Factors Influencing Online Poll Participation:
An Examination of Perception of Online Polls, Information Literacy, and Political Efficacy in Mainland China

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ABSTRACT

The purpose of this study is to examine the degree of participation in online polls and its relationship to the perception of online polls, information literacy, and the political efficacy of Internet users in mainland China. Data was gathered online from a sample of 419 Internet users. Results show that perceptions of both the usefulness and trustworthiness of online polls positively correlated to participation in online polls but not to information literacy or to political efficacy. Contrary to expected results, political efficacy did not relate to online poll participation. However, regression results suggested that Internet users who often participated in online polls were usually males who were literate in publishing and believed that online polls were an effective and trustworthy means to express opinions on public issues. Limitations and implications for future studies are discussed.

Keywords: China, Information Literacy, Online Poll Participation, Perception of Online Polls, Political Efficacy

INTRODUCTION

Since September 20, 1987, with the first email, "Across the Great Wall, we can reach every corner in the world," sent from China, the Internet has significantly infiltrated every area in China. According to the China Internet Network Information Center (CNNIC, 2011), the number of netizens in China 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 their main daily news source and admitted that the Internet played a unique role in the reporting of important news events and in fully satisfying people's need for informa-

tion (State Council Information Office of the People's Republic of China, 2010).

Because of its interactive property, the Internet is now widely used in citizen journalism to promote the voices of the audience, especially those from the grassroots. One of the commonly used methods for audiences to express views is through participation in online polls. According to a content analysis of 100 online newspaper websites in the U.S., Schultz (1999) found that 24 out of 100 conducted online polls. Similarly, editors in China from both state-owned and commercial websites also used online polls as an important means to interactively solicit users' participations in polls and to instantaneously report results to the public on different issues, except for some politically sensitive topics restricted by the government. The dramatic development of social media further facilitates the usage of online polls, as publishers are able to initiate all kinds of polls on topics ranging from lighthearted and sometimes trivial subjects in entertainment to serious and thought-provoking ones in politics. However, the online polls discussed in this paper refer only to public affairs polls related to political, economic, or social issues.

Many websites, especially those well-known portal websites in China, often post online polls for important news topics in public affairs. As scientific public opinion polls are not commonly conducted in China, online polls have developed into an important way for Internet users to express their opinions and participate in community affairs. To some extent, the results of "unscientific" online polls are often regarded as public opinions, and journalists often quote them in their stories. The government also regards them as a dashboard in the public policymaking process. In view of this increasingly popular trend and also given the little attention paid to the validity and reliability of online polls, it is necessary to examine Internet users' perceptions of online polls in China and factors influencing Internet users' participation in online polls.

Furthermore, despite the fact that China is still under a tightly filtered traditional media

system and the country is undergoing a period of transition from a totalitarian state to reform and openness, the Internet has rapidly become an important channel for expressing opinions, especially in user-generated content using social media in the Web 2.0 era (Leung, 2009). It was against this backdrop that this study explored the factors, such as perceptions of online polls, perceived self-information literacy, and political efficacy, which may have significant impacts on online poll participation.

LITERATURE REVIEW

Online Polls Participation

Past research has demonstrated that "cybercitizens" use the Internet to participate in the political process and have effectively accomplished political ends. With the widespread use of social media, the nature of political action will witness a dramatic change (Hill & Hughes, 1999). In China, engaging in online polls has become a novel form of political participation and civic engagement for cybercitizens. However, online polls have been criticized for their lack of reliability and validity. In examining the implementation of online polls, Wu and Weaver (1997) summarized five commonly recognized problems: 1) manipulation; 2) shaping the results by stuffing the ballot box or including repeat submissions; 3) class bias; 4) bias of selection in cooperation; and 5) bias of participation-nonparticipation. Meanwhile, despite the press reporting countless examples of anecdotal evidence that online polls are unscientific, Internet users, with a variety of motivations, continue to participate.

