

# IMPACT OF MEDIA CONSUMPTION HABITS ON ACADEMIC PERFORMANCE

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## Abstract

This study analyzes the impact of social media usage on school attitude and academic performance. The outcomes show a clear trend. Traditional media, even in their online versions, seem to be in an unstoppable decline. On the other hand, our data confirm a deep penetration of social media in the life of our target audience. Practically all participants in this study have accounts in several platforms. Furthermore, we analyze how this strong penetration may be affecting their academic live, the correlations of social media usage with some variables that may be associate with academic success or failure. The more time our students spend and the more frequently they access their social media accounts, the weaker their educational values and school attitude seem to be, as well as their willingness to engage in cognitively complex activities, constructs normally associated to academic success. Moreover, time and frequency of social media usage strongly correlate with both a lower GPA and a high score on the parameters that we could consider warning signs of weak academic performance, such as academic risk and the external academic locus of control.

Keywords: Media consumption habits, social media, academic performance, educational values, school attitude.

## 1 INTRODUCTION

Educators around the world have been observing how the invasion of digital electronic devices is changing our natural educational environment. Marshall McLuhan described in his classic *Understanding Media* (1964) how technological development introduces innovations that might radically change the human landscape. Those innovation penetrate our most intimate routines and transform not only our lifestyle, but also the very contents of our life. The printing press is the archetypal example of how an apparently modest invention (a wine press used to put ink on paper), triggered a revolution that radically changed Western civilization. When a college instructor enters nowadays a classroom (this used to be something habitual before the pandemic), s/he is greeted by an ominous silence. Peter Sloterdijk (2014, 476) describes those silent students as a generation of interactive, interconnected, inter-autistic phantoms.

Nothing seems to be more urgent in the field of education than to what extent such personal experience, our subjective perceptions, correspond to reality. It is urgent to analyze in depth, to gather empirical evidence of the actual effect of these new digital communication technologies on our body of students. While we are writing this brief article, media all over the world are informing about a scandal that involves Facebook. The *Wall Street Journal* (Wells, Georgia & Horwitz, Jeff & Seetharaman, Deepa, 2021) reported that this company may have been hiding for years some evidence of harmful effects of the use of Instagram, platform that belongs to the Facebook group, on the mental health of young users of this social network, particularly teenage girls. Apparently, such hidden data related the intense activity in Instagram with symptoms of depression and anxiety. Always according to the team of investigative reporters of the *Wall Street Journal*, around 13% of the teenagers whose data were analyzed in the research process faced suicidal thoughts. Most likely, this scandal will soon vanish from the public scene due to the fish's memory of both media and public.

Empirical evidence seems to support our intuitive thesis. In the last years, a significant number of researchers has explored the effects of digital communication technologies in different areas of our youth's life. Lepp et al. (2015), for instance, studied the relationship between cell phone use and academic performance in U.S. college students. The intensity of use of cell phones proved to be a robust predictor for GPA (self-reported). The more intensively participants in this study use their cellphones, the more likely their GPA will be lower than average.

Junco focuses on the most popular social network: Facebook. The author studies how the use of this online platform affects both the level of engagement in class activities of students (2012a) and their academic performance (2012b). In both cases, an excessive Facebook use seems to be detrimental for

both constructs. The more active participants were in Facebook the weaker their class engagement seemed to be, and the lower their academic performance. Ahn (2011) found similar negative trends with regards to the impact of digital social networking on academic success in adolescent students.

Alloway & Horton (2013) concentrated their research on the relationship between digital social networking and cognitive abilities. Their findings seem to support the thesis that a longer time of activity in social media – they also focused on Facebook – might improve cognitive skills. To measure cognitive skills, the authors relied on standardized tests of following factors: verbal ability, working memory and academic attainment. Since those factors have been associated to a positive academic performance, we decided to integrate cognitive complexity as one of the variables in our study.

It is important to note that this paper originates from a larger study that explores the media habits of our students and how this media habits might impact their academic performance. The study is a comprehensive survey of the media our students are using and the areas they are using those media for. We are interested in the fundamental trends. The study surveys the actual usage of daily national and regional newspapers, magazines, economic newspapers, tabloids, radio, TV and, of course, the new digital platforms. Then, these data are related to a series of factors associated to academic performance and mental health.

Here, we will only focus on the use of social media and its impact on academic performance. We will measure social media usage in terms of both frequency and amount of time. We asked our students to identify how much time they spend daily with social media, and how often they check their social media accounts.

