

# **Towards the Applicability in Designing e-Textbook for K-12 Schools**

Ronghuai HUANG

Knowledge Science & Engineering Institute, Beijing Normal University

huangrh@bnu.edu.cn

An e-Textbook is a kind of e-Book that can meet national curriculum standards and will serve as an important substitute for printed textbook in the future. In terms of the reading habits and learning habits, e-Textbooks are more suitable for the "digital generation." Therefore, the application of e-Textbook will be an important foundation for teaching and learning reform, and consequently will be one of the key issues of ICT use in education as well. The report presents relevant results of a research, entitled "The Research of Development Strategy of e-Textbook". It consists of three parts: (1) Research on the development path of e-Textbook for K-12 schools, with a prospective analysis of e-Textbook and research on key techniques of e-Textbook development. (2) Research on development technology of e-Textbook, which mainly covers such issues as logical framework design of e-Textbook system; user experience design and analysis; development technology analysis; and design of terminal system for providing emulation and learning supports. (3) An experimental study on the applicability of e-Textbooks to find out how the presenting way and difficulty-level of e-Textbook contents affect students' reading, self-efficacy and eye fatigue.