

## Consciousness Survey toward Disaster Mitigation and Evaluation of Disaster Mitigation Action Card Game for International Students

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Disaster Mitigation Action Card Game (DMAC)<sup>[1]</sup> was developed as an teaching material for junior school and junior high school students to promote quick thinking in disaster situation. Watanabe et al.<sup>[2]</sup> showed that the DMAC enables junior school students to learn disaster mitigation over times. Meanwhile, education for disaster mitigation is also important not only for Japanese students but also for international students. Tohoku University published a report for Great East Japan Earthquake and Tsunami in 2011<sup>[3]</sup>, which mentions that it was difficult for international students to access disaster information and to utilize evacuation centers as well as to get local information as Japanese students. In this research, we evaluated consciousness for disasters occurred in Japan and an effect of education for disaster mitigation using the DMAC by questionnaire surveys for foreigner students in Tohoku University.

Surveys with questionnaire sheet were carried out as a part of safety lecture for new nine international students in Graduate School of Arts and Letters in Tohoku University. Questionnaire survey was conducted before and after the DMAC. On the former questionnaire, we surveyed consciousness for disasters occurred in Japan. On the latter questionnaire, we set questions to evaluate the DMAC and their motivation for learning disaster mitigation. We also asked them to give feedback for the DMAC on the latter questionnaire. We will also discuss results of questionnaire surveys at communication events for international students and Japanese high school students in the future.

As a result of the former questionnaire survey, almost 50% of international students were anxious about disasters occurred in Japan and almost 60% of them did not recognize flood and tornado as disasters. As a result of the latter survey, over 80% of them agreed that it was easy to understand its rule and questions of the DMAC, and all of them agreed they enjoyed playing the DMAC. Many students commented that they learned various things regarding disaster mitigation from the DMAC. Moreover, over 90% of them had motivation for learning disaster mitigation. Some students also commented their motivation for playing the DMAC again in the future to consider as many disaster situations as possible, and to discuss actions for disaster mitigation with other students, and so on.

Keywords: International Students, Disaster Mitigation Action Card Game, teaching material for disaster mitigation