Information Credibility Factors on Information Sharing Activites in Social Media

Afira Putri Ghaisani[1], Qorib Munajat[1], Putu Wuri Handayani[1]
[1] Faculty of Computer Science, Universitas Indonesia
Depok, West Java, Indonesia, 16424

Abstract—**Social media became a popular platform to share information. However, since the information is shared by individual, it is important to identify which information is credible to avoid misinformation. This study aims to identify factors influencing information credibility from information consumer's perspective. There are five types of information studied which are personal, sensational, political, casual, and experience information. The study examined information from five categories of social media which are social networking sites, microblogging sites, wikis, online blogs, and online forums. Data from 255 respondents were analyzed with descriptive statistics. The results showed that link-to-other-sources is the most influential credibility factors for personal, sensational, and political information. Meanwhile, interests-in-the topic became the most important credibility factor for casual and experience information. The least favored factors for all type of information is embedded audio factor. In addition, these studies also found more additional credibility factors that have not been covered by previous study which are embedded photo/picture, source of information, writing aspects, logical, comment, similarity/coherence with other media, and similar experience.**

Keywords— information credibility, information sharing, social media, types of information

I. INTRODUCTION

Social media have become a world-wide phenomenon in information-sharing activities through internet. Lewis [1] defined social media as a platform used to connect people together, provide means to produce and share content with each other, enable users to extract, process and share knowledge from each other. There are many social media with different functionalities and natures. According to [2], social media is divided into five categories based on how users' interact using the social media. The categories are social networking sites (i.e. Facebook, LinkedIn), micro-blogging sites (i.e. Twitter), wikis (i.e. Wikipedia), online forums and blog [2].

In information sharing activities in social media, it is important to be able to distinguish credible information among huge amount of information being shared. One of the negative impact of the use of social media as a place to share information is that it nurtures misinformation. In Cision and Bates study, 85% journalists stated that the information available in social media is less reliable than traditional media due to lack of validation, verification, and reporting standards [3]. The characteristics of social media enable user to absorb information quickly in consequences it lowers the user understanding about the information [4]. Lack of understanding of information content shared on social media can lead to misinformation which may cause harm to society for example by hindering public to obtain critical information.

A study [5] about student behavior in sharing misinformation in social media found that more than half respondents (over 60%) claimed to have shared misinformation. One of the reason of misinformation sharing is related to information perceived characteristics [5]. These evidences show the necessity to understand how information is perceived as credible by users so that information producers can present their information accordingly.

Previous study [2] has discussed the topic of information credibility, which explored the differences in the credibility factor of several types of information. The credibility factor studied by [2] is based on the perspective of information producers. As it is helpful to know what factors affecting the credibility of information from the information producer, it is also important to understand the factors from information consumers' perspective.

The credibility of information from the perspective of information consumers can give more insight in information credibility topic and improve the knowledge of information credibility factors. One of the benefits of knowing information credibility factor is for organizations that can use these factors to present information in certain way to be more trusted.

The previous study [2] categorized information in different types and then studied the credibility factors for each type. This study used the same categorization of information from the previous study (personal, sensational, political, casual) [2] with one additional type of information which is experience type of information. Experience information is information about user's experience in doing certain activities. This type of information is necessary to be studied since many users use social media to share their experience online. For example, social media allows tourists to share their experiences online without the time difference [6][7]. This study explored the credibility factors in five type of information (personal, sensational, political, casual, and experience) that are being shared in five types of social media (social networking sites, micro-blogging sites, wikis, online forums, and log) from information consumer's perspective.

II. LITERATURE STUDY

A. Social Media

Social media is an Internet-based application created with technological foundation of Web 2.0 that allows creation and exchange of user generated content [8]. Social media is often used by society for various needs such as social interaction, information seeking, pass time, entertainment, convenience utility, communication, relaxation, giving opinions, sharing information, and surveillance [9]. With these various function, social media has become a phenomenon on many areas, including business related areas. Areas such as marketing, advertising, and public relations are said to have an impact with the rise of social media [1].

Characteristics of social media support the use of social media as a medium of information exchange in society. Based on research conducted by [9] who conducted a depth interview to 25 respondents, it is found that searching for information is one of the main activities in social media. The innovativeness of social media in information sharing activities make it popular throughout the world. The statistical calculation of We Are Social [10] states that the total active users of social media in the world until January 2017 reached about 2.7 billion users. Social media users are said to have grown by 21% since January 2016 [10]. It shows that the social media is rapidly becoming integral part of human life and thus, is important to be studied.

