levels of education. The study found that the educational background of the mother has a significant positive impact on the academic performance of both male and female students. Therefore, policies that promote access to education and training programs for women could have a positive impact on the academic performance of their children.

- Raise awareness about the negative impact of social media on academic performance. The study found that spending more time on social media has a negative impact on academic performance for both male and female students. Therefore, policies that raise awareness among students, parents, and educators about the negative effects of excessive social media use on academic performance could help students prioritize their time and reduce their screen time.

- Provide support for students who struggle academically. The study found that demographic factors, such as age and gender, do not have a significant impact on academic performance. Therefore, policies that provide support and resources for students who struggle academically, regardless of their demographic background, could help to improve academic outcomes.

References

Abudabbous, N. (2021). Advantages and Disadvantages of Social Media and Its Effects on Young Learners. *Available at SSRN 4002626*. doi:https://dx.doi.org/10.2139/ssrn.4002626

Ahmed, I., & Qazi, T. (2011). A look out for academic impacts of Social networking sites (SNSs): A student based perspective. *African Journal of Business Management, 5*, 5022-5031.

Ahsan-ul-Haq, M., & Chand, S. (2012). Pattern of Facebook usage and its Impact on Academic Performance of University Students: A Gender Based Comparison. *Bulletin of Education and Research, 34*, 19-28.

Al-Yafi, K., El-Masri, M., & Tsai, R. (2018). The Effects of Using Social Network Sites on Academic Performance: The Case of Qatar. *Journal of Enterprise Information Management, 31*, 446-462. doi:10.1108/JEIM-08-2017-0118

Alam, S., & Aktar, H. (2021). The Effect of Social Media on Student Academic Performance: A Case Study at the Islamic University of Bangladesh. *6*, 26-44.

Armitage, R. C. (2021). Social media usage in children: an urgent public health problem. *Public Health, 200*, e2-e3. doi:10.1016/j.puhe.2021.09.011

Asemah, E. S. (2012). Exploring the Advantages of Interpersonal Communication in Political Campaigns Ezekiel S. Asemah, Victoria Anum and Comfort Ogwo. *Sciences, 10*(2), 56-64.

Asiedu, N. (2017). Influence of social networking sites on students' academic and social lives: The Ghanaian Perspective. *Library Philosophy and Practice, 2017*.

Azizi, S., Soroush, A., & Khatony, A. (2019). The relationship between social networking addiction and academic performance in Iranian students of medical sciences: A cross-sectional study. *BMC Psychology, 7*. doi:10.1186/s40359-019-0305-0

Bahr, P. R. (2010). Making Sense of Disparities in Mathematics Remediation: What is the Role of Student Retention? *Journal of College Student Retention: Research, Theory & Practice, 12*(1), 25-49. doi:10.2190/CS.12.1.c

Ball-Rokeach, S. J., & DeFleur, M. L. (1976). A dependency model of mass-media effects. *Communication research, 3*(1), 3-21.

Borghans, L., Heckman, J. J., Golsteyn, B. H., & Meijers, H. (2009). Gender differences in risk aversion and ambiguity aversion. *Journal of the European Economic Association, 7*(2-3), 649-658. doi:https://dx.doi.org/10.2139/ssrn.1351149

Boyd, d. m., & Ellison, N. B. (2007). Social Network Sites: Definition, History, and Scholarship. *Journal of Computer-Mediated Communication, 13*(1), 210-230. doi:10.1111/j.1083-6101.2007.00393.x

Casipit, D., Cara, E., Ravago, J., Reyes, M., Pagay, J., & Tagasa, G. (2022). Gender Differences in Using Social Media in Language and Literature Teaching in Multicultural Context. *International Journal of Language and Literary Studies, 4*, 52-65. doi:10.36892/ijlls.v4i4.1083

Chou, S.-Y., Liu, J.-T., Grossman, M., & Joyce, T. (2010). Parental Education and Child Health: Evidence from a Natural Experiment in Taiwan. *American Economic Journal: Applied Economics, 2*(1), 33-61. Retrieved from http://www.jstor.org/stable/25760192

Corsalini, N., & Teklemariam, G. (2014). Relationship between Facebook Practice and Academic Performance of University Students. *Asian Journal of Humanities and Social Sciences, 2*, 2320-9720.

Frenette, M. (2007). Why are youth from lower-income families less likely to attend university?: Evidence from academic abilities, parental influences, and financial constraints. In: Citeseer.

