

Learning Based on Computer Science Unplugged in Computer Science Education: Design, Development, and Assessment

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Abstract : Although all high school students in Japan are required to learn informatics, many of them do not learn this topic sufficiently. In response to this situation, we propose a support package for high school informatics classes. To examine what students learned and if they sufficiently understood the context of the lessons, a questionnaire survey was distributed to 186 students. We analyzed the results of the questionnaire and determined the weakest units, which were “basic computer configuration” and “memory and secondary storage”. We then developed a package for teaching these units. We propose that our package be applied in high school classrooms.

Keywords : computer science unplugged, computer science outreach, high school curriculum, experimental evaluation

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