

# **Perception of Online Polls, Information Literacy, Political Efficacy, and Online Polls Participation in Mainland China**

**By**  
**ZHAO Wenyuan, Kevin**

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**Supervisor:**  
**Professor Louis Leung**

School of Journalism and Communication  
The Chinese University of Hong Kong

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# **Perception of Online Polls, Information Literacy, Political Efficacy, and Online Polls Participation in Mainland China**

## **ABSTRACT**

The purpose of this study is to examine the inter-relationships among the perception on online poll, the degree of participation in online poll, the information literacy, and the political efficacy of Internet users in mainland China. Data were gathered from a sample of 419 Internet users from Mainland China. Results show that correlations among information literacy, political efficacy and perception on online polls were only partially significant. The critical literacy dimension of information literacy is significantly but negatively correlated to the perception of online poll as a primary way to express ideas on public affairs. The correlation between political efficacy and perception on online poll was significant and but negative. Meanwhile, only gender (being female), perceived usefulness, the degree of regarding online poll as a primary way to express ideas on public affairs, and the publishing literacy significantly predicted the degree of participation in online poll. The inconsistent impacts of information literacy and political efficacy on the perception on online polls and the degree of participation in online polls are also discussed.

Key words: online poll; voting behavior; information literacy; political efficacy; Chinese

Internet user

## INTRODUCTION

Since September 20, 1987, with the first Email "*Across the Great Wall, we can reach every corner in the world*" sent from China, Internet has significantly infiltrated every area in China. According to China Internet Network Information Center (CNNIC) (2011), the number of net citizens in China has reached 457 million in December 2010. Meanwhile, in a white paper "*The Internet in China* " published by the Chinese government, it was reported that over 80% of China's netizens regard the Internet as the main daily news source and admitted that the Internet played a unique role in the reporting of important news events, fully satisfying people's need for information (State Council Information Office of the People's Republic of China, 2010).

Because of its interactive property, Internet is now widely utilized in citizen journalism to promote the voices from audiences, especially from the grassroots. One of the commonly used methods for audiences to express views is online polls. According to Schultz's (1999) content analysis of 100 U.S. online newspapers, twenty-four out of 100 newspapers conducted online polls. Nowadays in China, the editors and even the users of many news websites, BBS and social networking platforms can also launch an online poll on all kinds of subjects. However, the online poll discussed in this paper only referred to those public affairs related to political, economical and social issues.

Many websites, especially those famous portal websites in China, often post an online poll for important news topics on public affairs. As scientific polls in China are not commonly conducted, these online polls have been becoming an important way for Internet users to express their opinions and participate in community affairs. The results of online poll is

regarded as public opinion to some extent, and often quoted by the journalists in their stories. For example, a popular online news website Xinmin.cn (新民网) reported that, according to their online poll, 91% of the netizens approved that drunk driving should be a criminal offense<sup>1</sup>.

Therefore, it is necessary to find out the Internet user's perceptions on online poll in China and the factors influencing an Internet user's the participation in online poll. With these findings, we will be able to have a better understanding and assessment of online poll and voting behavior.

## LITERATURE REVIEW

### **Online Poll Participation**

Online poll is a way of political participation and civic engagement for the Internet users. But online voting was also criticized for its lack of reliability and validity. The initiator of an online poll and the stakeholders are able to manipulate the poll result easily. After examining the conduction of online poll and the traditional news media's reports on online poll, Wu and Weaver (1997) has summed up the problems with online polls: 1) manipulation; 2) shaping the result by "stuffing the ballot box" or repeat submission; 3) class bias; 4) bias of selection in cooperation; and 5) bias of participation-nonparticipation. Schultz (1999) also found that multiple votes were possible on many newspaper websites in the U.S. and only two that ran quick polls out of the 100 newspaper websites used a disclaimer explaining that the poll was unscientific.

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<sup>1</sup>沈小栋.(February 27, 2011). 逾九成网民支持将醉驾、飙车入罪. Xinmin Website. Retrieved February 27, 2011, From <http://news.xinmin.cn/t/xmsz/2011/02/27/9510565.html>

The electronic voting was born with technology weakness. Some organizations even use the unscientific poll result to mislead public opinion. Mercuri (2002) pointed out the risk of electronic voting system, including accountability, poorer reliability, and greater opportunity for widespread fraud. The Xinhua News Agency (2011) has reported that there were numbers of illegal agencies who help their customers to vote and get the poll result they expect in China. According to this report, some illegal "online marketing" companies claimed that they could help their client to control the result of online poll by hiring groups of people to vote, or manipulating the data by voting robot or insiders. The cheating company even hired hackers to falsify the data of online poll system directly.

