

**A Survey Study of Taiwanese Teenagers' Using Experience and
Cognition of Social Media**

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ABSTRACT

Nowadays, smart phones are popular among teenagers than before. Many apps have been developed for them. Among these app, social media plays an important role in teenagers' interaction. Teenagers use social media to keep in touch with friends and also record their life. The study explored the effect of social media on teenagers by surveying 435 teenagers' using experience and cognition of social media. Through collected the data by spreading questionnaires to the 13-18 years old teenagers, using SPSS to code, editing, and analysis the data to see the different from different teenagers. The findings of the study showed that most teenagers had good using experience and cognition, could tell the information from the social media as real or not, and could take care of themselves by not addicting. This research helps the educators and parents to know more about their students and kids, helps on whether their teenagers use social media correctly.

Keywords: social media, teenagers, using experience, cognition

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INTRODUCTION

Background

Nowadays, smart phone is more and more popular and the age of using smart phone is lower than each year. According to the Pew Research Center's Internet and Americans project, in 2009, there are 58 percent of 12-year-olds children own a cell phone.¹ Owing to the progress of new technology, cell phone become more popular. There are so many kinds of social media are given to everyone to use. Social media is a digital platform, website, and app which let people to have the entertainment and have social connection.

Social media plays an important role in teenagers' interaction. Teenagers use social media to share their life and their mood to make friends and also to connect with their family and friends. They also can use the social media to do lots of things such as learning, chatting, communicating and recording. There are some social media that most of teenagers like to use, such as, Facebook, Instagram, and YouTube. They use these social media as their entertainments and a tool to maintain the relationship with others.

There still have some social media will have something good to teenagers. For example, learning materials which can let teenagers has self-learning, and also has a lot of advantages for teenagers to use the social media. Such as, the findings from the Digital Youth Project, teenagers can develop the better social skills and communication between peers or elders, learn about the new culture and social issues from different countries to be more connected to the world, and also can be more creative and learn the technical skills by using the social media.²

¹ Amanda Lenhart, "Teens and sexting" *Pew Research Center Internet & Technology*, last modified December 15, 2009, <https://www.pewinternet.org/2009/12/15/teens-and-sexting/> (accessed April 12, 2019)

²Mizuko Ito et al., *Living and Learning with New Media: Summary of Findings from the Digital Youth Project* (2009).

However, there are also some bad things which have the impact to the teenagers. For example, violence and bullying by others from the internet, pornography, spend too much time online, and some negative videos shares by others. Take online dating website for example, there are some of the teenagers will use. Online dating website can be an app or the web page which let two people who do not know each other become a friend. However, there were many news had reported that the teenagers were cheated by the strangers through the online dating website and harass by it. Other than this, in this kind of website or application will have the indelicate words come out by those who want to talk about this kind of topic. However, according to the Pew Internet Project's study, teenagers' attitude for the sexting has been very different.³ Are they really know how to protect themselves? It is a very important issue that everyone needs to pay attention.

Teenagers in Taiwan are still too young to face the bad situation. They are not mature enough to face the bad things they have seen; it may cause the mental problems and the physical problems. It is difficult for them to judge what is good or bad and it is our duty to teach them. However, according to the Pew Research Center Internet & Technology indicates that in 2018, there are 45 percent of teens said that they believe social media has a neither positive nor negative effect on their age. 31 percent of teenagers said that most of the social media has the positive impact and other 24 percent of teenagers said most of it has the negative effect.⁴ Most of foreign teenagers know there will be some impact from the social media. Thus, the research will conduct how teenagers think about the social media.

³ Amanda Lenhart, "Teens and sexting" *Pew Research Center Internet & Technology*, last modified December 15, 2009, <https://www.pewinternet.org/2009/12/15/teens-and-sexting/> (accessed April 12, 2019)

⁴ Monica Anderson and Jingjing Jiang, "Teens, Social Media & Technology 2018", *Pew Research Center Internet & Technology*, last modified May 31, 2018, <https://www.pewinternet.org/2018/05/31/teens-social-media-technology-2018/>.

The research aims to know the situation about teenagers from 13-18 years old. To know how they use the social media and how do they think about the social media. Because teenagers are in the period of adolescence, there will be lack of communication between kids and parents. Sometimes it will be parents neglected their child cause the children want to find the assurance from the internet and also from the social media. This kind of problem needs to be fixed by knowing the situation from teenagers.

Parents all thought that they know about their children. However, they do not really know what they have done on the internet and what do they share on the social media. Maybe they are suffering from the bullying from the internet or cheated by others. But they do not want us worry about them, so they decide not to tell us the truth. It often can cause the tragedy sometimes. We should know what's their opinion about social media and how they use it, it will be very helpful for the parents, teachers and who will attach to the children to keep from the tragedy and know well about their behavior.

Motivation

Through the research, by investigating the teenagers using experience and cognition of social media, I will look at the research from the other countries to see what the differences with Taiwan is and compare with the differences from other countries. Through the research, I wish to know the using experience of social media from the teenagers. We can know how they use the social media and to understand the way they use is correct or not. I will use survey to get the information from teenagers from 13-18 years old. By using the google form and share the questionnaire to my friends and ask them to share to their younger brothers and younger sisters, and also ask them to help me share the questionnaire to their friends and classmate. I will also use case study to read the research from the foreign country to compare the difference or the same from them and Taiwan.

Research Purpose

The purpose of the study is to identify Taiwanese teenagers' using experience and cognition of social media. In order to know whether their cognition from the internet have the bias or not, the research would like to find out the teenagers' using experience to see if the teenagers' thought of social media is correct or not.