Academic performance – or academic success – is a complex phenomenon that cannot be reduced to just one parameter (GPA). While high School GPA functions well as predictor of academic success in the freshman year at college (Sawyer, 2013), it is not, by far, the only or best indicator of academic performance. As a matter of fact, there are studies that suggest that other indicators of academic success should be taken into account (Moni et al, 2019). A positive school attitude seems to be the best predictor of academic performance. The studies of Colangelo (1993) and McCoach & Siegle (2001) particularly provide robust evidence of the power of school attitude as reliable predictor for GPA.

In addition to school attitude, we add cognitive complexity as a factor that positively correlate with academic performance. Individuals who consider intellectually challenging tasks to be a stimulus, or who are willing to engage in cognitively complex activities may be more likely to success in college.

On the other hand, we identified a series of variables that may negatively affect students. We presume that academic risk, as well as an external locus of control might negatively affect the performance of our students.

Finally, we tried to measure to what extent students might develop an addiction to social media based on their consumption habits and how this addiction impacts their academic life.

This introductory study will just focus on the correlations between these factors. It is an exploratory, merely descriptive report. Thus, we do not start with any working hypothesis. Based on the outcomes of the correlations' analysis, we will establish hypothesis in further steps to test with more sophisticated regression analysis if causal relationships between those factors might be established.

## **2 METHODOLOGY**

### **2.1 Sample and Target Population**

A total of 311 undergraduate students participated in our study. Most of the participants (228) were recruited through the university's SONA platform and completed the survey online. When analyzed in terms of demographic attributes, we found the online sample to be clearly skewed in terms of ethnic diversity. The Latino and African American minorities were underrepresented.

We complemented the sample with face-to-face interviews addressing the groups of the population underrepresented in the online survey.

The final sample reflects to some extent the ethnical diversity of the institution. 62% are White, non-Hispanic students. The Latino and African American and Asian minorities make 17.9%, 7.9% and 4.4% of the sample. With 55%, white students represent the majoritarian ethnic group at Central Connecticut State University. Latinos are the largest minority with 17% of the total number of students, followed by African American with 14%. Asians represent a 6% of the student body. The rest 8% do not identify

themselves with any of those ethnic groups. Based on the actual numbers of the university, only African Americans seem to be underrepresented in the sample.

As we expected, most of the students who participated in the study are working to finance their education (76%). Most of them work part-time outside campus (60%). 5.7% work within campus and 6.6% both outside and within campus. Only 10% declared to work full-time.

One of the myths surrounding CCSU is that it is a “first-generation” college, meaning, our students come from families with no experience or degrees in higher education institutions. When asked about the educational level of their parents, our sampled students do not seem to confirm this myth. In over 50% of the cases, at least one of the parents have a college degree or post graduate degrees. In 20% of the cases, the students declared that their parents had had “some college experience”, even though they did not complete a degree.

The vast majority of students at CCSU come from the broad spectrum that we normally refer to as “middle class”. Middle class is not only a technical concept, but also a psychological category. In addition to their income level, most of the students feel that they belong to a particular group of the population determined by economic status and lifestyle. This psychological identification may even be more relevant than the actual figure of income. Almost 60% of the students would describe their families as middle class, while 18% would situate themselves in the upper and 20% the lower spectrum of that middle class.

## **2.2 Measure of Academic Performance**

The GPA we used as indicator of academic performance was self-reported. A direct inquiry into the students’ records would have involved collecting data (ID numbers, for instance) that may have compromised the privacy of the participants in the research.

All the other variables to measure academic performance are validated scales, some of them frequently used in social and psychological sciences.

The school attitude was measured using the School Attitude Assessment Survey (SAAS) developed by McCoach (2002). To assess the level of cognitive complexity of our participants, we used the classic scale developed by Cacioppo, Petty and Kao during the 1980ies (1984). The academic Locus of control is measured using the scale validated by Trice (1985).

Finally, to assess social Media Addiction we adopted the scale developed by Andreassen et al (2012) for Facebook addiction: the so-called Bergen Facebook Addiction Scale (BFAS). We replaced Facebook in all the items by “social Media”.

The scales used to measure school attitude, academic risk, external locus of control and media addiction are based on the Likert model ranging the response options from “strongly disagree” to “strongly agree”.

The cognitive complexity scale asks participant to what extent certain character features are characteristic of them, ranging from “extremely uncharacteristic” to “extremely characteristic”. Some examples: “I prefer complex to simplex problems” or “I find satisfaction in deliberating hard and for long hours”.