There are different ways on how to categorize social media. Based on user interaction, social media is classified into five categories. These categories are social networking sites, microblogging sites, wikis, online blogs, and online forums [2]. This study uses this categorization and study the credibility factors of information that are being shared in those five (5) types of social media.

B. Information

[2] classifies information into several types, namely personal, sensational, political, and casual. Personal information usually contains private information and may be sensitive. Examples of personal information are information about the health of social media users or family detail information. Personal information is one of the most frequently shared information in social media because social media is used for personal activities, such as to maintain relationships [1].

Meanwhile, sensational information is information that is instantly discussed by the crowd in a short time. Information with the sensational type usually attracts people, so that someone will share it with others and so on until the information is spread exponentially [11]. The rise of social media makes it easier for users to share sensational information with others. Examples of sensational information are breaking news, gossip of public figure, etc.

As for political information, it is information related to government or political news, for example information about the election of regional heads. Social media enable users to get and share political information in social media and also giving opinions that can be done by pressing 'like', 'dislike' buttons or commenting on information [12].

The next type is casual information. Casual information is often shared with friends, relatives, colleagues, or others which may triggers discussion. Casual information is one of the most relaxed and often shared information in social media because it is the purpose of using social media as a place of interaction with friends and means of entertainment [1]. Examples of casual information are recommendations of a restaurant or tourist attractions.

The type of information added for this research is experience information. Based on [13], one of the definition of experience is "a particular instance of personally encountering or undergoing something". Example of experience information is a person's experience after using a product or eating at a particular restaurant. Experience information need to be studied because it is one of information often shared in social media. The previous research has not been specifically address this information. Table I shows the summary of characteristic for each information type.

TABLE I.   INFORMATION TYPE

Information Type	Characteristic
Personal	Private and sensitive
Sensational	Discussed by many people on short period of time
Political	Related to government or political news
Casual	Casual information, shared to friends, colleagues, relatives, etc. which might trigger discussion
Experience	Personal experience about certain event/activities/things

C. Information Credibility

Credibility in general can be interpreted as a sense of trust someone [14]. McKnight and Kacmar define credibility of information as the extent to a person believes in information provided in website [15]. [15] also stated that the credibility of information greatly influences the public's willingness to do certain things. Based on the above understanding, the credibility of information in social media can be interpreted as a sense of confidence of a person to a source of information available that can affect his willingness to do certain things.

According to [16], there are several criteria that affect the credibility of information available on the web. These criteria are the source, content, format, presentation, contemporary information, accuracy, and web loading speed. Meanwhile, [2] describes the factors that affect the credibility of information shared on social media. The first factor is the existence of a link to another source in the shared information so that the recipient of the information can find additional information from the link. The second factor is interest in the topic, i.e. how user put their attention to the information shared. The last two factors are the existence of video and audio attached in the shared information.

III. RESEARCH METHODOLOGY

This study uses quantitative approach using survey to collect the data. Data obtained was processed using descriptive statistic. Figure 1 shows the process of this study.
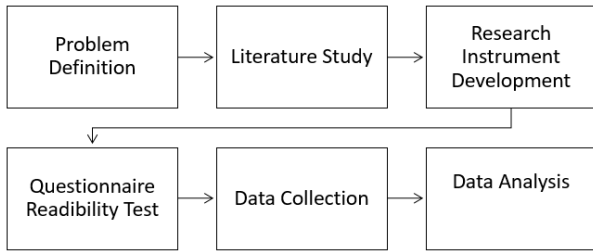

Fig. 1. Research Methodology

This study uses questionnaire for survey. The questionnaire consists of demographic related questions and main questions about credibility factors. Users are asked to choose one or more factors which they perceive influencing them in trusting certain information shared in social media. The questions were present for each type of information. There is also one free answer to explore more factors that might have not been identified by previous studies. This study uses online questionnaire to accommodate larger audience.

The sample used in this study is Indonesian people who have used social media aging 12 years old and above. We used purposive sampling because we aimed to address social media users. Therefore, all the respondents are social media users from age 12.

IV. RESULT AND ANALYSIS

A. Demographic Data

Respondents' data were taken from March 11, 2017 to April 30, 2017 (7 weeks). Data validation is performed to ensure that the data collected is not duplicated and is complete for all data in the questionnaire. Data duplication validation is done by asking respondents to fill in contacts that can be contacted and record the respondent's IP address. The number of data collected and validated is 255 data.