Galal, S. b. (2022). *Ethiopia: Leading Google searches 2021, Statista. Available at: https://www.statista.com/statistics/1307170/most-popular-google-searches-in-ethiopia/ (Accessed: December 10, 2022). .* Retrieved from

Gilani, H., Naz, H. I., Arshad, M., Nazim, K., Akram, U., Abrar, A., & Asif, M. (2021). Evaluating mangrove conservation and sustainability through spatiotemporal (1990–2020) mangrove cover change analysis in Pakistan. *Estuarine, Coastal and Shelf Science, 249*, 107128. doi:https://doi.org/10.1016/j.ecss.2020.107128

Hashem, Y. (2015). The Impact of Social Media on the Academic Development of School Students. *International Journal of Business Administration, 6*, 46. doi:10.5430/ijba.v6n1p46

Junco, R. (2012). The relationship between frequency of Facebook use, participation in Facebook activities, and student engagement. *Computers & Education, 58*, 162-171. doi:10.1016/j.compedu.2011.08.004

Jung, J.-Y. (2017). Media Dependency Theory. In *The International Encyclopedia of Media Effects* (pp. 1-10).

Karpinski, A., Kirschner, P., Ozer, I., Mellott, J., & Ochwo, P. (2013). An exploration of social networking site use, multitasking, and academic performance among United States and European university students. *Computers in Human Behavior, 29*, 1182–1192. doi:10.1016/j.chb.2012.10.011

Kelsey, H. (2022). Our Social Media Addiction. Retrieved from https://hbr.org/2022/11/our-social-media-addiction

Khan, S. (2012). Impact of social networking websites on students. *Abasyn Journal of Social Sciences, 5*(2), 56-77.

Kumar, S., Kumar, A., Badiyani, B., Singh, S. K., Gupta, A., & Ismail, M. B. (2018). Relationship of internet addiction with depression and academic performance in Indian dental students. *Clujul Med, 91*(3), 300-306. doi:10.15386/cjmed-796

Lenhart, A., Purcell, K., Smith, A., & Zickuhr, K. (2010). Social Media & Mobile Internet Use Among Teens and Young Adults. *Pew Internet and American Life Project*.

Lerner, R. M., & Steinberg, L. (2004). The Scientific Study of Adolescent Development: Past, Present, and Future. In *Handbook of Adolescent Psychology* (pp. 1-12).

Madaiah, M., Seshaiyengar, C., Suresh, P., Munipapanna, S., & Sonnappa, S. (2016). Study to assess the effects of social networking sites on medical college students. *International Journal of Community Medicine and Public Health*, 1204-1208. doi:10.18203/2394-6040.ijcmph20161385

Mbabazi, R. (2018). Effects of social media on students academic performance in institutions of higher learning in Makindye Division–Kampala District.

Mehmood, S., & Taswir, T. (2013). The effects of social networking sites on the academic performance of students in college of applied sciences, Nizwa, Oman. *International Journal of Arts and Commerce, 2*(1), 111-125.

Mim, F. N., Islam, M. A., & Kumar, G. (2018). Impact of the use of social media on students' academic performance and behavior change. *Age, 18*(20), 150.

Mingle, J., & Adams, M. (2015). Social Media Network Participation and Academic Performance In Senior High Schools in Ghana. *Library Philosophy and Practice, 2015*.

Morallo, I. M. (2014). *The Effects of Social Networking Sites on Students' Academic Performance In Lyceum of The Philippines - Laguna*.

Pozo-Burgos, E. J., Burbano-Pulles, M. R., Vidal-Chica, J. I., & Revelo-Salgado, G. E. (2022). Sociocultural and Demographic Factors That Influence Academic Performance: The Pre-University Case of the Universidad Politécnica Estatal del Carchi. *Journal of Technology and Science Education, 12*(1), 147-156. doi:http://dx.doi.org/10.3926/jotse.1359

Samarasinghe, S., & Chandrasiri, T. (2019). The Impact of Social Media on Students' Academic Performance. *American Scientific Research Journal for Engineering, Technology, and Sciences, 60*, 40-51.