Research Questions

1. Will teenagers have the cognitive bias of information by using social media?
2. After using social media, will teenagers decrease their ability?

Contribution

Teenagers are important because they will be the pillar of society. If we do not take good care of them, they may have the mental and physical illness. If the research has done a great job, it can help those who worked in educational service and the parents to know more about their kids and students about what they have do on the social media and study out a policy to protect the children.

Limits

The limits are lack of time and afraid of hard to find the 13-18-year-old teenagers. If the sample from survey cake is not enough, it will spend lots of time to send the questionnaire directly to the school.

Delimits

Delimits of the research is the research population only from 13-18 years old teenagers because the research wants to know if they have enough knowledge and ability to help themselves. Besides, also help adults whose kids are in adolescence and educators know more about them through it.

LITERATURE REVIEW

Nowadays, social media is using by everyone who has the cellphone. In We Are Social had said that now there are more than 3 billion people using the social media and it also include the teenagers.⁵ People use it for entertainment, shopping, and searching information. Social media is also a digital platform, website, and app which let people have social connection. According to the data from Taiwan New Media White Paper, the popularity of using cellphone from 10 percent in 2010 get high to 74.5 percent in 2015. The survey in 2017 also shows that the people older than 12 years old have over three quarter of them own the smart phone.⁶

Development of Social Media

The development of the internet had started from the early 1970s until today. From the Technology New Paper, in 1971, the researcher from Advanced Research projects Agency sent the first e-mail in the world. In 1980s, the Usenet attenders could read and sent the message on BBS. In 1995, classmates.com was released. This website let users to find their classmates from elementary school from college. In 2003, Myspace was recommended by the peers, there were one million users get in to use in the first month. In 2004, Mark Zuckerberg release the Facebook for college students to use and now it is popular for everyone who has the smart phone to use. In 2005, YouTube can let everyone share and upload the videos to everyone. In 2006, twitter let not only individuals and groups communicate easily. For example, the America president Trump uses twitter to share his opinion in order to get the supporters.⁷

⁵ Kemp Simon, "Global Digital Report 2018", *we are social*, <https://digitalreport.wearesocial.com/>.

⁶ 黃楚新、崔政韜，〈台灣移動傳播發展現狀〉，*人民網*
<http://media.people.com.cn/BIG5/n1/2018/0925/c421527-30312180.html> (2019.4.25)

⁷ Demension，〈社群媒體的歷史總表〉，*科技新報*
<https://technews.tw/2013/01/28/dimension-the-history-of-social-media/> (2019.04.24)

There are also many kinds of social media popular in Taiwan. In 1973, the Bulletin Board System which called BBS was original from America. However, in 1996, BBS was used by Taiwan. The biggest platform in Taiwan is called PTT. The numbers of registered persons have been over 1.24 million. It accounts for five percent of Taiwan people. In 2004, Facebook was only for the students for Harvard. Until 2006 it opened for everyone to use. Nowadays, the most popular Social Medias are Facebook, Instagram, and YouTube. Not only for teenagers, the people in every age like to use and also share their life through this.⁸

The Comments of Social Media

However, people have the different opinion from social media. For example, in an interview from EL PAIS, the sociologist Zygmunt Bauman had warned that in nowadays society, he thought that social media cannot let people have the real talk. Conversely, people will be lock in “stratosphere”⁹. Also, in the comment of the book, the writer made an example that the scholar Sherry Turkle shared his research and said that the development of social media has obstructed people to build the more meaningful relationship between each other. He thought that people become an object to fulfill each other.¹⁰ These two scholars has the negative opinion about the social media. It can be a really important issue for us to think about it.

⁸ 2011 台灣社會學會年會（展開中介物的網路-以 Facebook 和 BBS 為例）

<https://2011tsa.files.wordpress.com/2011/11/e895ade78592e9a6a8.pdf>（2019.4.24）

⁹ Querol De Ricardo, “Zygmunt Bauamn:” Social media are a trap”, last modified January 25, 2016,

https://elpais.com/elpais/2016/01/19/inenglish/1453208692_424660.html

¹⁰曹家榮，（書評），〈婉君妳好嗎？給覺醒鄉民的 PTT 進化史〉，《考古人類學刊》86（2017）：183-190

The Impact of Using Social Media

People all concern about how their children use the social media. Besides, they concern about that what kinds of impact the social media will bring to their kids. They are afraid that the bad impacts will influence their kids and do the wrong things which may make them regret forever. However, social media is a new thing for teenagers to learn how to use and learn how to balance the usage of social media.

Social media has the good impact to teenagers. There are a lot of learning materials for them to study. Besides, teenagers will post their life and mood on the social media which can help them build the good relationship with peers. Moreover, from the book of “Living and Learning with new Media”, by using the social media, teenagers can learn how to get along with others and also learn about the new culture and social issues from different countries to be more connected to the world. It also can be more creative and learn the technical skills by using the social media.¹¹

There are also the bad impacts from the social media. In some social media, there are some conceal dangerous behind the social media. For example, violence and bullying by others from the internet, pornography, spend too much time online, and some negative videos shares by others. For example, the online dating website will have the dangerous from it such as cheating and the bad harass. These bad impacts may directly influence teenagers’ self-esteem.

¹¹ Mary Madden, Amanda Lenhart, Maeve Duggan, Sandra Cortesi and URS Gasser, “Teens and Technology 2013”, *Pew Research Center Internet & Technology*, last modified March 13, 2013, <https://www.pewinternet.org/2013/03/13/teens-and-technology-2013/>.

