

Mobile Phone–Related Behaviors and Problems in Japan

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INTRODUCTION

Today, we are very familiar with smartphones and other mobile devices. Information Communication Technology (ICT) has widely spread. At the end of 2012, it was reported that the number of Internet users in Japan was 96.52 million (Ministry of Internal Affairs and Communications, 2013a). This trend also affects children, and 75.9% of students in 4th-6th grades of elementary school (9-12 years old) use personal computers (Ministry of Internal Affairs and Communications, 2013b). In recent years, young people remarkably use smartphones, and 84.5% of high school students have smartphones (Ministry of Internal Affairs and Communications, 2014). Smartphones and other mobile devices are already “common” things for us and our children.

The spread of ICT largely supports Japan but causes many problems. Firstly, when the Great East Japan Earthquake occurred on March 11, 2011, mobile phones and smartphones were used to exchange information necessary to life and confirming acquaintances’ safety, but it caused some psychological problems. Secondly, such devices make friendships among children closer as they are able to contact each other at any time, but increases serious “Internet addiction” and “cyberbullying” problems. This article describes how mobile devices are used in Japan and the

problems caused by them while focusing on the above issues. Then, we will discuss how to address these technologies in the future.

Sharing Negative Emotions on Twitter during the Earthquake Disaster of 3.11

At 14:46:18 on March 11, 2011, a large magnitude 9 earthquake hit Japan. The source zone of the earthquake was wide, at about 500 kilometers from north to south, and about 200 kilometers from east to west, from the sea near Iwate Prefecture to the sea near Ibaraki Prefecture. This earthquake caused a large tsunami and wrought devastating damage, mainly to the coastal areas of the Tohoku Region. In addition, wide areas were damaged from the coast of south Hokkaido to south Kanto (including Tokyo Bay) and through Tohoku by not only the Tsunami, but also the earthquake, liquefaction phenomenon, land subsidence, and dam failure. This event included not only natural disasters but also various man-made disasters; in particular, it caused the accident at the nuclear power plant. The Fukushima Daiichi Nuclear Power Plant of the Tokyo Electric Power Company, Incorporated (TEPCO) lost all power, rendering its reactor cooling impossible and resulting in a serious nuclear accident involving the leakage of a large quantity of radioactive materials. Other damage, such as

that to thermal power plants, also caused a serious power shortage in the Kanto Region under the jurisdiction of TEPCO. Therefore, not only the central disaster area, but also the surrounding areas, experienced a serious failure in Lifeline, which is essential to life and transportation during disasters. People were in chaos without any of the information necessary to conduct their lives in the subsequent days.

However, even when facing such a devastating situation, people actively collected and exchanged information via social media, such as Twitter (<https://twitter.com/>), just after the earthquake disaster. In fact, the number of tweets was approximately 33 million on the day of the event. This was 1.8 times higher than on a normal day, and 70–80% of tweets were about the earthquake disaster during the week following March 11 (NEC BIGLOBE, 2011). Furthermore, the local government of the central disaster area also provided information via social media, like Twitter (Ministry of Internal Affairs and Communications, 2011). Social media was also used for sharing and exchanging local information that was not reported on TV, such as updates about water stations. According to a survey performed in April 2011, the information acquired via social media included not only overall earthquake disaster news (the earthquake scale, aftershocks, and the accident at the Fukushima Daiichi Nuclear Power Plant) but also very local information (the safety of family, friends, and acquaintances, and the situation of Lifeline in the neighborhood) (Shigyou, 2011a). According to an online group interview performed by Shigyou (2011b), some people said, “Previously, Twitter was not very important to me, but I found Twitter is a very useful tool for searching for local information, such as water stations and available public baths, because it provides information earlier than any other media.” In addition, it is impressive that messages of encouragement to each other were also sent on Twitter. According to the result of an online group interview, Shigyou (2011a) reported that many messages and tweets with the hashtag “#prayforjapan” were exchanged

at the time of the earthquake disaster, and many users felt they were linked to the world when reading them. This suggests that people used tweets to express that this was a time when all of Japan should be united to overcome this situation together as they tried to face their difficulties during the unprecedented situation.

Furthermore, Miura, Komori, & Matsumura (2013) evaluated people’s emotional reactions to the unprecedented earthquake disaster by analyzing more than 175.79 million tweets posted from March 11 to March 18. The result showed that most of the tweets included negative and emotional words. Particularly, the word “anger” was mainly found after the September 11 attacks (Back, Küfner, & Egloff, 2010), but this time, “anxiety” about natural disasters and man-made disasters was more numerous than “anger.” The prominence of anxiety about natural disasters changed by a certain time and peaked at midnights. On the other hand, among the posts referencing anger, those addressing man-made disasters corresponded to the time that the nuclear power plant accident was reported and its rate of use changed in correspondence with events. This result also indicates that at night the people affected by the earthquake disaster would share and try to overcome their anxiety and various other emotions (such as anger) caused by the reports they received through Twitter.

However, how did the sharing of negative emotions via Twitter affect people later? One of the studies on this aspect was performed by Fujii & Yoshida (2014a). They performed a survey of Tsukuba University students who were affected by the earthquake disaster three months after the event by written questionnaires. The first question asked what kind of information they shared via Twitter during the earthquake disaster. The surveyors also evaluated how the students felt when accessing the information available on Twitter during the earthquake disaster, their mental health three months after the disaster, and their anxiety and avoidance reactions to the earthquake itself.

As a result, it was revealed that people shared not only general information about the earthquake

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