

# Looking for Sema's Sound

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In Korea, students are suffering from academic stress in a society that demands fierce competition for university admission. So, students have high academic stress. So we thought about ASMR to help this problem. ASMR effect has not yet been scientifically verified. Therefore, we conducted this research to scientifically verify the efficacy of ASMR and to help students, especially our school students first, relieve them by ASMR. We collected various sounds that could be heard in our school and extract the sounds that could become ASMR through the experiments. We conducted the EEG experiment as the scientific method. First, based on the fact that sound frequency and brain wave are synchronized, the sounds below 12Hz were classified as ASMR. We produced the SEMA ASMR with the extracted sounds and applied it to our school students for a long time. Then we measured their EEG and found whether the EEG value related to the efficacy increased significantly, through statistical analysis. We could find the significant value because the P-value indicating the significance level was under 0.05. As a result, the Alpha, Theta, and SMR waves, related to stability and concentration increased after application of SEMA ASMR, and beta waves related to stress decreased. In conclusion, we scientifically verified the effect of SEMA ASMR. We expect it positively affect many people who have stress.