Teenagers' Using Experience of Social Media

Using social media become part of teenagers' daily life. According to Pew Research Center, there are 78 percent of teenagers owns a cellphone.¹² However, University College London conduct a survey and found that the long time they use the social media, it will be more easily for them to get sick. The research in Taiwan found that there are 90 percent of students have the Internet. Teenagers will use the internet for over one hour. The research shows that the time teenagers spent on the social media, the sleeping quality will be worse, the bullying experience will be more than before. Also, it will directly hurt teenagers themselves.¹³

Cognition of Social Media

There are a lot of information that everyone can get from the social media. It is important to separate if the information is true or fake. Also, teenagers usually use the internet to find the information they want. However, it also increases the risk for teenagers to meet the danger. According to the Hong Kong Federation of Youth Groups have found that fifty percent of teenagers cannot separate the fake information on the internet. Besides, almost thirty percent of teenagers share the information without thinking if the information is true or not. Moreover, there are 37.6 percent of teenagers thought that the information from internet can take for granted.¹⁴

¹² Monica Anderson and Jingjing Jiang, "Teens, Social Media & Technology 2018", *Pew Research Center Internet & Technology*, last modified May 31, 2018, <https://www.pewinternet.org/2018/05/31/teens-social-media-technology-2018/>.

¹³ 林淑芳, (青少年網路素養、家長介入、與網路使用經驗), 《中華傳播學刊》30 (2016.12.01) :3-29

¹⁴ 香港青年協會 (青少年網路素養調查), *媒體素養教育網* <http://medialiteracy.hk/research-description/>

Teenagers easily forget to protect others' privacy on internet. Teenagers have opinion to protect their privacy. However, when they deal with others' information, they always ignore other's privacy. Our society need to enhance the net literacy to increase the awareness of protect others' privacy and also learn how to deal with the privacy information for others and in itself.

Taiwanese Teenagers in 13-18 Years Old

The teenagers from the past to nowadays have been very different. People in the past did not have internet to use. People in the past will be very rich if they own a television. Because they do not have the internet in the past, their entertainment will be outside to jump and run and saw the beautiful view. They also had the clean river to catch the fish. The life in the past was very easy and free.

However, in nowadays, people have their own cellphone. The environment has been destroyed which means there are almost no clean river and beautiful view anymore. People use smartphone as their entertainment. They can download different kinds of games to kill time, also use app to chat with friends and family which was difficult for the people in the past to contact who they want.

Because the age of people who use cellphone is younger than before. According to the Pew Research Center's Internet and Americans project, they had found that in 2009, there are 58 percent of 12-year-olds children own a cell phone.¹⁵ It is important for us to observe and teach them how to use the social media and how to protect themselves. Because of the trend of fewer children, family members will care about their kids in order to prevent they did some bad things. Teenagers are important because they will be the pillar of society. If

¹⁵ Amanda Lenhart, "Teens and sexting" *Pew Research Center Internet & Technology*, last modified December 15, 2009, <https://www.pewinternet.org/2009/12/15/teens-and-sexting/> (accessed April 12, 2019)

we can know what they are thinking or what do they need, then we can reduce the tragedy in order to build a happiness society.

Thus, I will like to ask the classmates who has the young brothers or sisters. Then asked those brothers and sisters to ask their classmates to answer the question in order to know the situation for our society. Therefore, we can know more about what they think and also help adults to get closer to their kids.

METHODOLOGY

Research Design

In this case, I will use one case study as my research design. The purpose of this research is to clarify teenagers' using experience and cognition of social media. In order to found out the using experience and cognition of the social media from the teenagers, I will use survey to conduct the research.

Sources of Data

The sources of my data are the teenagers who are in 13-18 years old. I made paper questionnaire and online questionnaire from Survey Cake, preparing to ask the students who are 13-18 years old to help me to do the survey. I will first ask my siblings to help me do the questionnaire and ask them if there have any problems or mistakes needed to be fixed. After finishing the revised, I will ask my siblings to share the questionnaire to their classmates and friends to collect the data. Also, I will make a paper questionnaire to clarify the study population is from the right study population or not. I will use the time during this June to start sharing the survey, try to let the teenagers can concentrate on the questions. Because of the summer vacation, it is difficult for teenagers to focus on the research.

Instrumentation and Data Collection

The instrument in this study is using the survey to collect the data. I have made a questionnaire by internet. I will use two ways to send the questionnaire. The first one is using the internet to spread the survey. I will ask my younger brothers and sisters to help me to send the questionnaire to get the data. The other way is using paper to ask the teachers from the junior high school to occupy some time from them during the class to help me

answering the questions. Because of the age of my siblings are arranging from 15-18 years old. It might be difficult for them to help me found the teenagers from 13-14 years old teenagers who might have the different experience about social media. However, I would try my best to collect the data.

Tools for Data Analysis

After finishing collected the data, I will use Excel to code and edit the data. After that, I will transform Excel into SPSS. Then I will start to analysis the data I have collected.

DATA ANALYSIS

The data was collected from teenagers who are in 13-18 years old. There were 132 males and 303 females, and the total are 435 teenagers. By asking younger brothers and sisters to share the questionnaires from internet. Also, found some friends' siblings who are in 13-18 years old to share the questionnaires to their friends and classmates. Besides, found the teenagers from the cram school to write the questionnaires. After finishing collected the data and discarded the useless data, I use Excel to code and edit. Then, I transformed Excel into SPSS, and used it to analysis and processed the data. First, because there are some attitudinal questions were in the same opinion, thus, I used factor analysis to assemble them together into fewer factors and use those factor scores to do further data analysis.