The five scales showed robust reliability values: Attitude toward school, 20 items  $\alpha = .96$ ; cognitive complexity, 18 items,  $\alpha = .82$ ; academic risk, 5 items,  $\alpha = .89$ ; academic locus of control, 8 items,  $\alpha = .80$ ; social media addiction, 6 items,  $\alpha = .84$ .

## **2.3 Social Media Usage**

As already mentioned, we measured social media usage in terms of quantity, amount of time, and frequency of use. We asked our students to identify how much time they spend daily with (how many hours) and how often they check their social media accounts. Students had the option to select five options for the frequency (Never, 1 time a day or less, 2-3 times a day, every hour, every 15 minutes or less). With regards to the amount of time, the scale offered again 5 options for checking their accounts every day (less than 1 hour/never, about 1 hour, 2-3 hours, 4-6 hours, more than 6 hours).

## **3 RESULTS**

The so-called traditional media, even in their online versions seem to be in a dizzying and unstoppable decline. The media that have been traditionally providing information during several generation are falling-off. Close to 75% of the interviewed CCSU students rarely or never read national daily

newspapers. The percentage raises to 80% in the case of regional newspapers, and 84% in newspapers specialized in economics, such as the Financial Times. Other maybe more visual formats (as opposed to purely textual), such as tabloids or magazines of general information, are not much more popular. The number of rarely/never responses was between 70 and 80%. The percentage of students who do watch news rarely or never is much lower: 38%. TV seems to be the only medium that resist the advance of the new digital media. Still, not even 13% watch TV news daily. The figures are practically reversed when we asked about online video platform, being YouTube, of course, the most popular. Around 60% of the students look for current information in YouTube at least several times weekly (over 37% daily). Other exclusively online platforms, such as Wikipedia, are also more frequently visited to gather information. Over 50% of the respondents stated that they utilize them at least once weekly. The most popular platform to look for information is, by far, the online search engines. Over 70% of the participants makes use of such engines on a daily basis. A good number of students seems to rely on their school activity to get information about current issues. Over 50% stated that they use textbooks and generic course material at least once weekly to this end.

### 3.1 Social Media Penetration

We expected that this decline of the use of traditional media might be the consequence of an increase in the use of alternative digital media.

Social media are online platforms that defy the traditional borders of communication contexts. Social Media are used as channels for interpersonal and small group communication, for professional and mass communication. People use those platforms in order to contact friends of the elementary school or to search for their adolescence love. The same social networks are used for groups of friends not only to plan social activities, but also to develop or publish those activities in the very same platforms (tik tok challenges, for instance). Particularly in these worrying times brought about by the Covid-19 health crisis, the social networks have also become an indispensable tool to work remotely. And finally, some platforms, such as Twitter, allow users to reach a mass audience that was unthinkable a couple of years ago even for the most powerful TV networks.

With this potential and our own experience in the field of education, we expected a deep penetration of social media in the life of our audience. The most popular ones seem to be Facebook, where over 90% of our participants have an active account, Instagram (89.5%), and Snapchat (89.5%). Twitter comes at some distance (68.6%). The lack of popularity of the professional social network per excellence, LinkedIn, may surprise. Only 25% of the students have an account on it. On the other hand, we need to consider that our participants are still undergraduate students. For many of them, professional life lies in the future far ahead.

We measured the penetration of social media in terms of amount of time (quantity) and frequency of use, how much time they spend with social media, and how often the check their social media accounts. When it comes to frequency, over 67% of our participants check their social media account at least every hour. In this group, we include a 17% of students who stated they check their accounts every 15 minutes. In general, over 93% of our students scan them at least 2-3 times a day.

