DEVELOPING METHOD OF TEACHING
'INFORMATION LITERACY IN TIMES OF DISASTER'
IN JAPANESE LANGUAGE TEACHING

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ABSTRACT

This paper discusses the need for education in 'Information Literacy in Times of Disaster' in Japanese language education for non-native speakers of Japanese who are staying in Japan. 'Information Literacy in Times of Disaster' refers to the ability to obtain necessary information and transmit it as appropriate in the circumstances when a major natural disaster occurs, such as an earthquake. After the April 2016 Kumamoto earthquake, the author investigated the behavior of international students when the earthquake occurred, the criteria for their decisions, their means of collecting information and other matters. The results revealed the issue that international students' behavior frequently relied on others' words and they could not make decisionsindependently. The factors causing these issues include: (1) lack of knowledge and understanding of Japanese language and Japanese society; (2) psychological distance from information in Japanese; and (3) capacity to analyze information. This report proposes the development of methods of teaching 'Information Literacy in Times of Disaster' to resolve these issues and discusses how the development of these teaching methods will contribute to furthering information literacy education in Japanese languageeducation.

Keywords: Information literacy, Times of disaster, Japanese language education

INTRODUCTION

Since the 2011 Tōhoku earthquake and tsunami, much study has been carried out and various problems raised on the subject of the state of Japanese language for supporting foreigners in times of disaster. The university that the author is affiliated with currently hosts over 3,000 international students, but when the Kumamoto earthquake struck in April 2016, this university, which is located in a neighboring prefecture, experienced tremors of *shindo* 6-lower on the Japan Meteorological Agency seismic intensity scale.

This paper raises the need for education in 'Information Literacy in Times of Disaster' as something Japanese language education can do to respond to disasters like this, based on the results of a survey of international students' behavior at the time of the earthquake, and discusses what should be taken into account to develop an information literacy teaching method, as revealed by an analysis of the survey.

DEFINITION OF 'INFORMATION LITERACY IN TIMES OF DISASTER'

The American Library Association defines information literacy as the ability to "recognize when information is needed and have the ability to locate, evaluate, and use effectively the needed information." Further, the *Nihon dai hyakka zensho* [Japanese great encyclopedia] (Shogakukan) defines it as "deriv[ing] from literacy, which refers to the ability to read and write, and having the two meanings: 'the ability to use information technology' and 'the ability to decode and utilize information'." "The ability to use information technology" is also known as computer literacy, being the ability to use computers and other information devices, software, computer networks and other information technology. Further, "the ability to decode and utilize information" is called media literacy, being "the ability to decode television and other media in its social context and use them autonomously" (Suzuki (ed.)1997:2).

In this study, the author defines 'Information Literacy in Times of Disaster' as the ability to (1) use all information sources functioning in the circumstances to obtain information, (2) check the reliability of the information and sift through it, and then take necessary action based on the information, and (3) transmit information to and share it with people who require it, in the unusual context of a disaster.

To date, information literacy teaching in Japanese language education has either been provided as information technology education, such as computer literacy, or treated as media literacy for critically decoding information that has been obtained, and these abilities are rarely integrated to treat them as a unified form of information literacy. This is because information literacy requires a broad range of abilities, making it difficult to cover all of them and necessitating a focus on a particular area. By limiting this to information literacy necessary in times of disaster, this study possesses the originality of studying methods of teaching information literacy comprehensively from information acquisition to transmission. In addition, if these teaching methods are established, the possibilities for information literacy education could be expanded by substituting the context of "in times of disaster" with other circumstances. This is not merely a countermeasure against disasters, but an ability that is also required in thinking about Japanese language education that links to society. In this respect, the author believes that 'Information Literacy in Times of Disaster' education could be established as a subfield of Japanese language education.

RESEARCH METHOD

In this study, the author firstly conducted a survey to gain accurate data from several aspects about the circumstances concerning the earthquake. This paper analyzes the results of the survey and summarizes issues in the development of 'Information Literacy in Times of Disaster' education.

The survey was carried out by questionnaires and interviews. The questionnaires were administered online to all students, including international students, and responses were sought on the university's internal website. The questions asked about such topics as circumstances when the earthquake occurred, means of getting information on the earthquake, and behavior and feelings after the earthquake.

