The Effectiveness of a Multimedia Electronic English Textbook for Elementary School Students

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This paper discusses the study of the effectiveness of the multimedia electronic English textbook for after-school programs in elementary schools developed by the Ministry of Education, Science and Technology (MEST) and Korea Institute for Curriculum and Evaluation (KICE). A total of 402 students in grades 3 through 6 and 117 teachers in the four research schools located in a metropolis, two small towns, and a rural area participated. Drawing upon the analysis of the multimedia textbook satisfaction survey and the T-test results of the English proficiency tests, the study demonstrated that the multimedia electronic English textbook benefited elementary school students’ English learning in terms of both affective aspects and English proficiency. Both the elementary school students and teachers were greatly satisfied with the multimedia textbook. Concerning English proficiency development, the students improved their English proficiency after they used the textbook for one academic year; however, the students did not show considerable improvement in all the four language skills. This study suggests that the multimedia electronic English textbook would serve students’ and teachers’ needs for English instructional materials which encourage students’ interactive and self-directed learning and improve their English proficiency.

I. INTRODUCTION

There is no doubt that the computer has innovated concepts and issues of material
designs, pedagogical theories and modes of instruction. In the last four decades, computer-assisted language learning (CALL) materials have changed from an emphasis on basic textual gap-filling tasks and simple programming exercises to interactive multimedia presentations with sound, animation and full-motion video. Multimedia technology shifts the focus of language education from an apprenticeship model of learning towards classroom-based instruction and increased opportunities for autonomous self-directed learning (Beatty, 2003). The computer has, therefore, become more widely advocated and employed in language education. Many studies suggest that the application of multimedia to classroom instruction benefits students (Smith & Woody, 2000). As computer technology innovations have been applied substantially in various educational settings, English education in Korea has also come to emphasize the application of computer technology to language teaching. For example, the Seventh Revised National English Curriculum promotes the application of multimedia and ICT (Information Computer Technology) to classroom instruction more strongly than previous curricula. As one of the English education innovation plans proposed by the Ministry of Education, Science and Technology (MEST) in 2006, a multimedia electronic English textbook for elementary school students had been developed yearly since 2006. It was originally developed not only as a teaching tool for after-school English programs in elementary schools, but it was also intended to be used as a supplementary material for multi-leveled English classes. The textbook has three different proficiency levels: Level I for beginners, Level II for intermediate English learners, and Level III for advanced ones.

The multimedia English textbook keeps an image of a printed book on the computer (See Appendix 1), but it features several different media types including text, images, sound, video, and animations, thereby encouraging the use of a variety of media. It further contains some advanced technological tools which make it different from existing CD-Roms of textbooks. The first one is a speech recognition program which decodes what a speaker says, through which students can role-play with a computer. The second one is a Natural Language Process (NLP)-base writing program through which students would have a variety of interactive writing activities on a keyboard. The third one is a word search program which students can use to easily find unknown words while using the textbook. The last but not the least important technical tool is a Learning Management System (LMS) program through which teachers would be able to track and manage

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