

A Study of the Correlation between Social Media Use and Academic Achievement

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1. introduction

Powered by the unprecedented IT technology in Information Age, social media, “internet based applications that allow the creation and exchange of content which is user generated” (Kaplan and Haenlein, 2010), have gained unseen popularity among people all around the world, including those in China. Aided by these telecommunication tools, everyone now is able to communicate in a fairly effective way with people around the world. Adding “friends” to share information and ideas, choosing to “follow” others and learning about their status, updating daily experiences with sights and sounds, receiving comments and feedback... all of those which appeared to be illusionary for our counterparts of the past have become part of our routine since the expansion of internet use. It seems that an effective mode of social networking now becomes available with our access to cyberspace. Beside its role as an access to effective social networking, social media also functions as one of the major platforms of news communication. However, despite the merits of effectiveness and convenience it has brought, the prevalence of social media has also woven some new problems into our social fabrics to be identified and addressed, providing an exciting new area of study in the field of sociology and psychology.

As a teenager who has witnessed how social media began to be accepted by people with great diversity and commenced its reign, I find it necessary to explore more and delve into this issue in order for a more thorough insight into benefits as well as pitfalls of its rise. Then I initiated students’ social media club in my

school and mobilized fellow students by calling for their involvement and contribution. After discussion, we planned a formal research aimed to investigate the effects of social media use. To realize our plan, we designed a questionnaire and did plentiful analysis with the support of statistics, and now it’s time to demonstrate efforts we made and conclusions we obtained.

Key Words: Social media, academic achievement, wechat

2. Narrow down

Teenagers’ excessive social media use has been blamed to negatively affect their academic performance for long. As a result, some of students are restricted in social media use, through both parental regulations and school rules. Although people surrounding claim it a truth that some of those peers who have excessive psychological addition to electronic media have suffered poor grades, nobody has proved that with scientific methods and statistical analysis. Worries of those students, parents and teachers still want a theoretical basis. The losses and gains of a limitation or prohibition on the use of social media is yet not cleared.

As a teenager who has plenty of experiences on social media use and has witnessed some peers’ excessive dependence on communications in cyberspace and others’ grumble or understanding towards a restriction on their social media use, I feel a necessity to focus on this specific group of users—teenagers—in my research. I believe that our attempts would help to identify problems on teenagers’ social media use in a

more effective way and address them more appropriately.

A lot of work has been done in recent years to examine the effects of social media use on teens global wide. [Tariq, Mehboob, Khan, and Ullah \(2012\)](#), a research focused on the influences of social media use on Pakistani students, for example, had illustrated that it yields negative outcome on students' academic performance by diverting their concentrations on study. Another study focused on students in Saudi Arabia, however, indicated that the hypothesis "The increase in se of social networks decreases the academic performance of students" is not satisfied by the findings of this study ([Esam Alwagait , Basit Shahzad , Sophia Alim ,2014](#)). What's more, a research aimed to examine effects of online social networking on students in the US unfolds a statistically significant negative relationship between time spent by students on OSN and their academic performance ([Jomon Aliyas Paul, Hope M. Baker, Justin Daniel Cochran, 2012](#)). A wide range of research concerning the influence of Facebook use on academic performance of college students have also been done but some reveal contradictory results: One proved Facebook users report lower GPA compared with non-users ([Kirschner & Karpinski, 2010](#)), while [Kolek and Saunders \(2008\)](#) found no significant difference lies there.

3. Methodology

3.1 collecting data

In order to provide a sound basis of

statistics for our research, we employed a questionnaire survey to collect data from domestic teenagers and investigate potential relationships. The questionnaire contains 11 questions intended to reveal subjects' academic performance, social media use and attitudes towards social media. Subjects are asked to report their GPA percentile, average amount of time spent on social media per use in both working days and nonworking days, frequency of social media use per day in both working days and nonworking days and attitudes towards social media of both people around them and themselves.

We issued the questionnaire in January, 2017, in a local secondary school. Some students are also asked to complete the survey via the online survey hosting site, sojump.com.

We recruited a total of 139 students aged between 12-18, most of which come from a local high school, and 99 effective forms are collected.

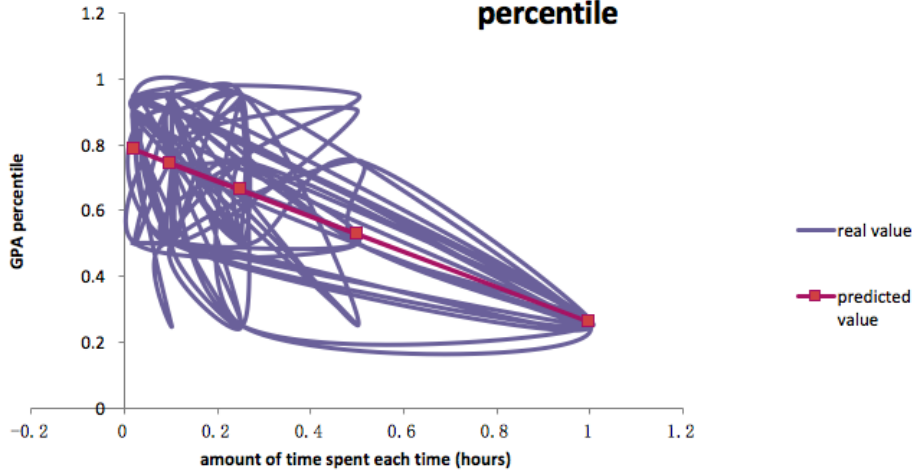
3.2 coding

After sorting out data, we employed a coding scheme to quantify qualitative statistics collected which include attitudes of subjects and people around them: 4 numbers are employed to represent 4 different choices provided. (very negative state=-1, negative state=-0.5, neutral state=0, positive state=1)