From Table 2, the most dominant group in gender is female, in age is person between 17-25 years old, and in occupation is student. Meanwhile the most used social media is social networking sites and majority of respondent use social media more than 6 times per day.

B. Result

The survey asked the respondents to choose which factors make them believe / trust the information being shared in social media. Respondent may choose more than one factor. The question was presented for each type of information. The result of survey was then calculated in percentage which is the number of respondent selecting the factor divided by the number of total respondent.

The percentage value can be interpreted as the degree of importance of certain factor from consumer perspective. Based on the Table 3, link to other sources is consistently became the important credibility factors for all type of information with more than 50% respondents selecting the factor. In political information, link to other sources have especially have higher value (74.50%). Political information is often based on opinions and comments of people [12]. Therefore, it needs a reliable source to make it clear that the information obtained is correct.

TABLE II. RESPONDENT DEMOGRAPHIC

Demographic Variable		Number	
		Frequency	*Percentage*
Gender	Male	83	32.5%
	Female	172	67.5%
Age	12 - 16 years old	12	4.7%
	17 - 25 years old	195	76.5%
	26 - 35 years old	19	7.5%
	> 35 years old	29	11.4%
Education	Elementary School	0	0.0%
	Junior High School	10	3.9%
	Senior High School	124	48.6%
	Diploma	9	3.5%
	Undergraduate Degree	102	40.0%
	Graduate / Master Degree	10	3.9%
	Doctoral Degree	0	0.0%
Occupation	Student	183	71.8%
	Private Company Employee	47	18.4%
	Civil Servants	1	0.4%
	Entrepreneur	7	2.7%
	Not working	7	2.7%
	Others	10	3.9%
The most frequently used social media	Social networking sites (Facebook, LinkedIn, Snapchat, dll.)	215	84.3%
	Microblogging sites (Twitter)	25	9.8%
	Online blogs (Blogspot, Tumblr)	2	0.8%
	Online forums (Kaskus)	3	1.2%
	Wikis (Wikipedia, WikiHow)	10	3.9%
Frequency of information searching in social media	1 - 3 times per day	61	23.9%
	4 - 6 times per day	71	27.8%
	> 6 times per day	123	48.2%

Interests in the topic became an important credibility factors (49.80% - 68.60%) as well, especially for casual and experience information. Casual and experience information are often based

on opinion or personal perspective. That information is very subjective which has no clear line between correct or incorrect information. Therefore, the credibility perception of information may be strongly influenced with reader's interests. Further study need to be conducted to explore more about the relationship between factors and user motivation.

TABLE III. PERCENTAGE OF RESPONDENT CHOOSING CREDBILITY FACTORS

Type of Information	Information Credibility Factors			
	Link to other sources	Interests in the topic	Embedded video	Embedded audio
Personal	59.20%	52.20%	38.00%	8.60%
Sensational	66.70%	51.40%	47.50%	12.20%
Political	74.50%	49.80%	42.40%	14.10%
Casual	55.70%	68.60%	53.70%	16.50%
Experience	56.10%	68.20%	55.70%	16.10%

For embedded video factor, it is also considered as one of the important credibility factors. Among all the type of information, embedded video factor is less important in personal information. Personal information contains private information which does not necessarily presented in video. For example, name, contact and birthday information presented in text is enough to make people trust the information. It might be reason why fewer respondents think that video factor is related to information credibility for personal information.

Generally, those three factors are considered influential in determining information credibility. However, it is not the case for embedded audio factor with no more than 20% respondents selected the factor. Embedded audio is perceived as not as important other factors in determining information credibility. Audio has several limitations, for example audio has a high chance of having noise which could result bias in receiving information. Audio while it is also not an easy validation method [17]. Therefore, respondents tend to not choose embedded audio as information credibility factor.

The questionnaire provided open ended question which respondents may add more factor they perceive affecting information credibility. The result from open ended question was then codified and categorized. It is found that there are seven additional credibility factors which have not been covered in previous study. The factors are:

- Embedded photo/picture: photo/picture can be used as evidence which would improve the credibility of a certain information.

- Source of information: trusted source of information (e.g. news account) indicates the information provided is validated, thus improve the information credibility.

- The writing aspect; language and grammar used: language and grammar used in an information showed the professionalism of information producers, thus the better linguistics will make information more credible.

