

Comparison between the earthquake education conditions at secondary schools of Japan and New Zealand

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1. Introduction

New Zealand is located near the subduction zone between the Pacific and the Indo-Australian plates. Therefore, disastrous earthquakes occur occasionally in and around New Zealand. For that reason, the New Zealand government regards earthquake education as important subject for not only the primary and secondary school students but also ordinary citizens. Accordingly, the condition of earthquake education at schools and enlightening activity in New Zealand are worth considering in order to improve the Japanese national curriculum standards and enlightenment for earthquake education. On the other hand, according to the New Zealand school curriculum, the Ministry of Education has not adopted 'Earth Science', 'Geoscience' or a similar subject at secondary schools from year 9 to 13. However, seismology and other earthquake-related fields such as natural disasters are included in the subject of 'Geography' for secondary school students. In this study, the weight of earthquake-related subjects in 'Chigaku (Geoscience)', which is the subject at upper secondary schools in Japan, and 'Geography', which is the subject for from year 9 to 13 at secondary schools in New Zealand is investigated by studying the technical terms related to earthquakes on the textbooks.

2. Data

Three textbooks were used to study the technical terms related to earthquakes that appear on these textbooks. The first book is one of the textbooks of 'Chigaku' for upper secondary school students entitled 'Chigaku (Geoscience) 1B' which was made under the former Japanese national curriculum and had been used from 1993 to 2003 school years. The second book is a textbook of 'Chigaku' for upper secondary school students entitled 'Chigaku (Geoscience) 1' which is made under the new Japanese national curriculum and is used from April, 2004 school year. The third book is a textbook of 'Geography' for some of New Zealand's secondary school students of year 11 that is entitled 'Natural Hazards' and has been used since 1993.

3. Results and Discussion

The number of pages discussing earthquake-related units are 76, 55, and 17 on the 'Chigaku 1B', the 'Chigaku 1', and the 'Natural Hazards', respectively. It is worth to mention here that the page sizes of these textbooks are different. The first and the second book 'Chigaku 1B' and 'Chigaku 1' have the same size, B5, but the size of the third book, 'Natural Hazards', is A4. The number of the technical terms related to earthquakes are 126, 144, and 68 on the 'Chigaku 1B', the 'Chigaku 1', and the 'Natural Hazards', respectively. It is interesting that, although the number of pages discussing earthquake-related units on the 'Chigaku 1' is less than that of the 'Chigaku 1B', the number of the technical terms is more. The number of the terms that appear only on the 'Natural Hazards' are 29 and the number of those terms appear only on the 'Chigaku 1' is 115. About 57 percents of the 68 terms appear on the 'Natural Hazards' only. This is because the aim of earthquake education in Japan and New Zealand is clearly different. In other words, the main focus of earthquake education in New Zealand is the earthquakes' effect on human life. However, knowing the fundamentals of seismology is the main focus in Japan.

4. Conclusion

The aim of the earthquake education status in Japan and New Zealand is noticeably different. An intensive discussion is needed in order to introduce the effect of earthquakes on our life to the Japanese school curriculum.