Adoption of new ideas and innovations for communication needs have been studied from a variety of perspectives. Davis's (1989) Technology Acceptance Model (TAM) indicated that perceived usefulness and perceived ease of use significantly correlated with user acceptance of new technology. Carter and Bélanger (2005) found that trustworthiness, which was composed of two constructs, namely trust of the Internet and trust of state government, was

also a significant predictor of citizens' intentions to use e-government services. A recent study by Schaupp and Carter (2005) showed that user perceptions of usefulness and trust had a significant impact on their intentions to use an electronic voting system. Past research has also shown that perceptions of credibility were enhanced when the channel used was consistent with the news source being evaluated (Bucy, 2003). Similarly, in a study using a probability sample of 2,500 residents in two cities in China in 2000, Zhu and He (2002) found that the perceived advantage-compatibility-ease-demonstrability is significantly and positively related to two online activities: use of e-mail and participation in online chat or discussion. Based on these findings, it is reasonable to conclude that trustworthiness and perceived usefulness are important factors influencing adoption of innovations. Thus, it is logical to expect that:

H₁: The more Internet users perceive online polls positively (both in usefulness and trustworthiness), the more they will participate in online polls in China.

Perception of Self-Information Literacy

In 1989, the Presidential Committee on Information Literacy published a final report 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). Shapiro and Hughes (1996) emphasized that the definition of 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. They proposed seven dimensions of information literacy. (1) Tool Literacy refers to the proper use of current information technology tools. (2) Resource Literacy means understanding the form, format, and location of, and the access methods for, information resources. (3) Social-

structural Literacy indicates understanding of information production and appreciation of how it flows into the lives 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 in a proper medium with tools such as the 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 evaluate information technology critically, from historical, philosophical, sociopolitical, and cultural perspectives.

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." With this literature, it is logical to infer that a critically literate person would be judgmental of online polls and would not rely on them to understand public opinion, as online polls generally lack reliability and validity. Consequently, continuing this inference, the result would be a lower degree of participation in online polls by critically literate people. Thus, one might expect that:

H₂ₐ: The more information-literate of the critical dimension Internet users are, the more they will report a negative perception of online polls in China.
H₂ᵦ: The more information-literate of the critical dimension Internet users are, the less they will participate in online polls in China.

Political Efficacy

Political efficacy refers to an individual's feeling of effectiveness within a political system. Campbell, Gurin, and Miller (1954) first defined political efficacy as 'the feeling that an individual political action does have, or can have, an impact upon the political process' (p. 187). Following Lane's (1959) two-component interpretation of political efficacy, Balch (1974) conceptualized and proposed that political efficacy was a

two-dimensional construct, including internal efficacy, referring to an individual's belief in his or her own competence to have an effective impact on politics, and external efficacy, referring to the degree to which an individual believes that the government represents him/her and reflects his/her needs and concerns.

Political efficacy plays a role in political communication and media usage. Wei and Leung (1998) studied the role of 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. Past research found that Internet access and online exposure to information about the presidential campaign are significantly associated with political efficacy, knowledge, and participation (Kenski & Stroud, 2006). By analyzing the 2004 Social Change Survey in Taiwan, Wang (2007) also found that political use of the Internet promoted political interest and feelings of trust and efficacy, and made an individual more likely to participate in campaigns and politics.

As the Internet can be a catalyst for making the Chinese government more open, transparent, and accountable (Zheng, 2007), the authorities also regard it as a "dashboard" of public opinions. As a result, it is logical to hypothesize that politically efficacious individuals tend to have a more positive view of online polls, as they believe public officials care about what people think, and they have confidence that their opinions expressed in online polls will be listened to. Thus, this study proposes two additional hypotheses and a research question:

H$_{3a}$: Internet users with higher political efficacy will report more positive perceptions of online polls than will users with lower political efficacy.
H$_{3b}$: Internet users with higher political efficacy will participate in online polls more often than users with lower political efficacy.
RQ: To what degree can demographics, perception of online polls, information literacy, and political efficacy predict online poll participation?

