

High-level science education and research activity program for high school student using video conference system with PC chat

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So far, university has been one of the most effective field to educate analytical skills of science, and to discuss scientific-topics logically, because teachers and students can gather easily and discuss the results obtained using up-to-date apparatus and advanced research resources. A difficulty arises, however, when we try to educate in a laboratory of university for high school students having a potential in the field of science. It takes much time to gather together in the laboratory, since they inhabit separately in local areas of Japan; especially, in the case of high school students living in except for the area called Pacific coastal belt in Japan. Moreover, when we educate them using only what we call as e-learning, because of the living away from the university, their decreasing motivation in the research activities can frequently occur. To overcome those difficulties, we have developed an original program about science education and research activity for high-school students using video conference system from 2014: Super Scientist Program. This program is clearly different from e-learning. The main feather is below: 1) Lectures and interactive discussions using video conference system with PC chat, which is held once a week. 2) Self-determination of research subjects to promote an active learning and investigations. 3) Adoption of the educational program with several short camps, including fieldwork studies. 4) Group works and scientific discussions for the research subjects in English with foreign students and graduated school students in University. In our presentation, we will show our approach for science education and research activity program in geophysical field. We will also report about the educational effect of PC chat in our program.

Keywords: Science education for high school student, Video conference system, Effect of chat