There were four factors from the factor analysis, which means that there were four close aspects that search by the factor analysis. (See table 1) In order to make the factors more easily to collecting, four factors were gathered with factor loadings larger than 0.5. Each factor also named by refer to each of the questions.

After these twenty- three questions were narrowed down into four factors, the factor scores could be calculated. Hence, the factor scores could be narrowed down to a smaller range from one to five with a formula. Here is the formula for four factors:

$$1. = (A1 * 0.583 + A2 * 0.545 + A3 * 0.594 + A4 * 0.750 + A5 * 0.593 + A7 * 0.537) / (0.583 + 0.545 + 0.594 + 0.750 + 0.593 + 0.537)$$

$$2. = (A6 * 0.528 + A10 * 0.796 + A11 * 0.654) / (0.528 + 0.796 + 0.654)$$

$$3. = (B2 * 0.533 + B3 * 0.594 + B4 * 0.581 + B5 * 0.505 + B6 * 0.621 + B8 * 0.743 + B9 * 0.611 + B10 * 0.757 + B11 * 0.593 + B12 * 0.530) / (0.33 + 0.594 + 0.581 + 0.505 + 0.621 + 0.743 + 0.611 + 0.757 + 0.593 + 0.530)$$

$$4. = (B4 * 0.549 + B5 * 0.587) / (0.549 + 0.587)$$

There were several variables for each different factor. Those variables times the factor loadings then the total number were divided by the total of the factor loadings. The number will be among one to five. The meaning of one to five will be extremely disagree, disagree, neutral, agree, and extremely agree.

Table 1. Summary of Exploratory Factor Analysis Results for Taiwanese Teenagers' Using Experience and Cognition of Social Media

Factors	Code	Questions	Factor loadings
1. Effect from the social media.	A1	Information from the social media will always be correct.	.583
	A2	Most of social media is using for relax.	.545
	A3	Using social media is good to your body.	.594
	A4	Using social media is good to your mentality.	.750
	A5	Using social media can enhance knowledge.	.593
	A7	Social media is the only way to relax.	.537
	2. The way of using social media.	A6	Information from social media is more circulated.
A10		Social media will be used by people with bad intentions.	.796
A11		Using social media in long-term will be addicted.	.654
3. Using experience	B2	Keep in touch with friends by using social media.	.533
	B3	Have a bad relationship with family after using social media.	.594
	B4	Using social media to convey the thought.	.581
	B5	Using social media can express the emotion.	.505
	B6	Using social media can promote self-esteem.	.621
	B8	Arise anxiety disorder after using social media.	.743
	B9	The ability of communication decrease after using social media.	.611
	B10	Cannot concentrate after using social media.	.757
	B11	Score decrease after using social media.	.593
	B12	Using social media is necessary.	.530
4. Convey	B4	Using social media to convey the thought.	.549
	B5	Using social media can express the emotion.	.587

Note: Questions with factor loadings lower than 0.5 were suppressed.

All of the factor loadings were larger than 0.5, it was a precondition in factor analysis. The first factor was identified as The Effect from The Social Media. It included six questions with positive factor loadings. All of these were about the effect from the social media, no matter the effect about mental harm, physical harm, the information was correct or not from the social media, or was social media is the only selection to relax during the leisure time. These reasons will influence many parts of body and thought.

The second factor was identified as The Way of Using Social Media. It included three questions with all positive factor loadings. All the questions were aims to the way people use the social media. People can use it for searching the information, and also used it to kill time. However, social media can also use by people with bad intention which could make more and more people get harm in many ways. Besides, the way that people use social media would cause the addiction if people did not control the time using social media, which would bring about people ignore the important things they needed to do.

The third factor was identified as Using Experience. There were ten questions with all positive factor loadings. These ten questions were talking about after using social media, would they have these kinds of problems. Did people feel using social media can get the benefits from it, or they just get the bad influence through using the social media. For example, after using social media, the relationship with families and friends would be better or even worse. Social media can be a place for people to release the stress and maybe promote the self-esteem. Besides, people use social media to keep in touch with family and friends, which would get in a good relationship. However, people might get addicted to social media which may make them get the anxiety, and also make people lost the ability to talk to others. Besides, they cannot concentrate to others no matter in class or working which would cause the score of homework and tasks be very low by addicted in the social media.

The fourth factor was identified as Convey. It included two questions with positive factor loadings. The opinion is about using social media to express the emotion and convey the thought into social media. These two reasons could be used in convey our thought and emotions through the social media.

Data Discussion

In general, most of the data were wrote by the female and the senior high school students. In this section, by using SPSS’s T-test and One-Way analysis to clarify the differences in gender, grade, and the social media has used by teenagers. Here is the table about the means about four factors (See Table 2). From the table, the “effect from the social media”, “using experience”, and the “convey” shows the mean was greater than three and lower than four, which means most of the teenagers thought these factors have neutral effect for them. The factor about “the way of using social media” has the higher agreement, which means teenagers were more agree about the questions from the way of using social media.

Table 2. The Four Factors Means

Factor	Minimum	Maximum	Mean	S.D.
Effect from the social media.	1.68	5.03	3.0177	0.48144
The way of using social media.	2.27	5.00	4.1010	0.58411
Using experience	1.03	5.17	3.2746	0.61838
Convey	1.05	5.23	3.8591	0.71907

Gender's Attitude on the Four Factors

Table three compared about the perception different from the different genders on the four factors with T-test. Overall, in this table shows “Effect from the social media” has respond as neutral and disagreement. “The way of using social media” were agree from the respondents. Neutral effect from the respondents on “Using Experience” and “Convey”.