METHODOLOGY

Sampling and Data Collection

Data was gathered from a sample of 484 Internet users in mainland China. Using a snowball sampling method, respondents were invited via e-mail to participate in an online survey posted on sojump (www.sojump.com), a professional online survey platform in China. Of the 484 completed online questionnaires, the study screened out 65 as repeated submissions, uncompleted questionnaires, or questionnaires completed by those who were not regular Internet users (online use indicated as less than once a week). These filtering mechanisms resulted in 419 valid samples.

The valid samples consisted of 57.3 percent males; the median age ranged from 35 to 45. The median personal monthly income ranged from US$473 to US$1,420. Approximately 14% had a junior college–level education or lower, 61.8% were at the bachelor's degree level, and 24.3% were at the master's degree level or above.

Measures

Perception of self-information literacy. To assess the different dimensions of information literacy as proposed by Shapiro and Hughes (1996), this exploratory study adopted an inventory of 15 items. Similar to those used by Leung and Lee (2011), some items were modified, and two new items were added because of differences in cultural backgrounds. Table 1 shows the factor analysis of the 15 statements, which yielded a five-factor information literacy structure of publishing literacy, critical literacy, emerging technology literacy, social-structural literacy, and tool literacy. Two other dimensions, namely research literacy and resource literacy, were not considered, as they were not directly related to this research. The reliability alphas were high for all factors, ranging from .79 to .86.

Political efficacy. In assessing political efficacy, this study employed a measurement methodology adopted by Wei and Leung (1998)

Table 1. Factor analysis of perceived self-information literacy

To what degree does your opinion match with the following descriptions?	Mean	SD	Factors				
			1	2	3	4	5
Publishing Literacy (Factor mean = 3.53)							
1. Format and publish ideas electronically in multimedia form	3.31	1.09	.86				
2. Create contents in BBS, blogs, micro blogs, 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				
Critical Literacy (Factor mean = 3.66)							
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 reliable	3.71	.77		.82			
6. Distinguish the true messages in a sea of messages	3.55	.78		.77			
Emerging Technology Literacy (Factor mean = 3.24)							
7. Aware of the latest product developments in new information technologies	3.25	1.01			.85		
8. Be able to decide wisely when to adopt the latest product developments 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		
Social-structural Literacy (Factor mean = 3.45)							
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	
Tool Literacy (Factor mean = 3.76)							
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

in a survey conducted in both China and Taiwan. 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." They also responded to one 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." Measurement was based on a 5-point scale with 1 = 'strongly agree' and 5 = 'strongly disagree' (higher score means more efficacious) on the statements. Reliability analysis of the composite political efficacy measure using these three items was acceptable at .71.

Perception of online poll. To assess perception of online polls, four statements to indicate respondents' attitudes toward online polls were used, including: "Online polls on public affairs are an effective way to express my opinion," "Online polls are a primary way for me to express my opinion on public affairs," "Online polls on public affairs are reliable and

trustworthy," and "The results of online polls on public affairs can represent the public opinion of our society." Respondents were asked "To what degree do you agree with the statements below?" using a 5-point scale with 1 = 'strongly disagree' and 5 = 'strongly agree.' As shown in Table 2, effectiveness (alpha=.66) consisted of two items indicating that online polls are useful, effective, and a primary way to express ideas on public affairs. Trustworthiness (alpha=.65) was comprised of two items, reflecting that online polls are reliable, representative, and trustworthy of public opinions.

Degree of participation in online polls. At the start, respondents were informed that the online polls in the questionnaire referred only to those polls related to public affairs associated with political, economic, and social issues. Respondents were asked to respond to the question, "How often have you participated in online polls on public affairs issues in the last six months?" using a 5-point scale with '1' = never and '5' = very often.

Demographics. The researcher recorded personal data, such as gender, age, education, and monthly personal income.