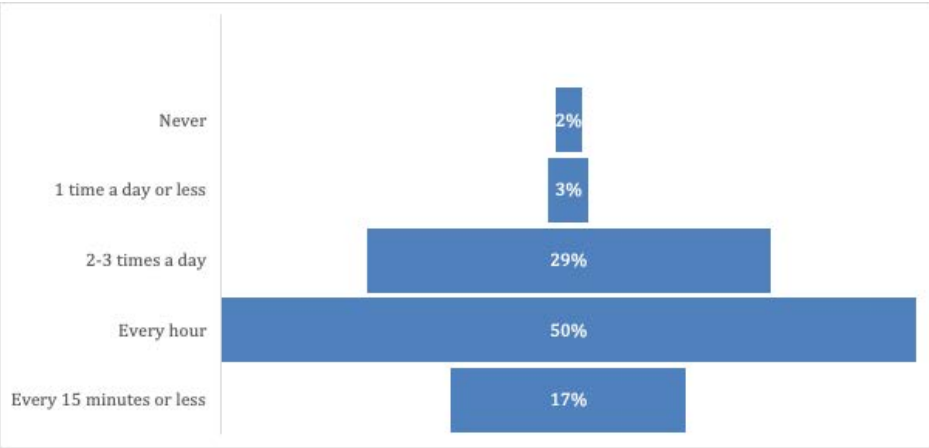


Figure 1. Frequency of Social Media Usage

With regards to the amount of time they spend immersed in social media, we found a similar degree of propagation. Over 80% of our participants stated that they devote 2-3 hours or longer daily to deal with their social media accounts. Within this large group, 30% stated that they spend at least 4-6 hours a day. There is still a large group, around 10%, who declared that they spend more than 6 hours in the social networks.

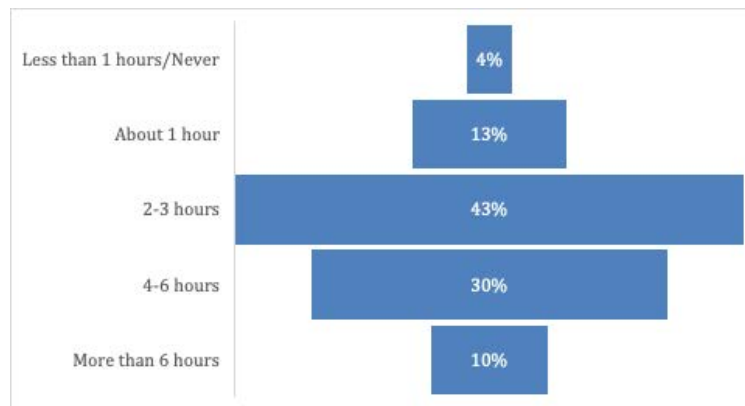


Figure 2. Amount of Time Spent with Social Media

This information confirms the intuitive personal experience of most of the members of the research team. When you ask yourself what those kids are doing with the cell phones all the time, most likely they will be active in any of these popular online platforms.

### 3.2 Impact of Social Media Usage on Academic Performance

As we mentioned in the introduction, this analysis is merely descriptive. It aims to explore the correlation between quantity and frequency of social media usage and academic performance. In further steps, we will try to establish causal relationships using regression analyses.

In order to analyze the coherence of the data set, we calculated the Pearson's correlation coefficients between all the parameters used in the area of academic performance. The interpretation pattern seems to confirm the intuitive knowledge of anyone who spend a considerable time of her/his life in the environment of a college classroom. The factors that refer to the academic success correlate positively with each other: GPA, school attitude and cognitive complexity.

GPA and School attitude:  $r(309) = .32, <.01$ ; GPA and cognitive complexity:  $r(309) = .18, <.01$ ; school attitude and cognitive complexity:  $r(309) = .35, <.01$ .

Those same values correlate negatively with the factors that could be perceived as threat for the students: Academic risk and external academic locus of control.

Academic risk and GPA:  $r(309) = -.32, <.01$ ; Academic risk and school attitude:  $r(309) = -.41, <.01$ ; academic risk and cognitive complexity:  $r(309) = -.20, <.01$ .

Academic locus of control and GPA:  $r(309) = -.27, <.01$ ; academic locus of control and school attitude:  $r(309) = -.37, <.01$ ; academic locus of control and cognitive complexity  $r(309) = -.37, <.01$ .

The measurement of social the Social Media Addiction variable also provided significant correlations. It negatively correlates with the variables associated to academic success (GPA, school attitude, cognitive complexity) and positively with those associated to academic failure (academic risk and external locus of control).

SM addiction and GPA:  $r(309) = -.12, <.05$ ; SM addiction and school attitude:  $r(309) = -.18, <.05$ ; SM addiction and cognitive complexity:  $r(309) = -.27, <.01$ .

SM addiction and academic risk:  $r(309) = .29, <.01$ ; SM addiction and academic risk:  $r(309) = .42, <.01$ .