The interviews were carried out in a semi-structured form with students, local residents, university staff, administrative officials, and others. For students, the author conducted a

preliminary survey and classified the students by their behavior at the time of the earthquake, interviewing only those students who exhibited distinctive behavior. The topics included interviewees' behavior when the earthquake occurred and the reasons for that decision, how they obtained information, and their mental state after the earthquake.

For local residents, we asked those who evacuated to evacuation sites and those who ordinarily have contact with international students (such as people working at the same part-time jobs as international students and landlords of the apartments they rent) about (1) the circumstances and appearance of international students as the residents saw them at the time of or after the earthquake, and the residents' impressions of the students, and (2) requests for universities, international students, and Japanese language education, among other matters. For university staff members and administrative officials, we asked those responsible for disaster response questions focusing on the type of response used in practice and the issues they faced.

RESULTS AND DISCUSSION
Questionnaire survey results

The author received responses to the above questionnaire from 1,009 students (396 local students and 613 international students, representing 17% of all students). From the questionnaire results, 45.5% of local students and 47.6% of international students evacuated to designated evacuation shelters immediately after the earthquake, which shows only a small difference between the two groups, and about half of each group took action to evacuate. However, differences in behavior were observed in the first week after the earthquake (the period when university classes were canceled). The proportion of local students leaving the city during this period was 53.5%, while 46.5% remained in the city. By contrast, the proportion of international students leaving the city was 34.9%, while 65.1% remained, showing that a higher proportion of international students remained in the city.

The most common reasons for international students to remain in the city were: (1) because they thought it was safe even if an earthquake occurred (31.8%); (2) because they did not think the earthquake was that serious (27.2%); and (3) because it was difficult to travel for economic reasons (20.4%). Looking at the comments, some respondents wrote "Japanese people behave calmly even when earthquakes occur" and "I believe Japan is a country that can respond capably to natural disasters," suggesting trust in Japan, which links to the response in (1) above. Further, other comments stated that "life returned to normal the next day, so I did not have any trouble in particular" and "the earthquake that had frightened me so much appeared to be a normal occurrence to the Japanese", for example, which suggest a relation to the response in (2) above.

Next, in the questions regarding methods of obtaining information about the earthquake, 91.1% of local students and 81.8% of international students actively sought information, indicating that a large proportion of both groups collected information. However, the tools used for obtaining information differed: local students received information from a variety of tools, including other people, television, the Internet and SNSs. Conversely, international students had limited information tools, and a greater proportion obtained information from the Internet and SNSs. They also displayed a stronger tendency than local students to rely on information from the university, such as by looking at the university website.

This reveals that international students' information collecting capacity is limited and they

display tendencies to rely on the words and actions of Japanese people around them to supplement that.

Interview survey results

Interviews were conducted with 52 international students, 14 local residents, and 9 university staff members and administrative officials.

Firstly, the results of the survey of international students demonstrated the tendency to seek accurate information in English despite feeling that information in Japanese is more accurate, due to a lack of confidence in their ability to collect information in Japanese. Further, possibly due to this uncertainty about their own information collecting ability, many international students wrote that they actively engaged in communication with Japanese people to obtain information, and we received comments that "I had Japanese friends interpret and translate information in Japanese (advanced level)," "the earthquake happened while I was at my part-time job, but there were Japanese people near me, which was good, and I felt calmer (intermediate-advanced level)," "I was with Japanese people from the same club, and they interpreted for me. Had there been no Japanese people, I would not have understood the announcements at the evacuation site (advanced level)," and "I obtained information from Japanese people because you can find out information from Japan straight away (intermediate-advanced level)."

In addition, there were also comments expressing the need for interaction with Japanese people in normal times as well, such as "information from friends and the government is frequently wrong, so I want reliable information from Japanese people (advanced level)," and "I receive information about Kumamoto, but it is difficult to obtain information more closely related to me. I think Japanese people have information, so we should keep in contact with Japanese people in the neighborhood more (intermediate-advanced level)."

The questionnaire results showed a trend where international students' information tools were limited and they relied on the Internet, such as SNSs and web news. Some respondents evaluated these information tools positively, stating that "I used Facebook and Line to exchange information about what to do and where to go with friends (advanced level)," "I browsed Facebook to get up-to-date information (intermediate level)," and "students put something up on Facebook as soon as something happens, so you can find out about it quickly (intermediate-advanced level)," but others commented that "I looked at Facebook but it made me worried (intermediate-advanced level)" and "there is an excess of information on SNSs and it is difficult to tell whether it is accurate (intermediate-advanced level)."