Davis (1989)'s Technology Acceptance Model (TAM) indicated that perceived usefulness and perceived ease of use were significantly correlated with the user acceptance of new technology, and "usefulness had a significantly greater correlation with usage behavior than did ease of use". Carter and Bélanger (2005) found that trustworthiness, which was composed of two constructs: trust of the Internet and trust of state government, was significant predictor of citizens' intention to use an e-government service. Schaupp & Carter (2005) found user perceptions of usefulness and trust significantly impacted their intention to use an electronic-voting system, but perceived ease of use had no direct affection on the e-voting adoption. Therefore, we hypothesize that:

**H1.1:** In China, Internet users who have more positive perception on the usefulness of online polls will participate more in online polls.

**H1.2:** In China, Internet users who have more positive perception on the reliability and trustworthiness of online polls will participate more in online polls.

## Information Literacy

The American Library Association's Presidential Committee on Information Literacy published a final report in 1989, stating that an information literate person “must be able to recognize when information is needed and have the ability to locate, evaluate, and use effectively the needed information” (Presidential Committee on Information Literacy: Final Report, 1989). Then, many institutes and university researchers in the U.S. started to develop information literacy competency standards. In 1998, American Association of School Libraries (AASL) and the Association for Educational Communications and Technology (AECT) published *Information Literacy Standards for Student Learning*, offering guidelines for describing the information-literate students in K-12. Then AASL (2000) published the Information Literacy Competency Standards for Higher Education to extend the standards to higher education.

Shapiro and Hughes (1996) emphasized that information literacy should be extended to “critical reflection on the nature of information itself, its technical infrastructure, and its social, cultural and even philosophical context and impact”. Shapiro and Hughes (1996) also proposed seven dimensions of information literacy: (1) Tool Literacy refers to properly use the tools of current information technology; (2) Resource Literacy means to understand the form, format, location and access methods of information resources; (3) Social-structural literacy indicates the understanding of information production and flows into the life of groups; (4) Research Literacy reflects the ability to use information technology tools to conduct research; (5) Publishing Literacy is the ability to format and publish by an proper

medium with tools such as Internet; (6) Emerging Literacy means the ability to continually embrace emerging innovations in information technology; (7) Critical Literacy refers to the awareness and ability to be critically evaluate the information technology from the historical, philosophical, sociopolitical and cultural perspective.

With the development of information technology, the information environment keeps changing. An information literate person should be able to adapt to changing information environment. Lloyd (2006) regarded information literate people as those “who have a deep awareness, connection, and fluency with the information environment. They are engaged, enabled, enriched and embodied by social, procedural and physical information”.

In a country with a population of more than 1.3 billion, the online poll is conducted online and the results definitely could only represent the ideas of the Internet users who participate in a specific poll. The opinions from those who cannot get access to Internet are excluded. The sampling method for online poll is usually “convenient sampling”. The poll result is lack of representativeness but was often reported by the media to represent the public opinion.

However, despite the unscientific sampling and the problematic results, the online poll is still popular in China. Some users, for example, of the most popular Twitter-like service, Sina Weibo, still enjoy the poll function. While others seem to be losing interested in online voting in China, how to improve the reliability and validity of online poll is becoming an important concern for media agencies in China.

In China, an information literate person would be critical to online poll and not rely on it to understand the public opinion. One is because online poll is lack of reliability and validity,

thus, its effectiveness in assessing public opinion should be questioned. The other is that an information literate person is able to publish or express their idea by other information technology such as blog, micro-blog or SNS. This would result in a lower participation degree on online poll for information literate people. Hence, we expect that:

**H2.1** In China, the more information literate Internet users will perceive online poll more negatively in terms of the reliability and trustworthiness.

**H2.2** In China, the more information literate Internet users will perceive online poll more negatively in terms of the representativeness of public opinion.

### **Political Efficacy**

Political efficacy refers to an individual's feeling of effectiveness within a political system.

Campbell, Gurin & Miller (1954) first defined political efficacy as "the feeling that individual political action does have, or can have, an impact upon the political process" p.187.

