

Seismological learning through 'Newspaper In Education' in tertiary level education

Hiroo Nemoto[1], Chiharu Okuda[2], Tomoko Ejiri[2], Keiko Noda[2], Ryo Yamanaka[2], Hiroshi Nishino[1], Shigenobu Yamada[1], Tetsuya Fukuzumi[1], Makoto Nakamukae[1]

[1] Geosciences, Osaka City Univ., [2] Geosciences Sci., Osaka City Univ

<http://geolo.sci.osaka-cu.ac.jp/>

Teachers usually use newspaper articles in order to teach sciences in their class at primary and secondary schools in Japan as well as in other countries. Consequently, various reports in teaching through NIE (Newspaper In Education) have been published for educational level of primary and secondary schools. On the other hand, any kind of reports in teaching through NIE for tertiary schools' students in the fields of natural sciences has rarely ever published. Therefore, in Osaka City University, learning seismology through NIE in a student-initiated seminar for beginners has been carried out.

Members of this seminar consisted of four freshmen, who had not studied geosciences at upper secondary schools, two 4th grade students, two teaching assistants, and one academic staff. The aims of this seminar were:

(1) Understanding the scientific definitions of specific technical terms in the field of seismology which appear in the newspapers such as seismic intensity, magnitude, active faults, hypocenter, epicenter, and so forth.

(2) Master the KJ method through newspaper articles.

(3) Investigating the decreasing frequency of newspaper articles related to earthquake disaster with time after the occurrence of a large earthquake.

In the seminar, we used the newspaper articles related to eight earthquakes from 1986 to 2002 using a database of the Yomiuri Shimbun (Japanese newspaper). These eight earthquakes are the 1987 Hyuga-nada (MJMA=6.6), the 1987 Chiba-ken Toho-oki (MJMA=6.7), the 1993 Kushiro-oki (MJMA=7.8), the 1993 Hokkaido Nansei-oki (MJMA=7.8), the 1994 Hokkaido Toho-oki (MJMA=8.2), the 1994 Sanriku Haruka-oki (MJMA=7.6), the 2000 Tottori-ken Seibu (MJMA=7.3), and the 2001 Geiyo (MJMA=6.7) earthquakes. The newspaper articles related to the 1995 Hyogo-ken Nanbu earthquake (Kobe earthquake) were also used partially. This is because there are around 30,000 articles related to the 1995 Hyogo-ken Nanbu earthquake and it was impossible to go through all those articles in the seminar.

From this seminar, we came to the conclusion that every person need to understand the definitions of words related to geoscience in upper secondary schools in order to understand correct meanings of newspaper articles in earthquakes. This means, geoscience subject is important during the upper secondary schooling. The newspaper articles related to the earthquake disasters were classified into 7 groups, which are politics, earthquake mitigation planning, civil suits, volunteering support, restoration, research, and damage using the KJ method. Finally, it made clear that the number of articles per day related to the earthquake disaster except for the 1995 Hyogo-ken Nanbu earthquake have almost disappeared after about 75 days of the occurrence of an earthquake. This shows that it is important to have continuous learning about the natural disasters even after completing the school education.