

**Independent Study Title**                      The Development of Virtual Classroom on the Introductory  
Programming for Secondary School

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**ABSTRACT**

This Independent Study Title was about The Development of Virtual Classroom on the Introductory Programming for Secondary School. The aims were to develop The Virtual Classroom on the Introductory Programming for Secondary School and the results used from The Virtual Classroom on the Introductory Programming for Secondary School.

The method used in this The Development of Virtual Classroom on the Introductory Programming for Secondary School included four kinds, such as, surveying the needs and opinion from teachers who teach computer, designing the structure, to make the webpage and finally, the course was divided into 18 units. Each unit has a lesson plan, pre-test, activities involving studies, exercise, homework, post-test and webboard/chatroom. When we have finished making The Development of Virtual Classroom on the Introductory Programming for Secondary School, we set up to the computer server at Samakkhi Witthayakhom School at the web site : <http://www.samakkhi.ac.th/vcp/home.htm> . The experts checked The Virtual Classroom on the Introductory Programming for Secondary School and said that the quality is very good. We had Mathayom 4 of Samakkhi Witthayakhom School used The Virtual Classroom on the Introductory Programming for Secondary School and collected the data that the students used.

The results showed that the students : firstly, achieved higher in post-test than pre-test at significant level of 0.005. Secondly, the students had the attention , interest and co-operation in working concerning group activities at a very good level. Thirdly, had the good attitude to used The Virtual Classroom on the Introductory Programming for Secondary School . Lastly, when the students did the grading by themselves, they got the knowledge, ability in thinking, doing serving and solving the problems at the highest level.