Following Lane's (1959) two-components interpretation of political efficacy, Balch (1974) conceptualized and testified political efficacy as a two dimensional construct: (1) internal efficacy, referring to an individual's belief in own competence to impact politics effectively, and (2) external efficacy, referring to in what degree, individuals believe that the government represent them and reflect their needs and concerns.

Political efficacy plays a role in the political communication and media usage. Wei and Leung (1998) found the role of the mass media in political socialization in China and Taiwan, and found that the amount of attention paid to the media correlated strongly with political efficacy. By analyzing the data of Taiwan's 2004 Social Change Survey, Wang (2007) also



found that “political use of the Internet promotes political interest and feelings of trust and efficacy, and makes an individual more likely to participate in campaigns and politics”.

As the Internet is a catalyst for making the Chinese government “more open, transparent, and accountable” (Zheng, 2007), the authorities also regard it as a dash board of the public opinion. Sometimes they even adapt their policy on certain event according to the public opinion on the Internet (Li, 2004; Tang, 2009). By a survey in Zhejiang Province in China, Wan and Zhang (2010) found that the degree of voting participation was higher in rural areas than in urban areas, because under the villager self-administration system, the villagers in rural area are able to elect their leaders in the village directly. Wan and Zhang (2010) stated that, for middle class citizens in urban areas, they are unconcerned with traditional elections of representatives of the People's Congress, which is led by the Communist Party, and the Internet will become the important channels for emerging mid-class. This study seeks to expand previous research by addressing two hypotheses and a research question:

**H3.1:** In China, people with higher political efficacy will perceive online poll more as a primary way to express their ideas.

**H3.2:** In China, people with higher political efficacy will perceive online poll more positively in terms of the influence of online polls on government.

**RQ1:** How can demographics, information literacy, political efficacy and perception on online polls predict the participation of online polls?

## METHODOLOGY

### **Sampling and Data Collection**

By convenient sampling method, the data for this study were collected via both an online survey system and street interview targeting at those internet users who are from mainland China. Of the 491 completed questionnaires, 65 are filtered because: a) repeated submission; or b) uncompleted questionnaires, or c) chose the significant different answer to two questions with the same meaning, which was used to filter the malicious respondents; or d) finish the questionnaire within 120 seconds, which is impossible to finish the questionnaire normally; or e) those who claimed they get access to Internet less than one time a week, which means they are not regular Internet users. These filtering mechanisms resulted in a total valid sample size of 419.

The valid sample consisted of 57.3% male and 42.7% female. 6.9 percent of the respondents were in the age 15-20 group, 36.8 percent were in the age 21-25 group, 35.6 percent were in the age 26 -30 group, 15.8 percent were in the age 31-35 group, 3.1 percent were in the age 36-40 group, 1 percent in the age 41-45 group, 0.7 percent in the 46-45 group and 0.2 percent in the age 56- 60 group. Of the 419 respondents, 9.6 percent refused to report the income, and 31.5 percent had no income, while 9.5 percent were in the income range of RMB3000 and below, 27.6 percent in the income range of RMB3,001-9,000, 21.3 percent in RMB9,001- 15,000, 3.6 percent in RMB 15,001-21,000 , and 2.4 percent in RMB21,001 or above. In terms of education level, 0.2 percent of the respondents were at middle school or under level, 2.6 percent at high school level, 11% at junior college level, 61.8% at bachelor degree level, and 24.3% at master degree or above level.

## Measures

*Information literacy.* To assess the five of the seven dimensions of information literacy as proposed by Shapiro and Hughes (1996), an inventory of 15 items, most of which had been testified by Leung and Lee (2010) were used in this survey. However, some of them were adapted and two new items were added according to mainland Chinese society's different cultural background. Respondents were asked to indicate, 'To what degree do you match with the following descriptions?' on a 5-point scale with '1' = not very confident, and '5' = very confident.

Table 1 shows the factor analysis of the 15 statements yielded a five factor information literacy structure including tool literacy, critical literacy, publishing literacy, emerging technology literacy and social-structural literacy. The reliability alphas were high and ranged from .797 to .859. Other two dimensions were not considered as the research and resource literacy is not directly related to this research.