4. Analysis

4.1 average amount of time spent per use in working days vs. GPA percentile

average amount of time spent per use in working days vs. GPA percentile



	Coefficients	st error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	0.7942202	0.0284877	27.879418	4.181E-48	0.73768	0.8507604
X Variable	-0.53355	0.0716383	-7.447828	3.923E-11	-0.675732	-0.391368

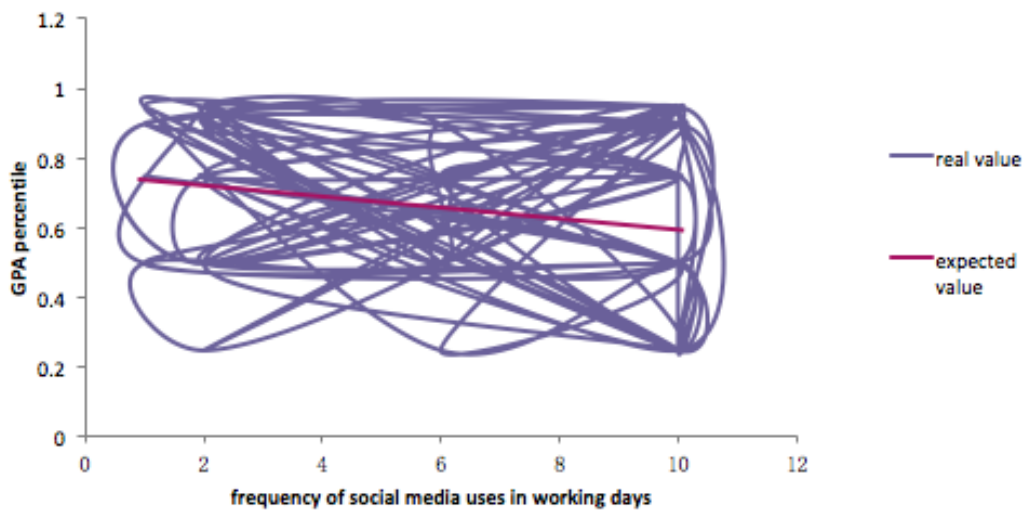
Through a regression analysis, a moderate negative linear relationship between the average amount of time spent on social media per use in working days and reported GPA percentile is revealed. (multiple R = 0.6031665)

This result indicates that, generally,

teenagers who tend to spend less time on social media per use in working days are more likely to have better academic performance.

4.2 frequency of social media uses in working days vs. GPA percentile

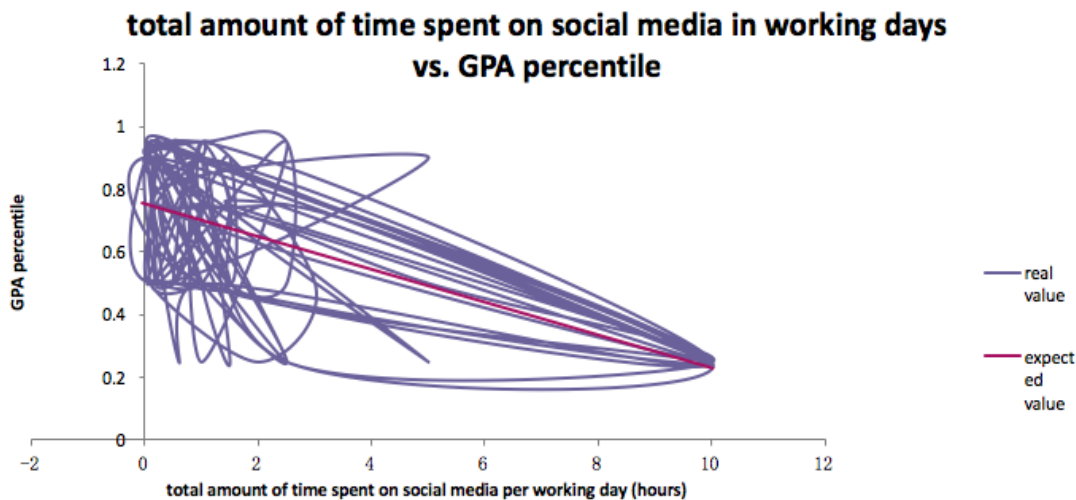
frequency of social media uses in working days vs. GPA percentile



	Coefficients	St error	t Stat	P-value	Lower 95%
Intercept	0.7509695	0.0505076	14.868436	9.345E-27	0.6507258
X Variable	-0.01545	0.006671	-2.315952	0.0226667	-0.02869