Schultz, P. (2001). Why Governments Should Invest More To Educate Girls. *World Development, 30*, 207-225. doi:10.1016/S0305-750X(01)00107-3

Talaue, G., AlSaad, A., AlRushaidan, N., AlHugail, A., & AlFahhad, S. (2018). The Impact of Social Media on Academic Performance of Selected College Students. *International Journal of Advanced Information Technology, 8*, 27-35. doi:10.5121/ijait.2018.8503

Tsitsika, A., Janikian, M., Schoenmakers, T. M., Tzavela, E. C., Olafsson, K., Wójcik, S., . . . Richardson, C. (2014). Internet addictive behavior in adolescence: a cross-sectional study in seven European countries. *Cyberpsychol Behav Soc Netw, 17*(8), 528-535. doi:10.1089/cyber.2013.0382

Tufekci, Z. (2008). Grooming, Gossip, Facebook and MySpace. *Information, Communication & Society, 11*, 544-564. doi:10.1080/13691180801999050

Ullah, M., Hassan, M., Anwar, A., Butt, R., Hussain, K., & Rasheed, A. (2021). Impact of Social Networking Sites on Academic Performance of University Students: A Quantitative Analysis. *Reviews of Management Sciences, 3*.

Upadhayay, N., & Guragain, S. (2017). Internet use and its addiction level in medical students. *Advances in Medical Education and Practice, 8*, 641-647. doi:10.2147/AMEP.S142199

Vinney, C., Dill-Shackleford, K., Plante, C., & Bartsch, A. (2018). Development and Validation of a Measure of Popular Media Fan Identity and Its Relationship to Well-Being. *Psychology of Popular Media Culture, 8*. doi:10.1037/ppm0000188

Wu, I.-L., Chuang, C.-H., & Hsu, C.-H. (2014). Information sharing and collaborative behaviors in enabling supply chain performance: A social exchange perspective. *International Journal of Production Economics, 148*, 122-132. doi:https://doi.org/10.1016/j.ijpe.2013.09.016

Yulianti, K., Denessen, E., & Droop, M. (2018). The effects of parental involvement on children's education: a study in elementary schools in Indonesia. *International Journal about Parents in Education, 10*, 14-32.

Yunus, A., Hamzah, M., & Abdul Razak, K. (2018). Parental Background and Students' cademic Performance: A Comparative Study in North-Central Nigeria. International Journal of Academic Research in Progressive Education and Development, 7. doi:10.6007/IJARPED/v7-i2/4077

Appendices

Appendix 1. Model summary and specification tests

Model Summary

Source	SS	Df	MS	Number of obs = 293
Model	715571.677	8	71557.1677	F(8, 284) =18.91
Residual	1067119.24	282	3784.11077	Prob F = 0.0000
Total	1782690.91	292	6105.10587	R-squared = 0.4014
				Adj R-squared = 0.3802
				Root MSE =61.515

Regression Model and diagnostic test

Ramsey Omitted Variable Test

```
. estat ovtest

Ramsey RESET test using powers of the fitted values of ESLCEscore
      Ho:  model has no omitted variables
             F(3, 284) =       2.10
               Prob > F =       0.1005
```

```
. linktest

     Source         SS          df       MS        Number of obs   =        293
                                                    F(2, 290)       =      52.55
      Model     474235.699        2   237117.849    Prob > F        =     0.0000
   Residual     1308455.22      290   4511.91454    R-squared       =     0.2660
                                                    Adj R-squared   =     0.2610
      Total     1782690.91      292   6105.10587    Root MSE        =     67.171


  ESLCEscore       Coef.   Std. Err.       t    P>|t|     [95% Conf. Interval]

        _hat    -.779154    1.301753    -0.60    0.550    -3.341236    1.782928
      _hatsq    .0026097     .001904     1.37    0.172    -.0011377    .0063571
       _cons    298.8122    220.7615     1.35    0.177    -135.6856    733.3101
```

Heteroskedasticity Test

```
. hettest

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
        Ho: Constant variance
        Variables: fitted values of ESLCEscore

        chi2(1)     =       0.42
        Prob > chi2 =     0.5177
```

```
. vif

     Variable  |       VIF        1/VIF
-------------+----------------------------
mothereduc~n  |      1.21     0.827267
timeonsoci~a  |      1.17     0.856327
fathereduc~n  |      1.16     0.863747
timespendi~y  |      1.15     0.870395
      gender  |      1.02     0.984349
-------------+----------------------------
    Mean VIF  |      1.14
```

Normality Test

Shapiro-Wilk W test for normal data					
Variable	Obs	W	V	Z	Prob > Z
R	293	0.99123	1.829	1.416	0.07841

Table 1: Shapiro-Wilk W test for normal data