Table 3. Perception Differences between Female and Male on the Four Factors

Factor	Gender	Number	Mean	S.D.	t	p
Effect from the social media.	Male	132	3.1300	.56538	3.248	0.001
	Female	303	2.9687	.43187		
The way of using social media.	Male	132	4.0512	.58653	-1.176	0.240
	Female	303	4.1228	.58268		
Using experience	Male	132	3.3212	.71728	0.948	0.344
	Female	303	3.2543	.57008		
Convey	Male	132	3.7623	.85096	-1.676	0.095
	Female	303	3.9013	.65043		

The “effect from the social media” showed that in different gender, the mean of the male has the neutral effect 3.13, the mean of the female was 2.9687 has weaker than the male. Although both of two gender has a little gap from the mean, $P=0.001 < 0.05$, there was significant difference from this factor.

“The way of using social media” showed that in different gender, the mean of the male and the female has showed that they have the positive effect from this factor. It also showed that $P=0.240 > 0.05$, in this factor have no significant difference.

The factor of “Using experience” showed that neutral effect from the male and the female. However. It has no significant difference from the different sexual. ($P=0.344>0.05$) the mean from male has showed that still higher than female.

The factor of “convey” showed that both male and female had the neutral effects. Although the mean between male and female were closed, it showed that female’s number of mean was higher than male’s. ($3.7623<3.9013$) The P value ($0.095>0.05$), means this factor has no significant difference.

In conclusion, different gender of teenagers has different reaction from the “effect of social media”, “the using experience”, and “convey”, and “the way of using social media” have no significant different.

Grade’s Attitude on the Four Factors

Table four compare about different perception between junior high school and high school students. All of the factors showed that different grade had the neutral and the positive effect.

Table 4. Perception Differences between Junior high school and High school on the Four Factors

Factor	Grade	Number	Mean	S.D.	t	p
Effect from the social media.	Junior high school	71	3.1516	.49607	2.579	0.010
	High school	364	2.9915	.47484		
The way of using social media.	Junior high school	71	3.8831	.66788	-3.481	0.001
	High school	364	4.1435	.55749		
Using experience	Junior high school	71	3.0707	.74786	-2.596	0.011
	High school	364	3.3144	.58276		
Convey	Junior high school	71	3.5096	.83939	-3.952	0.000
	High school	364	3.9273	.67363		

The first factor of junior high school has neutral effect, the high school students has the negative but was close to the neutral. It showed significant difference cause $P=0.010<0.05$.

The second factor of junior high school has neutral attitude also was close to the positive attitude. The high school students have the positive attitude. It showed significant difference for the factor two cause the $P=0.001>0.05$.

The third factor showed that both junior high school and high school students have the neutral attitude. However, the high school students' mean (3.3144) has higher than junior high school student. (3.0707) It showed significant difference cause of the $P=0.011<0.05$.

The fourth factor showed both different grades have the neutral attitude from the "convey". There was a gap between different grade's attitudes. Junior high school students' mean (3.5096) has lower than high school students whose mean was 3.9273. It showed significant difference because of the $P=0.000<0.05$.

In conclusion, the high school students have little disagree the effect cause by the social media. Junior high school students have the neutral attitude from this. The second factors people tend to agree the way that people use the social media. People has the neutral attitude for "using experience" and "convey".

Instagram users' attitude on four factors.

Table 5 illustrate the people's perception by using Instagram or not. There were 17 teenagers did not use the Instagram, most of teenagers did use Instagram. At the first glance, most of the means of four factors were neutral and positive attitude, only few has the negative attitude.

Table 5. Different perception of people using Instagram and non-using Instagram on the Four Factors

Factor	Using Instagram or not	Number	Mean	S.D.	t	p
Effect from the social media.	No	17	3.0051	.78997	-.068	.947
	Yes	418	3.0182	.46614		
The way of using social media.	No	17	4.0073	.73293	-.675	.500
	Yes	418	4.1048	.57802		
Using experience	No	17	2.9376	1.07459	-1.338	.199
	Yes	418	3.2883	.59064		
Convey	No	17	3.2748	1.04542	-3.461	.001
	Yes	418	3.8829	.69406		

The first factor shows that both teenagers using Instagram or not has the neutral attitude. However, $p=.947>0.05$, the teenagers who were using the Instagram attitude were higher than the teenagers who did not use the Instagram. Thus, this factor has the significant difference. The second factor showed that both two groups of teenagers has the positive attitude. $P=0.500>0.05$, there's no significant difference from the factor of "the way of using social media." The third factor "Using Experience" showed that teenagers who did not using the Instagram were close to the neutral attitude but in negative attitude. The teenagers who are using the Instagram were in neutral attitude. Teenagers who has using the Instagram's attitude were higher than the teenagers who did not using the Instagram. $P=0.000<0.05$, there were significant difference from this factor. The fourth factor showed that both groups of teenagers has the neutral attitude. However, people use Instagram's attitude is higher than the people did not use the Instagram. $P=0.001<0.05$, there was significant difference for the factor.

Facebook users' attitude on four factors.

Table 6 illustrate the attitude from teenagers using Facebook or not on four factors. Most of teenagers have used Facebook and the mean showed that most of the attitude were neutral and positive. Only few showed that they have different opinion.