(\* Insert Table 1 About Here \*)

*Political efficacy.* Measurement testified by Wei and Leung (1998) in a survey conducted in both China and Taiwan were employed in this survey. Measurement was based on a 5-point scale with 1 = 'strongly agree' and 5 = 'strongly disagree' (efficacious) responses to statements. The respondents were asked to respond to two statements on external political efficacy: 'I don't think public officials care much about what people like me think', and 'People like me don't have any say about what the government does', and one other statement on internal political efficacy: 'Sometimes politics and government seem so

complicated that a person like me can't really understand what's going on'. The statement "Voting is the only way that people like me can have any say about how the government runs things" used in Wei and Leung's (1998) survey is deleted because it is not applicable to China's special political ecology. Table 2 shows the reliability analysis of the composite political efficacy scale and the Cronbach's alpha was accepted at .711.

(\* Insert Table 2 About Here \*)

*Perception on online poll.* The respondents were asked to respond to five statements to indicate their attitudes to online poll. "Online poll on public affairs is an effective way to express my opinion;" "Online poll is a primary way for me to express my opinion on public affairs;" "Online poll on public affairs is reliable and trustworthy;" "The result of online poll on public affairs can represent the public opinion of our society;" and "The government cares the result of online poll on public affairs and often refers to it in the formulation of public policy process." These five statements were designed to measure the perception on online poll in five different aspects respectively: 1) The usefulness of online poll; 2) The degree of regarding online poll as a primary way to express ideas on public affairs; 3) The reliability and trustworthiness of online poll; 4) The representativeness of public opinion of online poll; 5) The influence of online poll to the government. Measurement was based on a 5-point scale with 1 = 'strongly disagree' and 5 = 'strongly agree' responses to statements.

(\* Insert Table 3 About Here \*)

*Degree of participation in online poll.* At the beginning of the questionnaire, the respondents were informed that the online poll here only referred to those on public affairs related to political, economical and social issues. Respondents were asked to indicate, 'How

often do you participate in online poll on public affairs issue in the last six months?’ on a 5-point with ‘1’ = never, and ‘5’ = very often.

*Demographics.* Personal data such as age, gender, education and monthly income were assessed and recorded.

## RESULTS

### **Online Poll Participation**

Although the online poll is still popular in many Chinese news websites, BBS and social networking platforms, the survey results indicated that most of the Internet users do not participate in as many online polls on public affairs as expected. Only 5% scored “very often” or “often” when answering ‘How often do you participate in online poll on public affairs in the last six months?’ This indicates that most of the respondents do not take part in the online polls on public affairs very often and the online polls may be not so popular as expected. Some realistic factors may have inhibited Internet users’ participation in online polls.

### **Hypothesis Testing**

Results in Table 4 shows that the degree of participation in online polls is significantly and positively correlated to the perceived usefulness of online poll ( $r = .36, p < .01$ ) and the perceived reliability and trustworthiness of online poll ( $r = .24, p < .01$ ). Thus, H1.1 and H1.2 was fully supported.

H2 proposed that in China, the more information literate Internet users will perceive

more negatively in terms of 1) the reliability and trustworthiness, and 2) the representativeness of online polls. However, according to Table 4, the correlations were not significant. Therefore, H2.1 and 2.2 were not supported. These results suggest that those who self-reported they are information literate Internet users in mainland China had very different perceptions on online polls.

H3.1 hypothesized that people with higher political efficacy will regard online poll more as a primary way to express their ideas on public affairs. Table 4 suggested that correlation is significant but negative ( $r = -.10, p < .05$ ). Therefore, H3.1 was not supported.

H3.2 hypothesized that people with higher political efficacy will perceive more positively in terms of the influence of online polls on government in China. But Table 4 indicates that the correlation between political efficacy and the Internet user's perception on online poll's influence to the government is not significant. So H3.2 was not supported.

(\* Insert Table 4 About Here \*)

### **Predicting the degree of participation in online poll**

A regression analysis was conducted to examine how demographics, information literacy, political efficacy and perception on online polls can predict the participation of online polls. Results in Table 5 indicates that the gender ( $\beta = -.04, p < .05$ ), perceived usefulness ( $\beta = .23, p < .001$ ), the degree of regarding online poll as a primary way to express ideas on public affairs ( $\beta = .20, p < .001$ ), and the publishing literacy ( $\beta = .13, p < .05$ ) can significantly predict the degree of participation in online poll. This suggested that the male publishing literate Internet users who believe in the usefulness of online poll and regard online poll as the main

channel to express opinions on public affairs would participate more on the online polls on public affairs.