As shown above, the interviews also confirmed that international students feel that information in Japanese is more reliable than information in English or their own native languages, but they lack confidence in their ability to collect information in Japanese and thus tend towards a passive mindset of relying on information transmitted by others, such as Japanese people and SNSs. Although there were cases where decisions relying on others like this were effective, in many cases this was not so. A typical example is the case where people are swayed by false information, such as "you had better go to [a given place] immediately because a tsunami is coming," but besides this, a problem also occurred where many international students congregated at a certain evacuation site because of information claiming that "the evacuation site at [a given place] is more comfortable," with the result that evacuation site reached its admissible number of

people and could not admit elderly people living in the area. The survey revealed that transmissions of information like this cause situations where unnecessary friction between local residents and international students or prejudice amongst residents against "foreigners" inevitably arises. Moreover, the author also found that many of the international students who evacuated outside of Beppu after the earthquake were moving on the basis of information from family and friends in other prefectures or countries.

On the other hand, in interviews with officials responsible for disaster prevention in the city hall and other agencies, we heard of expectations that learners who stay in Japan long-term would transmit accurate information to foreign tourists and other temporary residents. These expectations are predicted to increase as the Tokyo Olympics in 2020 draw nearer.

To prevent issues like these that can occur in times of disaster and to play a role in supporting temporary residents who are not native speakers, it is extremely important to acquire a suite of information literacy tools, to obtain information, sift through it, independently make decisions based on it, and transmit information.

Discussion

The results of the surveys above revealed the following problems in information collection by international students:

(1)   Lack of knowledge and understanding of Japanese language and Japanese society

We learned that the degree of specialty and difficulty in understanding terms used in times of disaster was a point of difficulty at the stage of obtaining information in times of disaster. The degree of specialty of terms does not simply mean that they are words that are not used daily. For example, when international students were asked what they understood by the word "evacuation site", one responded that they thought it was "a wide area with nothing around it where people should go to ensure their physical safety." This student said that because the evacuation site was an elementary school gymnasium, they could not enter the building for fear that it would collapse in an earthquake. In this case, it is necessary to understand the functions of an "evacuation center" in Japan, rather than simply understanding the word "evacuation center" by substituting it for the word in one's own language.

Thus, the nature of the information international students have in advance is important in acquiring information accurately.

(2)   Psychological distance from information in Japanese

While international students trust information in Japanese, they lack confidence in their ability to collect information in Japanese and tend to rely on secondary information, such as Japanese people and SNSs. As a result, they are affected by others around them when they act. A tendency is observed when evacuating, where international students move for the reason that they were told to by family, friends, or senior students or colleagues, rather than on their own decision, and few students act on their own initiative. Information literacy is not just obtaining information, it is the ability to autonomously decode information, and lessening these kinds of concerns about the ability to collect information in Japanese and removing the psychological distance from information in Japanese is essential for acquiring informationliteracy.

(3)   Capacity to analyze information

In the interviews, we heard comments that "I felt secure because Japanese people were calm,"

but others were also impressed, saying "the fact that the buses run and the newspapers get delivered in circumstances like this is due to the way Japanese people think of others before themselves." In this way, perceptions from seeing the same situation will differ depending on the person receiving the information. To accurately decode information that one receives, it is necessary to foster the ability to consider and analyze it from multipleangles.

CONCLUSION

Surveys of the behavior of international students in Beppu when the Kumamoto earthquake occurred have revealed the need for development of information literacy teaching in Japanese language education. Information literacy is the ability to obtain information, check its reliability, render necessary decisions based upon it, and transmit accurate information. Acquiring this information literacy requires the ability to analyze information from multiple angles. Analyzing information from multiple angles requires knowledge about the information. To this end, imposing the restriction "in times of disaster" and narrowing the scope of the necessary assumed knowledge is effective. The author believes that if methods of teaching information literacy in times of disaster can be developed, they could form a model for information literacy education and be applied to methods of teaching information literacy in other contexts.

The author intends to collect vocabulary used in times of disaster, carefully examine knowledge that should be retained in advance, and construct a method of teaching the ability to analyze information based on knowledge.

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