RESULTS

Online Poll Participation

Although online polls are still popular in many Chinese news websites, bulletin board system (BBS), and social networking platforms, results from this exploratory study indicated that most Internet users in China are not active participants in online polls, especially when the polls relate to public affairs issues. In fact, only 5% responded "very often" or "often," with males dominating the participation (M=2.38, sd=.83), and over 30% reported "sometimes," when answering the question "How often have you participated in online polls on public affairs in the last six months?" This indicates that online polls may not be as popular as expected if they are on serious topics. Some factors may have inhibited Internet users from expressing their views through online polls. Some may perceive participating in online polls as a game, and some may prefer not to express their opinions through entertainment-oriented polls. However, despite still being under a tightly controlled traditional media system, China is undergoing a period of transition from a totalitarian state to reform

Table 2. Factor analysis of perception of online polls

To what degree do you agree with the statements below?	Mean	SD	Factors	
			1	2
Usefulness				
1. Online polls are an effective way for me to express my opinion on public events.	3.57	.97	.85	
2. Online polls are the primary way for me to express my opinion on public events.	3.06	1.08	.83	
Trustworthiness				
3. The results of online polls represent the public opinion of our society.	2.80	1.02		.89
4. Online polls on public events are trustworthy and reliable.	2.73	.89		.78
Eigenvalue			2.15	.83
Variance explained			53.80	20.83
Cronbach's alpha			.66	.65

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

and openness. At the same time, the Internet is rapidly becoming an important channel for expressing opinions, especially in user-generated content using social media in the Web 2.0 era (Leung, 2009). It is against this backdrop that this study explored the factors, such as perceptions of online polls, information literacy, and political efficacy, which may have significant impacts on online poll participation.

Hypothesis Testing

The results in Table 3 show that the degree of participation in online polls was significantly and positively related to the perceived usefulness (r=.41, p<.001) and trustworthiness (r=.25, p<.001) of online polls. Thus, the results fully supported H_1.

The bivariate relationships in Table 3 between the critical dimension of perceived self-information literacy and the two perceptions of online polls were not significant. Thus, H_{2a} was not supported. Contrary to what was hypothesized in H_{2b}, Pearson correlation in Table 3 shows that perceived critical literacy and online poll participation was positive but not significant. Therefore, H_{2b} was rejected. However, bivariate relationships such as publishing literacy (r=.20, p<.001), emerging technology literacy (r=.13, p<.01), and social-structural literacy (r=.13, p<.01) were significantly and positively related to online poll participation. This indicates that being literate in technology and publishing, together with the ability to evaluate the social significance of the information, makes people more willing to participate in online polls.

H_{3a} hypothesized that Internet users with higher political efficacy would report a more positive perception of online polls than would users with lower political efficacy. However, the results showed no significant relations and therefore did not support H_{3a}. H_{3b} proposed that Internet users with higher political efficacy would participate in online polls more often in China. No significant relationship was found. Therefore, H_{3b} did not receive support.

Predicting the Degree of Participation in Online Polls

The regression results in Table 4 indicate that gender (β=.12, p<.05), perceived usefulness (β=.37, p<.001), trustworthiness (β=.10, p<.05),

Table 3. Pearson correlations among key variables

	2	3	4	5	6	7	8	9
Perception of Online Polls								
1. Usefulness	.44***	.07	-.08	.04	-.01	-.04	.05	.41***
2. Trustworthiness		.00	-.06	.03	-.03	-.02	.08	.25***
Self-Information Literacy								
3. Publishing literacy			.30***	.50***	.46***	.39***	.01	.20***
4. Critical literacy				.38***	.52***	.47***	-.10*	.07
5. Emerging technology literacy					.51***	.42***	-.03	.13**
6. Social structure literacy						.41***	-.16***	.13**
7. Tool literacy							-.02	.09
Political Efficacy								
8. Political efficacy								.04
Online Poll Participation								
9. Frequency of participation								

Notes: *** p < .001; ** p <.01; * p < .05; N= 419

Table 4. Regression analysis of demographics, perception of online polls, information literacy, and self-political efficacy as predictors of online poll participation