Regression analysis indicates a weak correlation between the frequency of social media uses in working days and GPA percentile. (multiple R= 0.2289)

4.3 total amount of time spent each working day vs. GPA percentile



	Coefficients	St error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	0.753201	0.025882	29.10189	1.01E-49	0.701834	0.804569
X Variable	-0.0523	0.007437	-7.03258	2.86E-10	-0.06706	-0.03754

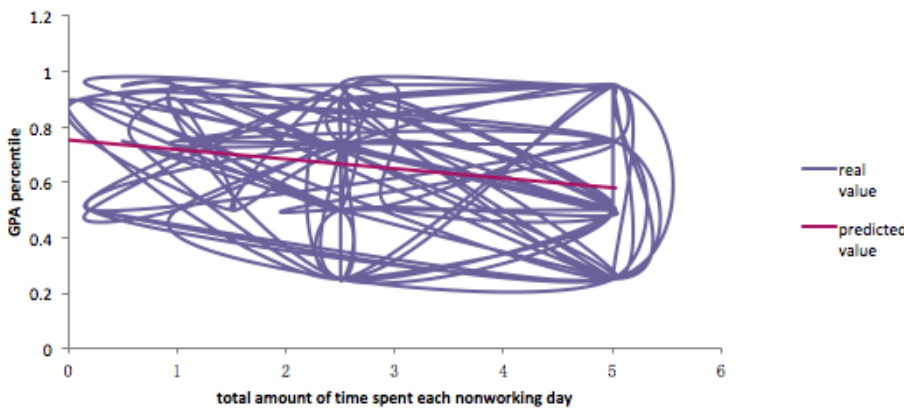
Through a regression analysis, a moderate negative linear relationship between total amount of time spent per working day and reported GPA percentile is revealed. (multiple R =0.581111)

This result indicates that, generally,

teenagers who tend to spend less time on social media per working day are more likely to have better academic performance.

4.4 total amount of time spent each nonworking day vs. GPA percentile

total amount of time spent each nonworking day vs. GPA percentile



	Coefficients	St error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	0.755383	0.051887	14.55838	3.86E-26	0.652403	0.858364
X Variable	-0.034842	0.014942	-2.331861	0.021776	-0.064496	-0.005187

Regression analysis indicates a weak correlation between the total amount of time spent each nonworking day and GPA percentile.

4.5 attitude towards social media use of subjects themselves and their elders vs. GPA percentile

Regression analysis indicates no significant relationship between attitudes towards social media use of subjects themselves and GPA percentile (multiple R= 0.078778) as well as between attitudes of elders surrounding and students' GPA percentile (multiple R= 0.17969).

5. Conclusion

5.1 results and interpretations

Through a series of regression analysis with a confident level of 0.95, relationships between social media use and teenagers' academic performance are identified, and valid conclusions can be drawn.

Considering the fact that there is a negative relationship between the total amount of time spent on social media in workdays and teenagers' academic performance which is represented by GPA percentile, the overuse of social media in workdays does contribute to distract students' focus and undermine their academic enthusiasm.

Additionally, the amount of time spent per use can be considered an effective factor considering that an interrelationship between a greater amount of time spent each time and a lower GPA percentile is identified in the regression analysis. What's more, a weak correlation between the frequency of social media use per workday and academic performance has been found in regression analysis. While the high-frequent use of social media cannot be blamed as the major factor that negatively influence students' grades, it probably does play a minor role.

While the time of social media use in workdays does negatively affect teenagers' academic achievements, a different conclusion can be drawn by testing the interrelationship between subjects' responses about their use of social media is non-workdays and GPA percentiles: only a weak correlation is identified, so the use of social media in non-workdays probably has less effect on students' academic performance than what some people believe.

The attitudes of students and elders

towards social media actually unfold no significant association with students' academic performance, according to the regression analysis, with most subjects reporting that elders around them are likely to accuse social media use of hindering their academic progress, and a large number of students themselves also acknowledge the influence of social media use upon their studies, while social media use has been a prevailing trend among teens and an indispensable tool for social activities.

5.2 suggestions on problem-addressing

In order to ensure an adequate use of social media for teens without undermining their academic performance, actions should be taken.

1. Suggestions for schools
 - a) Setting up a limitation on students' access to Free Wi-Fi on campus: Free Wi-Fi may only be accessible for a total of 2 hours per day.
 - b) Holding more activities advocating for wise social media use on campus
 - c) Setting up a No-Social-Media-Day on campus.
 - d) Monitoring students' network use during class
2. suggestions for parents
 - a) Practicing parental control

5.3 limitations

Considering a large proportion of all responses we got are from internet-based questionnaire, the data about the time as well as frequency of social media use are generally suggested to be more than the average.

Due to the fact that most of responses are contributed by high school students in Chongqing, those data are suggested to represent more of the conditions in this region instead of that nationwide.

Due to the fact that students are less willing to report accurate numbers of their GPA

percentile, we provided several intervals for them to choose when designing the questionnaire, and this might lead to less accuracy of our estimation.

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