Table 6. Different perception of people using Facebook and non-using Facebook on the Four Factors

Factor	Using Facebook or not	Number	Mean	S.D.	t	P
Effect from the social media.	No	20	2.8504	.42660	-1.594	0.988
	Yes	415	3.0275	.48292		
The way of using social media.	No	20	4.1865	.36461	1.034	0.006
	Yes	415	4.0969	.59261		
Using experience	No	20	3.0547	.83912	-1.631	0.155
	Yes	415	3.2852	.60506		
Convey	No	20	3.3879	1.23879	-1.771	0.000
	Yes	415	3.8819	.67850		

The first factor shows that the teenagers who did not use Facebook has disagree the factor about “Effect from the social media”. Although the teenagers who has used the Facebook showed that they have the neutral attitude, the number of mean was much closed to disagree. P value was 0.988, the first factor has no significant difference from both teenagers. The second factor “the way of using social media” both of two groups teenagers has the positive attitude. However, the teenagers who has used the Facebook, the attitude was lower than the teenagers who did not use the Facebook. P value was 0.006, the second factor has the significant difference from both two groups of teenagers. The third factor “Using Experience” both two groups of teenagers has the neutral attitude. P value was 0.155,

there was no significant difference from both two groups of teenagers. The fourth factor “Convey” has both neutral attitudes. However, the mean from the teenagers who has use the Facebook (3.8819) was larger than the teenagers who did not use the Facebook (3.3879). P value was 0.000, the fourth factor has the significant difference.

Weibo users’ attitude on four factors.

Table 7 illustrate teenager’s attitude by using Weibo or not. Most of the factors showed the neutral and positive attitude. But there was still some of the mean showed the disagree attitude.

Table 7. Different perception of people using Weibo and non-using Weibo on the Four Factors

Factor	Using Weibo or not	Number	Mean	S.D.	t	P
Effect from the social media.	No	327	3.0503	.49783	2.478	.302
	Yes	108	2.9187	.41462		
The way of using social media.	No	327	4.1030	.59019	.120	.828
	Yes	108	4.0952	.56794		
Using experience	No	327	3.2981	.61977	1.377	.339
	Yes	108	3.2037	.61150		
Convey	No	327	3.8553	.72027	-.196	.822
	Yes	108	3.8709	.71865		

The first factor “Effect from the social media” showed that teenagers who did not use the Weibo, the mean was 3.0503 and it was higher than the teenagers who has use the Weibo which mean was 2.9187. Although both of two groups’ teenagers has the different attitude, the number of mean was very close. P value was 0.302 which has no significant difference.

The second factor “The way of using social media”, both two groups of teenagers has agreed from it. The P value was 0.828, there was no significant difference. The third factor “Using experience”, both two groups’ teenagers has the neutral attitude. Also, the P value was 0.3396, there was no significant difference from this factor. The fourth factor “Convey” both mean were neutral and close to the positive attitude. P value was 0.822, there was no significant difference.

PTT users’ attitude on four factors.

Table 8 illustrate the attitude from teenagers who has use the PTT. At the first sight, all of the mean was showed neutral and positive attitude. Which means that the PTT users were all agree about the four factors.

Table 8. Different perception of people using PTT and non-using PTT on the Four Factors

Factor	Using PTT or not	Number	Mean	S.D.	t	P
Effect from the social media.	No	383	3.0006	.47877	-2.016	.885
	Yes	52	3.1435	.48704		
The way of using social media.	No	383	4.0928	.58968	-7.96	.088
	Yes	52	4.1616	.54283		
Using experience	No	383	3.2841	.63040	.869	.163
	Yes	52	3.2047	.52130		
Convey	No	383	3.8214	.71280	-2.998	.097
	Yes	52	4.1371	.71064		

The first factor “Effect from the social media” showed that both two groups of teenagers were neutral attitude. P value was 0.885 which means there was no significant

difference. Both two groups of teenagers have almost the same opinion for this factor. The second factor “The way of using social media” showed that both two groups of people has agreed to this factor. The P value was 0.088 which was larger than 0.05, there was no significant difference from this factor. The fourth factor “Convey” showed that teenagers who did not use the PPT were in the neutral attitude (3.8214); the teenagers who use PPT showed in a agree attitude which mean was 4.1371. The P value was 0.097, which means in this factor, there was no significant difference.

Dcard users’ attitude on four factors.

Table 9 illustrate that teenagers’ attitude from using the Dcard on four factors. It seems that most of mean has the neutral and positive attitude. Only one of the groups has the different opinion wit ho others.

Table 9. Different perception of people using Dcard and non-using Dcard on the Four Factors

Factor	Using Dcard or not	Number	Mean	S.D.	t	P
Effect from the social media.	No	181	3.0630	.55644	1.662	.066
	Yes	254	2.9854	.41809		
The way of using social media.	No	181	4.0066	.6025	-2.871	.525
	Yes	254	4.1683	.55778		
Using experience	No	181	3.2437	.67350	-.880	.358
	Yes	254	3.2967	.57625		
Convey	No	181	3.7821	.76109	-1.893	.197
	Yes	254	3.9141	.68380		

The first factor “Effect from the social media” has the different opinion from the two groups of teenagers. Teenagers who used the Dcard disagree to this factor; teenagers who did not use Dcard has the neutral attitude. However, they have the close mean and the P value was 0.066 and this was no significant difference from this factor. The second factors “The way of using social media” has the positive attitude from both two groups of teenagers. Which means that teenagers in this factor all agree that the way of using social media would affect to them. The P value was 0.525, it showed that there was no significant difference. The third factors “Using Experience” has the neutral attitude from both two groups’ teenagers. The P value was 0.358, there was no significant difference from this factor. The fourth factor “Convey” showed that both two groups of teenagers has the neutral attitude and was close to the agree attitude. It showed that teenagers agree to this factor that using social media to convey their emotions and thought. The P value was 0.197, which has no significant difference.