Predictors	Online Poll Participation
	β
Demographics	
Gender (Male=1)	.12*
Age	.05
Education	.06
Income	-.05
Perception of online polls	
Usefulness	.37***
Trustworthiness	.10*
Perceived Self-Information literacy	
Publishing literacy	.13***
Critical literacy	.04
Emerging technology literacy	.04
Social-structural literacy	.05
Tool literacy	.05
Political efficacy	
Political efficacy	-.06
R^2	.24
Adjusted R^2	.21
F	9.50***

Notes: *** $p < .001$; ** $p < .01$; * $p < .05$; N= 419

and publishing literacy (β=.13, $p<.001$) significantly predicted online poll participation. This suggests that male Internet users who are literate in publishing and who believe in the usefulness and trustworthiness of online polls would participate most often in online polls on public affairs topics.

CONCLUSION AND DISCUSSIONS

Perception of Online Polls and Information Literacy

This study set out to empirically examine the degree of participation in online polls and its relationship to the perception of online polls, information literacy, and political efficacy of Internet users in mainland China. Contrary to expectations, the study found no significant relationships among any of the dimensions of perceived self-information literacy (especially the critical dimension) and the two dimensions of perception of online polls (i.e., usefulness and trustworthiness). It would be logical to expect that critically literate Internet users would be quick to recognize the shortcomings of online polls and to develop negative perceptions. However, the current results indicate that many self-reported, information-literate Internet users in mainland China may not realize the limitations of online polls in reliability and representativeness. Given that the emphasis on information literacy training in

China's educational system is much less than in Western education, Internet users may not have sufficiently developed the highly sensitive critical literacy skills necessary to recognize that online polls are unscientific and that they should not be regarded as a reliable channel to express opinions. In fact, despite that the means on each item of information literacy scale was above 3.0, respondents may have overstated their information literacy skills in the sample.

Perception of Online Polls and Political Efficacy

Although it was our expectation that the higher an Internet user's political efficacy is, the more positive they would perceive that online polls are reliable and trustworthy, no significant correlation between perception of online polls and political efficacy was found. The insignificant relationship between political efficacy and perception of online polls suggests that Internet users with high political efficacy may think that they are able to have an impact on the government in real life, but their perceptions of the ability of online polls to influence government policy or the political climate are quite different. In other words, the limitations of online polls, such as being unscientific and unrepresentative, and the less developed political efficacy among cybercitizens in China may have lowered trust in online polls. To some degree, they may think that online polls are platforms for polls of entertainment issues, not for serious topics.

Participation in Online Polls

As expected, perceptions of online polls positively correlated with online poll participation. Such results are in line with Davis's (1989) Technology Acceptance Model (TAM) and with Carter and Bélanger (2005), Schaupp and Carter (2005), and Bucy (2003) who suggest that trustworthiness, effectiveness, and credibility of content are key determinants of usage behavior. Thus, in the future, building a positive image for the implementation of online polls presents a monumental challenge to media organizations, portal sites, and website operators who want to promote the perception that online polls can be scientific, unbiased, and trustworthy.

It is interesting to note that, contrary to the hypothesis originally proposed, the relationship between the critical dimension of information literacy and online poll participation was insignificant. However, as shown in the bivariate relationships in Table 3, those users literate in publishing, emerging technology, and social-structural skills (i.e., ability to evaluate the social significance of information) were those who participated more in online polls. It is easy to understand that Internet users who were technologically literate, who were good at publishing information electronically in multimedia forms, and who created content for different audiences in BBS, blogs, Twitter, and SNS websites would be frequent online poll participants. Meanwhile, the finding that users who were social-structurally literate were also active users of online polls was surprising. One would think that someone who is critically and social-structurally literate would participate in online polls less. One explanation is that, given the limited freedom of political participation and opinions expressions in China, some of the self-reported social-structurally literate people may believe that the online poll may have significant positive impact on social change and civic engagement. It is important to bear in mind that scientific public opinion polls are not commonly conducted in China. Only in recent years have online polls become popular as an alternative way for Internet users to express their opinions. Therefore, the scientific method, probability theory, and random sampling are not in the vocabulary of most cybercitizens, even if they are social-structurally and technologically literate with the latest developments in new information technologies. This seems logical, as users may possess the technical expertise and have higher computer competence and Internet efficacy, while at the same time, they may not have the skills to evaluate online polls in terms of scientific integrity, usefulness, and trustworthiness.