- Logical: a logical explanation will make the information perceived more trusted which would improve the information credibility.

- Comment: comments showed enthusiasm of other people as well as peer agreement in a certain information which can help improve information credibility.

- Similarity/coherence with other media: information covered by many media indicates that it has been validated by many parties and has a very high chance of being credible.

- Similar experience: people who had similar experience with information producers will trust the information more as they had been there before.

Those findings enrich the previous studies related to the information credibility factors.

V. CONCLUSION

This study reported a descriptive analysis of information credibility factors on sharing information in social media. The credibility factors are studied from the perspective of information consumers throughout five different information types, personal, sensational, political, casual, and experience. The result showed that there are similar and different credibility factors across all types of information. For personal, sensational, and political information, link to other source factor have the most respondents selected the factor among other factors. Meanwhile, for sensational and experience information, interests of the topic factor are the selected the most. The result also found more credibility factors, which are embedded photo/picture, source of information, writing aspects, logical, comment, similarity/coherence with other media, and similar experience. However, further research is required to find the correlation between each factor with each information type and explore more about user motivation related to the factors. Further studies can also explore the degree of importance for each factor and type of information.

REFERENCES

[1] B.K. Lewis, "Social Media and Strategic Communication: Attitudes and Perceptions Among College Students", *Public Relations Journal*, vol. 4, no. 3, 2010.

[2] B. Osatuyi, "Information sharing on social media sites", *Computers in Human Behavior*, vol. 29, no. 6, pp. 2622-2631, 2013.

[3] Cision and D. Bates, "Social Media & Online Usage Study", Cision (http://www.cision.com) and The George Washington University's Strategic Public Relations Program, Dec. 2009.

[4] T. Jiang, Y. Hou and Q. Wang, "Does micro-blogging make us "shallow"? Sharing information online interferes with information comprehension", *Computers in Human Behavior*, vol. 59, pp. 210-214, 2016.

[5] X. Chen, S.J. Sin, Y. Theng and C.S. Lee, "Why Students Share Misinformation on Social Media: Motivation, Gender, and Study-level

Differences", *The Journal of Academic Librarianship*, vol. 41, no. 5, pp. 583-592, 2015.

[6] J. Berger and E. Schwartz, "What Drives Immediate and Ongoing Word of Mouth?", *Journal of Marketing Research*, vol. 48, no. 5, pp. 869-880, 2011.

[7] A.M. Munar and J.K.S. Jacobsen, "Motivations for sharing tourism experiences through social media", *Tourism Management*, vol. 43, pp. 46-54, 2014.

[8] A.M. Kaplan and M. Haenlein, "Users of the world, unite! The challenges and opportunities of Social Media", *Business Horizons*, vol. 53, no. 1, pp. 59-68, 2010.

[9] A. Whiting and D. Williams, "Why people use social media: a uses and gratifications approach", *Qualitative Market Research: An International Journal*, vol. 16, no. 4, pp. 362-369, 2013.

[10] S. Kemp. (2017). "Digital in Southeast Asia in 2017 - We Are Social", *We Are Social* [Online]. Available: http://wearesocial.com/uk/blog/2017/02/digital-southeast-asia-2017.

[11] A. Vista, "Mass media, the 'sensational message', and metamorphic truths", *Telematics and Informatics*, vol. 32, no. 2, pp. 416-423, 2015.

[12] D. Pierce, D.P. Redlawsk and W.W. Cohen, "Social Influences on Online Political Information Search and Evaluation", *Political Behavior*, 2016.

[13] Dictionary.com. (2017). "The Definition of Experience", *Dictionary.com* [Online]. Available: http://www.dictionary.com/browse/experience.

[14] C. Castillo, M. Mendoza and B. Poblete, "Information credibility on twitter", *Proceedings of the 20th international conference on World wide web - WWW '11*, 2011.

[15] D.H. McKnight and C.J. Kacmar, "Factors and effects of information credibility", *Proceedings of the ninth international conference on Electronic commerce - ICEC '07*, 2007.

[16] C.N. Wathen and J. Burkell, "Believe it or not: Factors influencing credibility on the Web", *Journal of the American Society for Information Science and Technology*, vol. 53, no. 2, pp. 134-144, 2002.

[17] S. Ikram and H. Malik, "Digital audio forensics using background noise", *2010 IEEE International Conference on Multimedia and Expo*, 2010.