YouTube users’ attitude on four factors.

Table 10 illustrate that teenager’s attitude from using the YouTube. It showed that all the teenagers have the neutral and good attitude. It seems that there was no significant difference fort the first sight.

Table 10. Different perception of people using YouTube and non-using YouTube on the Four Factors

Factor	Using YouTube or not	Number	Mean	S.D.	t	P
Effect from the social media.	No	25	3.2691	.86417	1.531	.000
	Yes	410	3.0023	.44501		
The way of using social media.	No	25	4.1621	.56571	.538	.818
	Yes	410	4.0973	.58567		
Using experience	No	25	3.6653	.73003	3.291	.131
	Yes	410	3.2508	.60381		
Convey	No	25	3.8540	.78230	-.037	.323
	Yes	410	3.8595	.71607		

The first factor “Effect from the social media” showed that teenagers who did not use YouTube has the neutral attitude (3.2691) and was higher than the teenagers who has use the YouTube (3.0023). Although two groups of teenagers both were in the neutral attitude, but the P value was 0.000, which showed that from this factor there were significant difference between two groups of teenagers. The second factor “The way of using social media” showed that both two groups of teenagers has the positive attitude. The P value was 0.818 which means there were no significant difference from two groups of teenagers. The third factor “Using Experience” showed that teenagers in this factor has the neutral attitude and also close to the positive attitude. The P value was 0.131 which means there was no significant difference from this factor. The Fourth factor “convey” has the neutral attitude and also close to the positive attitude. It showed that teenagers all agree to the factor. The P value was 0.323 which showed there was no significant difference.

TikTok users' attitude on four factors.

Table 11 illustrate that teenagers' attitude by using TikTok. It seems that there were no different opinion and no significant difference from the four factors.

Table 11. Different perception of people using TikTok and non-using TikTok on the Four Factors

Factor	Using TikTok or not	Number	Mean	S.D.	t	P
Effect from the social media.	No	358	2.9827	.47493	-3.305	.878
	Yes	77	3.1803	.48119		
The way of using social media.	No	358	4.1325	.56208	2.439	.132
	Yes	77	3.9546	.66169		
Using experience	No	358	3.2753	.63003	.050	.344
	Yes	77	3.2714	.56488		
Convey	No	358	3.8844	.71548	1.581	.448
	Yes	77	3.7418	.72877		

The first factor “Effect from the social media” showed that people did not use the TikTok disagree to this factor; the teenagers has use the TikTok has the neutral attitude from this factor. Although these two groups of teenagers has the different opinion, the P value was 0.878 showed that there was no significant difference. The second factor “The way of using social media” showed that teenagers did not use the TikTok has agree to the factor; the teenagers who has use the TikTok has the neutral attitude from this factor. Both two groups of teenagers have the positive attitude and the P value was 0.132 which means there was no significant difference. The third factor “Using Experience” showed that both two groups of teenagers has the neutral attitude to this factor. The P value was 0.344 also showed that there was no significant difference. The fourth factor “Convey” showed that

both two groups of teenagers has the neutral and close to the positive attitude. The P value was 0.448 also showed that there was no significant difference from this factor.

Table 12. T-test about will different sexual and grade of teenagers have the cognitive bias of information by using social media

Question	Gender	Numbers	Mean	S.D.	t	P
<i>Information from the social</i>						
<i>media will always be correct.</i>	Male	132	2.46	0.952	2.498	0.283
	Female	303	2.23	0.857		

* p<.05

Here the chart (see Table 12) by using T-test shows that both two gender not totally agree with that they have the cognitive bias of information by using social media. The Mean form both two gender, male was 2.46, female was 2.23. Although female's mean was lower than male, they were all disagree about the question. There was no significant difference with different sexual.

Table 13. T-test about after using social media, will the different stage of teenagers decrease their ability

Question	Grade	Numbers	Mean	S.D.	t
<i>The ability of communication decrease after using social media.</i>	Junior high school	71	2.56	.1.118	-1.772
	High school	364	2.80	1.023	
<i>Cannot concentrate after using social media.</i>	Junior high school	71	2.80	1.249	-3.077*
	High school	364	3.29	1.032	
<i>Score decrease after using social media.</i>	Junior high school	71	2.72	1.111	-.527
	High school	364	2.80	1.153	

* p<.05

There are also about the different grade of teenagers. From Table 13, the first question about the ability of communication did not affect to the teenagers. There were also no significant different from the first question. However, the second question has the significant difference between junior high school students and high school students. The table shows that high school students cannot concentrate after them using the social media. The third question was about the score. This question shows that teenagers still can do well on the exam after they use the social media. The third question shows no significant difference between junior high school students and high school students.

CONCLUSION

Discussion

The findings have showed that from the four factors, most teenagers have the close opinion from the different groups. The findings show that in different genders, they have the significant difference on using experience and convey. These two factors belong to the using experience. Although they have the neutral attitude on these two factors, the mean scores was around three, there still have some effect from different gender. Different grade of teenagers also has the significant difference from the using experience and convey, and it also belong to the using experience. Instagram users has the significant difference from the effect of using social media and the using experience which belongs to cognition and using experience. Facebook users has the significant difference from the way of using social media and convey which also belongs to cognition and using experience. YouTube users has the significant difference from the effect from the social media which belongs to cognition. Form the users of Weibo, PPT, Dcard, and TikTok, all of them did not have the significant difference from cognition and using experience.

