

Chapter 6

Design and Implementation Issues of Interoperable Educational Application: An ICT Application for Primary School English Education in Japan

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ABSTRACT

This chapter reports on the development of an innovative interoperable Information and Communication Technology (ICT) application for English teaching in primary schools in Japan. An investigation into the use of the ICT application during a four month period at two primary schools is also described. The results of the initial needs analysis conducted to identify appropriate means of support for effective primary school English education, the subsequent processes of the design, the development and implementation of the ICT application, the children's reflections during use of the ICT application in English lessons, and a post-course evaluation by children and by their homeroom teachers are described. Proposals are made for the future enhancement of the interoperability capacity for the ICT application.

INTRODUCTION

Information and Communication Technology (ICT) is viewed throughout the world today as a necessity *in* education and an opportunity *for*

education (UNESCO, 2009). ICT has a wonderful potential to improve the quality and the reach of education through the information it will eventually make accessible in every classroom and through its interactive communicative capacities that can make the ways we teach and learn more effective.

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In an attempt to improve Japan's very poor standing in international comparisons of English language proficiency, the national government proposed to advance the beginning of teaching English as Foreign Language in public schools from grade seven in junior high school to grade five in primary school. The response to the policy change from the general public and from teachers was overwhelmingly pessimistic. It was claimed that there were not enough trained primary school teachers proficient in English to teach the new courses and that the impact of poor teaching would get children off to a frustrating start with English that would have a negative long-term effect on motivation.

This chapter describes an ICT project that dealt head-on with those concerns by using a newly available ICT public resource, interactive whiteboards, in a way that supported the government's teaching objectives and the authorized teaching materials. This chapter outlines the development of the first stage of an ICT application that was shown, in a fully-integrated manner, to contribute to teacher training and to enhance student motivation. The integration of these two core contributions rests on three educationally-sound assumptions:

1. Blended learning, the integration of technologically-assisted learning and traditional classroom practices, may help initiate ICT educational programs (Voos, 2003).
2. Team learning, the collaborative participation of teachers and learners in configurations that blur the conventional divisions between learners and teachers (Tajino & Tajino, 2000), may help facilitate a special form of blended learning with an ICT application that allows teachers to feel comfortable in occasionally taking the role of learner in classroom learning activities.
3. The principles of Exploratory Practice (Allwright & Hanks, 2009) can provide a philosophical framework to promote team

learning in ways that deal with the legitimate concern that technology can cause divisions between participants in learning and can reduce the level of their activity in learning. Exploratory Practice places a priority on achieving quality of life in the classroom for learners and for teachers by bringing them together for mutual development, and by working to understand life in the language classroom in ways that are compatible with professional teaching practices, and in ways that are continuous.

English Education in Primary Schools: Current Views in Europe and Asia

At the Group of Eight economic summit held in Köln, Germany, 1999, education was nominated as one of the key topics and the summit joint declaration stated that "the promotion of the study of foreign languages" was indispensable "to increase the understanding of different cultures and enhance mobility in a globalized world" (G8 Information Centre, 1999). Following this declaration, various educational initiatives in foreign language education have been undertaken; a common pillar of the reform movements has been the introduction of foreign language teaching at primary schools. It is generally agreed that primary school children have special age-related capacities for foreign language acquisition and the nurturing of constructive cross-cultural understanding (e.g., Johnson & Newport, 1989; Lenneberg, 1967; Minoura, 1984; Penfield & Roberts, 1959). See Dolitsky, McCloskey & Orr (2006) for a recent case study review of EFL teaching in primary schools in a number of different countries.

In the European Union it was decided that in addition to the study of the children's native language, two foreign languages would be taught beginning at primary school. In Germany, although there are some differences between various states, foreign language education classes have been taught twice

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