(\* Insert Table 5 About Here \*)

## CONCLUSIONS AND DISCUSSIONS

### **Perception on online poll and information literacy**

This study set out to empirically examine the inter-relationships among the perception on online voting, the degree of participation in online poll, the information literacy and the political efficacy of Internet users in mainland China. Among the dimensions of information literacy and the perception on online poll, results show that only the critical literacy is negatively correlated to “online poll as a primary way to express ideas on public affairs”. That means the Internet users who are good at evaluating information would not regard online poll as a main channel to express their opinions on public affairs. Meanwhile, the perceptions of those self-reported critical literate Internet users on online poll are paradoxical in terms of the usefulness, reliability and trustworthiness, and representativeness.

It is interesting to note that there are no significant relationships among all the other information literacy dimensions and the perceptions on online poll in terms of the usefulness, reliability, trustworthiness, and the representativeness. Information literate Internet users are expected to realize the limitation of online poll in China and have negative perceptions on online poll. However, this result indicates that some of those self-reported information literate Internet users in mainland China may have not realized

the limitations of online poll in terms of reliability, trustworthiness, and the representativeness. Given the situation that information flow is still not unimpeded and the education of information literacy is far less than enough in mainland China, the Internet user may not be able to evaluate their information literacy appropriately. The means on each item of information literacy were above 3.0, so the respondents may have over-estimated or over-stated their information literacy.

### **Perception on online poll and political efficacy**

Contrary to our expectation, the correlation between political efficacy and “regarding online poll as a primary to express ideas on public affairs” is significant and negative, which means that the higher an Internet user’s political efficacy is, the less he or she would regard online poll as a main channel to express the ideas on public affairs. It would be reasonable because for those with high political efficacy, they have many offline channels or other online channel to influence the political progress, then online poll would be not so important for them.

The correlation between political efficacy and the perceived influence on government of online poll in China is not significant. This suggests for those Internet users with high political efficacy, they think they are able to impact the government in real life, but their attitudes are inconsistent on the influence of online poll on government.

### **Participation in online poll**

Given the combined influence of demographics, perception on online poll, information



literacy and political efficacy, only the gender, perceived usefulness, the degree of regarding online poll as a primary way to express ideas on public affairs and the publishing literacy can significantly and positively predict the degree of participation in online poll.

It is reasonable that if the Internet users believe online poll is effective and important, they would participate more. But it is interesting to find out that perception on the reliability and trustworthiness, the representativeness, and the influence to the government could not significantly predict the degree of participation. This means that these three aspects of perception may lead to inconsistent results of participation. For example, someone who believes online poll is lack reliability and trustworthiness, and cannot represent the public opinion of the society would choose not to participate; while another one who believes despite it is not reliable, trustworthy and representative, but at least it is a kind of social expression, would choose to participate. Another situation is that: someone who thinks the online poll would not influence the government would choose not to participate; but for the others who knows the government doesn't care but still is eager to express or lack of other channels to express, would like to choose to participate in online poll. All this situations are possible in Chinese society as the traditional political participation channels are limited and people expect more on the cyberspace which is increasingly powerful but still fragile, unstable and sometimes unpredictable in terms of the impact on political progress.

The political efficacy would not significantly predict degree of participation of online voting also partially proved the paradoxical role Internet played in the Chinese society. As discussed above, Internet users with higher political efficacy would less regard online poll as

a primary way to express their opinions on public affairs, but it seems the perception of “not a primary way” have led to different behavior: some of them would not participate, while some of the others like to participate, as they may be interested in public affairs and still do not want to lose the opportunity of expressing their ideas by online poll. Those different behaviors may make the political efficacy is less powerful in predicting the participation in online poll.

Of the dimensions of information literacy, only the publishing literacy would significantly predict the participation in online poll. It means that Internet users who are good at publishing information and would like to publish information on different online platforms would participate more in online poll. In other words, as they are active users of Internet, they would participate more on online polls. It is interesting that the tool, critical, emerging technology and social-structural literacy all failed to predict the degree of participation. One possible explanation may be that: online poll is not a kind of complex and new technology and it is easy to use as an online tool, so the tool literacy and emerging technology literacy would not have significantly impact on participation. For those who are critical and social-structural literate, they would have inconsistent behaviors to online poll. The reasons mentioned before about why information literacy is not significantly related to the perception on online poll could also explain the insignificant predicting of online poll participation.