Conclusion

The first research question is “Will different sexual of teenagers have the cognitive bias of information by using social media?” From the findings it seems like different sexual of teenagers would not have the cognitive bias of information by using social media.

Research question two is “after using social media, will the different stage of teenagers decrease their ability?” it seems that the teenagers would not decrease their ability too much. There were only high school students could not be concentrated on the class after using social media.

Suggestion

From the research, people could direct to deal the question that teenagers might have. For example, some of the teenagers cannot concentrate on class after using social media. Maybe school can force students not to use cellphone in school in order to let them more concentrate in class. It seems like the teenagers can control themselves on using smart phones and social media. There was not the big deal to let parents and educators to worry about.

APPENDIX

台灣 13-18 歲青少年對社交媒體的使用經驗與認知

各位同學您好：

這是一份學術性的研究問卷，調查內容的主要目的是研究台灣青少年對視覺媒體的使用經驗與認知，您的作答與否對本研究極其重要，請惠賜您的寶貴意見。

本問卷採不記名方式，所蒐集到的全部數據將僅提供統計分析和學術論文的研究，絕不對外公開，故請各位安心作答。本問卷並無正確答案，請依照自身情況來做回答。由衷感謝您的幫忙，在此致上最誠摯的感謝。

祝福您：

學業順利

文藻大學國際事務系
指導教授：林建宏 教授
學 生：黃柔瑄 敬上

【第一部分】手機與社交媒體使用情形

1. 請問是否有使用社交媒體?

(1) 是 (2) 否 (如填否，謝謝您的填答)

2. 請問您擁有一台智慧型手機大約有多久時間了?

_____月/年

3. 請問您一天使用手機的時間大概多久?

(1) 0~1 小時 (2) 2~3 小時

(3) 4~5 小時 (4) 6~7 小時

(5) 8 小時以上

4. 請問您使用社交媒體的時間有多久?

_____月/年

5. 請問您一天使用社交媒體的時間大概多久?

(1) 0~1 小時 (2) 2~3 小時

(3) 4~5 小時 (4) 6~7 小時

(5) 8 小時以上

【第二部分】

對社交媒體的知識認知	非常同意	同意	普通	不同意	非常不同意
1. 認為社交媒體所傳達的資訊一定都是正確的。	<input type="checkbox"/>				
2. 認為大部分社交媒體是用來釋放壓力的。	<input type="checkbox"/>				
3. 認為社交媒體對生理上有好的影響。	<input type="checkbox"/>				
4. 認為社交媒體對心靈有好的影響。	<input type="checkbox"/>				
5. 認為社交媒體可以增加知識。	<input type="checkbox"/>				
6. 認為社交媒體的資訊更加流通。	<input type="checkbox"/>				
7. 認為社交媒體是唯一的休閒管道。	<input type="checkbox"/>				
8. 認為社交媒體會負面影響自己的思想。	<input type="checkbox"/>				
9. 認為社交媒體會影響人與人之間的溝通。	<input type="checkbox"/>				
10. 認為社交媒體會被有心人士所利用。	<input type="checkbox"/>				
11. 認為長期使用社交媒體是會上癮的。	<input type="checkbox"/>				

對社交媒體的使用經驗	非常同意	同意	普通	不同意	非常不同意
12. 清楚知道大部分社交媒體該如何使用。	<input type="checkbox"/>				
13. 利用社交媒體來與朋友維繫感情。	<input type="checkbox"/>				
14. 使用社交媒體後跟家人之間的關係出現負面影響。	<input type="checkbox"/>				
15. 利用社交媒體來傳達自己的思想。	<input type="checkbox"/>				
16. 使用社交媒體可以抒發情緒。	<input type="checkbox"/>				
17. 使用社交媒體能提升自尊心。	<input type="checkbox"/>				
18. 社交媒體曾經出現可能危害您的資訊。	<input type="checkbox"/>				
19. 使用社交媒體後出現焦慮症狀。	<input type="checkbox"/>				
20. 使用社交媒體後溝通能力下降。	<input type="checkbox"/>				
21. 使用社交媒體後專注力下降。	<input type="checkbox"/>				
22. 使用社交媒體後成績下降。	<input type="checkbox"/>				
23. 認為使用社交媒體是必須的。	<input type="checkbox"/>				

【第三部分】

1. 有使用的社交媒體（可複選）

- (1) Instagram (2) Facebook (3) 微博
(4) PTT (5) Dcard (6) YouTube
(7) 抖音 (8) 其他_____

2. 你使用社交網站的目的是什麼？（可複選）

- (1) 交新朋友
(2) 獲得資訊
(3) 與他人分享共同的興趣
(4) 與他人保持聯絡
(5) 跟隨使用社交網站的熱潮
(6) 其他_____

3. 你認為社交網站能改善下列哪些個人狀況？（可複選）

- (1) 人際關係
(2) 溝通技巧
(3) 維持關係 (如: 友誼)
(4) 批判性的思考
(5) 獨立思考
(6) 其他_____

【第四部分】基本資料

1. 性別

- (1) 男 (2) 女

2. 現在年級為

- (1) 國中一年級 (2) 國中二年級 (3) 國中三年級
(4) 高中一年級 (5) 高中二年級 (6) 高中三年級
(7) 大學一年級

結束作答

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