Altogether, when considering all factors simultaneously, as indicated in the multiple

regression analysis, those who participate in online polls are usually males, with positive perceptions of online polls being credible, useful, and trustworthy, and with advanced literacy skills in publishing content on the Internet. All other information literacy skills, such as critical, emerging technology, social-structural, and tool skills failed to predict the degree of participation. One possible explanation may be that an online poll is easy to use as an online tool; so, tool literacy and emerging technology literacy would not have a significant impact on participation. This further illustrates that, until a strategy to correct negative perceptions of online polls is found, better education in information literacy is needed, especially in critical and social-structural literacy, including skills in polling methods, so that users can make wise decisions regarding online poll participation.

Although no formal hypothesis was formulated to test the relationship, it is also interesting to find significant but negative bivariate relationships between political efficacy and perceived self-information literacy, especially in critical and social-structural literacy (as shown in Table 3). One possible explanation is that information-literate Internet users may have greater opportunities for exposure to information about different political philosophies, enabling them to evaluate critically whether information is authentic, accurate, and reliable, and to know how information is socially situated and produced from different political backgrounds. As a result, these users may be better cultivated; they may have less confidence in their abilities to influence politics, perhaps believing, to some degree, that the government does not represent them and reflect their needs and concerns. It is also important to point out that only critical and social-structural dimensions of information literacy were significantly linked to political efficacy. This indicates that technological expertise to publish and to navigate the Internet is not an important factor associated with political efficacy; however, being able to think critically and to evaluate the authenticity of information is.

LIMITATIONS AND SUGGESTIONS FOR FUTURE RESEARCH

A convenience sample was surely a limitation for this study, as it would be more generalizable and vigorous if it could have employed a probability sample. Another limitation may be the measurement of information literacy that relied on self-reports, as information literacy is a set of objective standards rather than a subjective assessment. Meanwhile, with different social backgrounds, technology application, and life scenarios, the denotation of information literacy would be different. 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 information literacy accurately according to different socio-cultural backgrounds and application context in future studies. Furthermore, online polls on some important or sensitive public affairs topics are sometimes not encouraged but are restricted by authorities in mainland China. In this situation, all variables discussed in this study would definitely not be able to predict the degree of participation in online polls. The impact of the government's policy was not specifically discussed in this study, but it should not be ignored as an important variable to the degree of online poll participation.

The Internet is changing the political landscape in China, but it is also fragile and being filtered and restricted by the political system. The political ecology in China is different from Western countries, which may have different impacts on online behavior. In real life, the voting behavior between noncompetitive plebiscitary elections and semi-competitive elections is fundamentally various (Shi, 1999), and the different ecology would definitely impact online behavior. Therefore, online civic engagement is complex and dynamically changing in mainland China, and it is necessary to keep on tracking the changing impacts of all predicting variables,

as some of them may become significant while others may not.

REFERENCES

Balch, G. I. (1974). Multiple indicators in survey research: The concept "Sense of Political Efficacy.". *Political Methodology*, *1*, 1–43.

Bucy, E. P. (2003). Media credibility reconsidered: Synergy effects between on-air and online news. *Journalism & Mass Communication Quarterly*, *80*(2), 247–264. doi:10.1177/107769900308000202.

Campbell, A., Gurin, G., & Miller, W. (1954). *The voter decides*. Oxford, UK: Row, Peterson and Company.

Carter, L., & Bélanger, F. (2005). The utilization of e-government services: Citizen trust, innovation and acceptance factors. *Information Systems Journal*, *15*(1), 5–25. doi:10.1111/j.1365-2575.2005.00183.x.