Table 1. Pearson's Correlation Coefficients: Academic Performance Variables

	1	2	3	4	5
<b>1. GPA</b>					
<b>2. School Attitude</b>	.35**				
<b>3. Complexity</b>	.18**	.32**			
<b>4. Academic Risk</b>	-.32**	-.41**	-.20**		
<b>5. External Locus</b>	-.27**	-.38**	-.37**	.33**	
<b>9.SM Addiction</b>	-.12*	-.18*	-.27**	.30**	.42**

Note. N = 311. \*p<.05; \*\*p<.01 (2-tailed)

### 3.2.1 Time and Frequency

All the factors associated to academic success, correlate significantly with both quantity and frequency of social media usage. First of all, and as was expected, social media addiction strongly correlates with the amount of time devoted to social media,  $r(309) = .49, <.01$ , and frequency of use,  $r(309) = .52, <.01$ . It is almost evident that the more alcohol one consumes, the more likely s/he would become an alcoholic. The strong correlation just confirms what the common sense would suggest.

The three parameters, quantity, frequency and social media addiction, seem to correlate with a lower GPA. In the case of time and addiction the correlation is moderately significant  $r(309) = -.12, <.01$ , while in the case of frequency we only found a marginal correlation  $r(309) = -.10, <.1$ .

The negative correlation is stronger when we bring into the equation the other variables used to measure the academic success. Time and of social media use negatively correlate with school attitude. The correlation is only moderately significant in the case of frequency (time and school attitude:  $r(309) = -.16, <.01$ ; frequency and school attitude:  $r(309) = -.12, <.05$ ).

The correlation of the intensity in social media usage and cognitive complexity runs in the same direction, but seems to be stronger. The more time students spend with those platforms, the lower tends to be their willingness to engage in cognitively complex activities ( $r(309) = -.19, <.01$ ). The same could be said about frequency of use. The more often they check their social media accounts, the lower they score in the cognitive complexity scale ( $r(309) = -.21, <.01$ ).

On the other hand, social media usage also seems to be associated with factors considered to be threats for the academic success. In both cases amount of time and frequency the correlation coefficient was positive. The more time students spend with social media, the higher seems to be the academic risk ( $r(309) = .33, <.01$ ). The more frequent they access those platforms, the higher appears to be the academic risk ( $r(309) = .16, <.01$ ).

The same positive correlation appears with the external academic locus of control (time and external locus of control:  $r(309) = .23, <.01$ ; frequency and external locus of control:  $r(309) = .22, <.01$ ).

Table 2. Pearson's Correlation Coefficients:  
Time and Frequency of Social Media Use and Academic Performance

	1	2	3	4	5	6	7	8
<b>1. SM Time</b>								
<b>2. SM Frequency</b>	.59**							
<b>3. GPA</b>	-.12*	-.10^						
<b>4. School Attitude</b>	-.16**	-.12*	.35**					
<b>5. Complexity</b>	-.19**	-.21**	.18**	.32**				
<b>6. Academic Risk</b>	.33**	.34**	-.32**	-.41**	-.20**			
<b>7. External Locus</b>	.23**	.22**	-.27*	-.38	-.37**	.33**		
<b>8. SM Addiction</b>	.49**	.52**	-.12*	-.18**	-.27**	.30**	.42**	

Note. N = 311. ^p<.1; \*p<.05; \*\*p<.01 (2-tailed)

## 4 CONCLUSIONS

The outcomes of our study offer a rather worrying picture. On the one hand, it shows a very deep penetration of social media in the lives of the surveyed students. The presence of social media in their life seems to be a necessary reference in every single hour of their existence. This incredible penetration comes with the obvious decline of the conventional media. This is particularly worrying in the case of the information that those students may have available to function as responsible citizens. Those well-established media, even though they are not free of biases, at least had some professional and ethical standards in dealing with information. Plus, they were subject to a close control on the side of the administration of law. The new digital platforms have no transparency with regards to sources, no apparent standards in terms of profession and occupy a gray legal area.

At the same time, an intense social media activity correlates negatively with all the parameters associated to academic success and positively with those factors associated to academic failure. All the data analyzed in this sample indicate that the uncontrolled use of social media may represent a danger for the academic success of the students. Furthermore, an intense activity in social media may become addictive. The data in our U.S. sample seem to indicate some negative implications for both the individual development of our younger generation and a social body who will lack citizen with the critical spirit to look for and assess the information they need to function as such citizens.

This exploratory, descriptive study establishes a solid basis for further inferential analyses. The correlations only show patterns that demand further and deeper investigations. In the next steps, causal relationships must be determined that show if, as a matter of fact, the indiscriminate use of social media may be considered a danger for the academic success of college students.

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