This result also demonstrated that the information literacy is a combination of different dimensions and sometimes those different dimensions would impact on online voting behavior respectively. In a research of the relationships between information literacy and

the Internet risks, Leung and Lee (2010) also noted that the critical and emerging technology literacy dimensions of information literacy are lack of power to significantly predict the Internet risks, while tool, publishing and social-structural literacy would significantly predict some of the Internet risks.

The online polls on some important or sensitive public affairs sometimes are not encouraged or restricted by the authorities in mainland China. In this situation, all the variables discussed in this study would definitely not be able to predict the degree of participation in online poll. The impact of government's policy was not specifically discussed in this study but it should not be ignored as an important variable to the degree of participation in online poll.

#### LIMITATIONS & SUGGESTIONS FOR FURTHER RESEARCH

The limitation for this study firstly is the sampling method, as it would give a better and stronger explanation if it is probability sampling. Another limitation may be the measurement of information literacy which relies on self-report, as information literacy is a set of objective standards rather than subjective assessment. Meanwhile, with different social background, technology application and life scenario, the denotation of information literacy would be various. Lloyd (2010) emphasized that information literacy is a context-dependent practice. So it is necessary to explore and find out how to measure different dimensions of the information literacy accurately according to different social background and application context.

The Internet is changing the political progress in China, but it is also fragile and being

changed by the political system. The political ecology in China is different from those western countries. In real life, the voting behavior between noncompetitive plebiscitary elections and semi-competitive elections would be fundamentally various (Shi, 1999), and the different ecology would definitely impact the online behavior. Therefore, the online civic engagement is complex and dynamically changing in mainland China, and it is necessary to keep on tracking the changing impacts of all variables as some of them may become significant while others may become not.

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**Table 1 Reliability Analysis of information literacy (N= 419)**

To what degree does your opinion match with the following descriptions?	Mean	S.D.	Cronbach's Alpha
<b>Tool Literacy</b>			.80
1. Locate information in multiple sources/Decide the type of resources needed to yield useful information for a particular need	3.55	.89	
2. Recognize the needed information sources in time	3.82	.81	
3. Find the needed information in an online database or search engine in time	3.91	.77	
<b>Critical Literacy</b>			.82
4. Be able to distinguish the true messages in a sea of information.	3.55	.78	
5. Judge critically whether information authentic, accurate and reliability.	3.71	.77	
6. Compare and evaluate critically whether the information is timely and appropriate.	3.73	.73	
<b>Publishing Literacy</b>			.86
7. Format and publish ideas electronically in textual form	3.84	1.03	
8. Format and publish ideas electronically in multimedia form	3.31	1.09	
9. Create contents in BBS, blogs, micro-blogs, and SNS websites for different audiences	3.43	1.14	
<b>Emerging Technology Literacy</b>			.83
10. Be able to decide wisely when to adopt the continually emerging innovations in information technology	3.25	.91	
11. Aware of the latest product development in new information technologies	3.25	1.01	
12. Be able to decide wisely when to adopt the latest product development in new information technologies	3.21	1.03	
<b>Social-Structural Literacy</b>			.81
13. Understand how information is socially produced	3.37	.91	
14. Be able to evaluate the social significance of information	3.46	.80	
15. Understand how information is socially situated	3.53	.81	



**Table 1. Factor Analysis of Information Literacy**

To what degree does your opinion match with the following descriptions?	Mean	SD	Factors				
			1	2	3	4	5
<b>Publishing Literacy</b>							
1. Format and publish ideas electronically in multimedia form	3.31	1.09	.86				
2. Create contents in BBS, blogs, microblogs, and SNS websites for different audiences	3.43	1.14	.82				
3. Format and publish ideas electronically in textual form	3.84	1.03	.82				
<b>Critical Literacy</b>							
4. Compare and evaluate critically whether the information is timely and appropriate	3.73	.73		.83			
5. Judge critically whether information is authentic, accurate, and reliability	3.71	.77		.82			
6. Distinguish the true messages in a sea of message	3.55	.78		.77			
<b>Emerging Technology Literacy</b>							
7. Aware of the latest product development in new information technologies	3.25	1.01			.85		
8. Be able to decide wisely when to adopt the latest product development in new information technologies	3.25	.91			.84		
9. Be able to decide wisely when to adopt the continually emerging innovations in information technology	3.21	1.03			.67		
<b>Social-structural Literacy</b>							
10. Understand how information is socially situated	3.37	.91				.86	
11. Be able to evaluate the social significance of information	3.46	.80				.80	
12. Understand how information is socially produced	3.53	.81				.62	
<b>Too Literacy</b>							
13. Find the needed information in an online database or search engine in time	3.91	.77					.84
14. Recognize the needed information sources in time	3.82	.81					.84
15. Locate information in multiple sources and decide the type of resources needed to yield useful information for a particular need	3.55	.89					.67
Eigenvalue			6.10	1.73	1.34	1.16	.95
Variance explained			40.68	11.53	9.05	7.73	6.33
Cronbach's alpha			.86	.82	.83	.81	.79