CNNIC. (China Internet Network Information Center). (2011, January). *Statistical report in internet development in China.* Retrieved Febuary 20, 2011, from CNNIC Website: http://www.cnnic.cn/uploadfiles/pdf/2010/8/24/93145.pdf (In Chinese)

Davis, F. D. (1989, September). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *Management Information Systems Quarterly*, *13*(3), 319–340. doi:10.2307/249008.

Hill, K. A., & Hughes, J. E. (1999). *Cyberpolitics: Citizen activism in the age of the internet*. Lanham, MD: Rowman & Littlefield Publishers.

Kenski, K., & Stroud, N. J. (2006). Connections between Internet use and political efficacy, knowledge, and participation. *Journal of Broadcasting & Electronic Media*, *50*(2), 173–192. doi:10.1207/s15506878jobem5002_1.

Lane, R. E. (1959). *Political life: Why and how people get involved in politics*. New York, NY: Free Press. doi:10.2307/1891593.

Leung, L. (2009). Users-generated content on the internet: An examination of gratifications, civic engagement, and psychological empowerment. *New Media & Society*, *11*(8), 1327–1347. doi:10.1177/1461444809341264.

Leung, L., & Lee, P. S. N. (2011). The influences of information literacy, internet addiction, and parenting styles on internet risks. *New Media & Society*, *14*(1), 115–134.

Lloyd, A. (2006). Information literacy landscapes: An emerging picture. *The Journal of Documentation*, *62*(5), 570–583. doi:10.1108/00220410610688723.

Lloyd, A. (2010). *Information literacy landscapes: information literacy in education, workplace and everyday contexts*. Oxford, UK: Chandos Publishing. doi:10.1533/9781780630298.

Mercuri, R. (2002). A better ballot box? *Spectrum (Lexington, Ky.)*, *39*(10), 46–50. doi:10.1109/MSPEC.2002.1038569.

Presidential Committee on Information Literacy: Final report. (1989, January 10). Retrieved March 1, 2011, from, http://www.ala.org/ala/mgrps/divs/acrl/publications/whitepapers/presidential.cfm

Schaupp, L. C., & Carter, L. (2005). E-voting: From apathy to adoption. *Journal of Enterprise Information Management*, *18*(5), 586–601. doi:10.1108/17410390510624025.

Schultz, T. (1999). *Interactive options in online journalism: A content analysis of 100 U.S. newspapers*. Retrieved June 15, 2011, from http://jcmc.indiana.edu/vol5/issue1/schultz.html

Shapiro, J. J., & Hughes, S. K. (1996, March/April). Information technology as a liberal art. *Educom Review*, 31–35.

Shi, T. (1999). Voting and nonvoting in China: Voting behavior in plebiscitary and limited-choice elections. *The Journal of Politics*, *61*(4), 11. doi:10.2307/2647556.

State Council Information Office of the People's Republic of China. (2010, June). *Internet in China.* Retrieved Febuary 20, 2011, from http://www.scio.gov.cn/zxbd/wz/201006/t667385_3.htm

Wang, S. G. (2007). Political use of the Internet, political attitudes and political participation. *Asian Journal of Communication*, *17*(4), 381–395. doi:10.1080/01292980701636993.

Wei, R., & Leung, L. (1998). A cross-societal study on the role of the mass media in political socialization in China and Taiwan. *International Communication Gazette*, *60*(5), 377–393. doi:10.1177/0016549298060005002.

Wu, W., & Weaver, D. (1997). On-line democracy or on-line demagoguery: Public opinion 'polls' on the internet. *The Harvard International Journal of Press/Politics*, *2*(4), 71–86. doi:10.1177/1081180X97002004006.

Zheng, Y. (2007). *Technological empowerment: The Internet, state, and society in China*. Stanford, CA: Stanford University Press.

Zhu, J. H., & Zhou, H. (2002). Perceived characteristics, perceived needs, and perceived popularity adoption and use of the Internet in China. *Communication Research*, *29*(4), 466–495. doi:10.1177/0093650202029004005.