Study on the Usage and Perception of University Students on the Credibility of Information from Wikipedia

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Abstract: This study investigates the usage of and perceptions of university students on the quality of information found in Wikipedia. Although several studies reported that the accuracy of Wikipedia information corresponds to that of Encyclopedia Britannica (Giles, 2005), the citations for academic works in Wikipedia remain contentious (Rand, 2010). Furthermore, the manner by which students use Wikipedia is unclear. Lim (2009) analyzed the Wikipedia usage of university students from the perspective of the social cognitive theory, and found that students use Wikipedia with a vague idea on information quality. Lim and Kwon (2010) examined the Wikipedia usage of university students in the US, as well as their perceptions on the credibility of Wikipedia information. The study deduced several gender differences. The present study examined the Wikipedia usage of university students in Japan and their perceptions on the quality of Wikipedia information. The research replicated the questionnaire validated previously by Lim et al. ICT usage and demographic questionnaire items were added for correlational analysis. The questionnaire was administered online and in print to 205 undergraduate students from a science university. The data were analyzed in terms of gender and focus of the study (media versus non-media major). The study indicated gender difference in terms of self-efficacy when judging information, as well as a positive correlation between perceptions of information quality and previous experiences of using Wikipedia.

Keywords: *Wikipedia, Information Credibility, Self-efficacy, ICT Use, Gender Difference*

BACKGROUND

This paper presents a preliminary research on the usage of Wikipedia by university students and their perceptions on its quality. Lim (2009) analyzed the Wikipedia usage of university students by using the social cognitive theory perspective, and found that students use Wikipedia with a vague perception of its information quality. Lim and Kwon (2010) examined the usage of and perceptions on the credibility of Wikipedia information by students in the US, from which they observed gender differences. Based on these studies, the present study investigated the student usage and perceptions of Wikipedia and its information credibility, as well as examined other factors such as the students' ICT usage, field of study, and gender.

METHODOLOGY

Research questions

This paper aims to identify how Japanese university students use the Internet and Wikipedia, how they perceive the credibility of Wikipedia information, and whether their perception correlates to their usage.

Methods

The questionnaire comprised three parts: 1) general questions on Internet usage (e.g., frequency and purpose); 2) specific questions concerning Wikipedia credibility and their usage; as well as 3) demographic questions (e.g., gender and field of study). The Wikipedia credibility items were adapted from Lim and Kwon (2010) and translated into Japanese. Respondents were requested to rate their level of agreement to the statements using a seven-point scale, ranging from one (strongly disagree) to seven (strongly agree). Prior to the main data collection, the survey was tested on three volunteers to identify any defects and ambiguity in the organization and translation.

The survey was completed by the end of the second semester of 2012. The survey was implemented in print and online to obtain the highest possible response rate. The paper survey sheets were distributed to the students and collected by the researchers after verbally explaining the research objective in class, with the cooperation of the instructor. The online survey (developed on https://jp.surveymonkey.com/) web links were relayed by participating instructors to the students for survey completion.

For statistic handling, the SPSS software was used. Conceptual variable items were analyzed by obtaining the mean scores for each variable group, and the items were then analyzed according to the gender and major of the student. The Mann-Whitney test was performed to determine whether the differences were statistically significant.

RESULTS

Respondent profile

A total of 205 responses were collected, from which 197 were considered valid (with no missing items). The majority of respondents aged from 18 to 23 years old. Male to female distribution was 171:26 or 87%:13%. In the participating school, the average male to female student ratio was approximately 88%:12%. Thus, the gender distribution in this study was considered representative of the general profile of the school. The ratio of media and information students (who are assumed to be well-acquainted with online information sources) to non-media and information students was almost equal at 100:97.

Internet and Wikipedia usage

The majority of the students used the Internet for two to five hours per day. On average, the highest in number were of students who have been using the Internet for 8 to 12 years (45%). Students used the Internet for studying (96%), communicating (59%), gaming and shopping (54%), as well as other purposes (17%). The majority of the students classified watching videos on YouTube under the "others" category. Hence, the respondents have used the Internet for a long time for purposes other than studying before they entered the university.

Students accessed Wikipedia by accident (51.3%) and by selecting a search engine result (31.0%). Therefore, their usage of Wikipedia was not intentional. In addition, the majority of the students indicated that they have been using Wikipedia for four years (60.4%), and from two to four years (26.9%). Students use Wikipedia a few times per week (41.1%), followed by once per week (28.4%), and a few times per month (22.8%). A moderately positive correlation existed between age and Wikipedia usage/frequency, although the results were statistically insignificant. These results indicated that Wikipedia is part of the daily lives of the students, and that familiarity with using Wikipedia was significantly high.

Self-efficacy toward using information on Wikipedia

Overall, the students showed a reasonably high confidence in the credibility of Wikipedia content (m = 4.88), and their previous experience in using Wikipedia was considered accurate (m = 5.10). The students expressed belief in the moderate risk that Wikipedia information may be incorrect (m = 4.33). By contrast, the students expressed less confidence in their ability to judge the veracity of Wikipedia content (m = 3.29) compared with other items.

Difference between genders

Minimal difference was observed between the Internet usage of male and female students, except for the item on frequency of Wikipedia usage, in which male students showed a higher agreement level (4.24, or two to three times a week) than female students (3.73, or two to three times over a few weeks). However, the differences in the mean scores between the male/female groups were not statistically significant. Therefore, as far as this paper is concerned, no gender difference was observed in the perceptions on using Wikipedia.

Differences in study major areas

Based on major, the two groups of respondents showed statistically different responses for Internet and Wikipedia usage, except for Wikipedia usage frequency. Overall, media students use the Internet and Wikipedia more than non-media students. On a daily basis, media majors used the Internet and Wikipedia longer (68% of these students have been using Wikipedia for over four years), and had a longer experience of using the Internet than non-media major students. However, 40% of both groups used Wikipedia two to three times a week. Additionally, two items on the perceptions on Wikipedia credibility show statistical significance: unlike non-media students, media students perceive that Wikipedia has a high quality content than other items. However, media students showed lower confidence in their ability to judge the veracity of the content. Nevertheless, both groups indicated similar levels of risk image and previous experience of Wikipedia credibility.

Relationship between Internet usage and Wikipedia credibility

This paper used Spearman's rho correlational analysis, which resulted in a curious finding. Among the items, a low level of positive correlation was observed between usage per day and Internet usage experience in years, which is understandable. Similarly, a moderately *negative* correlation existed between these two items and the usage experience of Wikipedia; that is, for those who have been using the Internet for years, Wikipedia became a part of their lives relatively recently. This negative relation is more evident with female students (r = -0.506, p < 0.05) and with media students (r = -0.289, p < 0.05). Moreover, a moderately positive correlation was observed between the credibility and the idea of non-risk of Wikipedia information (r = 0.304, p < 0.05). Hence, students who believe that Wikipedia information could be incorrect tend *not* to use Wikipedia, and vice versa.

DISCUSSION

This study discussed how science university students in Japan use the Internet and Wikipedia. Using this dataset, no remarkable gender differences were observed in terms of Internet and Wikipedia usage, or the perceptions on Wikipedia content credibility and student ability to judge the content. The major of the students appears to be a determinant factor: media major students who use the Internet for their studies seem to have higher confidence on the credibility of the available content in Wikipedia, although they expressed a higher uncertainty in ascertaining its veracity. Further research is necessary to understand how the credibility of online information is evaluated.

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