Notes: Scale used: 1= totally not match and 5= totally match; N=419

**Table 2 Reliability Analysis of Political Efficacy**

How much do you agree with the following statements?	Mean	S.D.	Cronbach's Alpha
<b>Political Efficacy</b>			.71
1. I don't think public officials care much about what people like me think	2.17	1.01	
2. People like me don't have any say about government does	2.18	1.02	
3. Sometimes politics and government seems so complicated that a person like me can't really understand what's going on.	2.50	1.15	

Note: Scale used: 1= strongly agree and 5=strongly disagree; N=419

**Table 3. Descriptive Statistics on Perception in Online Poll (N=419)**

To what degree do you agree in the statements below:	Mean	S.D.
1. Online poll is an effective way for me to express my opinion on the public events	3.57	.97
2. Online poll is the primary way for me to express my opinion on the public events	3.06	1.08
3. Online poll on public events is trustworthy and reliable	2.73	.89
4. The results of online polls represent the public opinion of our society	2.80	1.02
5. The influence of online poll to public policy process	2.62	1.06

Scale used: 1 = 'strongly disagree' and 5 = 'strongly agree'

**Table 4. Pearson Correlations among Key Variables**

	2	3	4	5	6	7	8	9	10	11	12
<u>Perception on online polls</u>											
1. The usefulness of online poll	.49**	.37**	.29**	.22**	<b>.36**</b>	.02	-.03	.08	.06	.03	.02
2. Online poll as a primary way to express		.38**	.30**	.20**	.35**	-.08	-.10*	.05	.01	-.05	<b>-.10*</b>
3. The reliability and trustworthy of online poll			.48**	.20**	<b>.24**</b>	-.02	-.08	-.01	.00	-.01	-.04
4. The representative of public opinion of online poll				.22**	.20**	-.02	-.03	.02	.04	-.05	-.09
5. The influence of online poll to the government					.12*	.03	-.03	.02	.03	.06	<b>.08</b>
<u>Participation of online polls</u>											
6. Frequency of participation in online polls						.09	.07	<b>.20**</b>	<b>.13**</b>	<b>.13**</b>	.04
<u>Information Literacy</u>											
7. Tool literacy							.47**	.39**	.42**	.41**	.02
8. Critical literacy								.30**	.38**	.52**	<b>.10*</b>
9. Publishing literacy									.50**	.46**	-.01
10. Emerging Technology Literacy										.51**	.03
11. Social structure literacy											<b>.16**</b>
<u>Political Efficacy</u>											
12. Political Efficacy											

Notes: \*\*  $p < .01$ ; \*  $p < .05$ ; N= 419

**Table 5. Regression Analysis of Demographics, Information Literacy and political efficacy as Predictors of Online Voting Participation**

Predictors	Online Poll Participation
	$\beta$
Block 1: Demographics	
Age	.07
Income	.06
Education	.12
Gender (M=1)	-.04*
Block 2: Perception on online polls	
The usefulness of online poll	.23***
Online poll as a primary way to express	.20***
The reliability and trustworthiness of online poll	.05
The representative of public opinion of online poll	.06
The influence of online poll to the government	.01
Block 3: Information Literacy	
Tool literacy	.02
Critical Literacy	.04
Publishing literacy	.13*
Emerging Technology Literacy	-.01
Social-structural Literacy	.03
Block 4: Political Efficacy	
Political Efficacy	.06
$R^2$	.24
Adjusted $R^2$	.21

Notes: \*\*\*  $p < .001$ ; \*  $p < .05$ ; N= 419