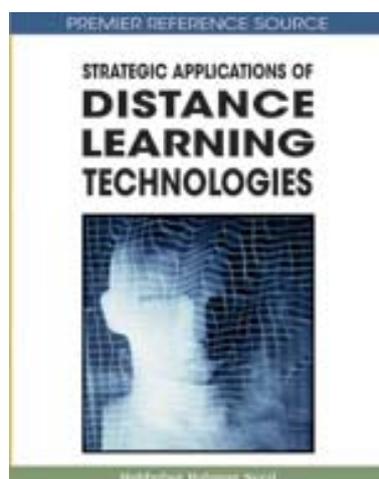


## Strategic Applications of Distance Learning Technologies

Syed, M. R. (Ed.) (2008). Hershey, PA: IGI Global - Information Science Reference (ISBN-10: 1599044803; ISBN-13: 978-1599044804).

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It is plausible to claim that the digital revolution has considerably changed the way people live and think. Distance learning technologies in particular have been transforming the educational communication patterns. In this respect, "Strategic

Applications of Distance Learning Technologies" helps instructors and researchers in their endeavors to provide an alternative and hopefully better approach to their current educational techniques. The source aims to realize this purpose through addressing global opportunities of ICT integration, mentioning tactical uses of distance education technologies, and outlining strategies for distance learning practices in developing countries.

The book is edited by Mahbubur Rahman Syed from Minnesota State University in Mankato, USA. It is published by Information Science Reference, which is an imprint of IGI Global, an international publishing company specialized in research publications in the fields of technology, management and information science.

The book is consisted of 354 pages covering 18 chapters. Topics covered can be listed as adaptive QOS, agent-based architecture, algorithm education, asynchronous learning environments, collaborative education model, distance learning, e-Learning, hypermedia, lecture video contents, lecture video player, multicast applications and SEAMAN (i.e. a visual language based tool for e-learning processes).

The editor, Mahbubur Rahman Syed, is an experienced professor of Information Systems and Technology at Minnesota State University. He has experience in teaching, research, academic leadership and industry in the fields of computer science, engineering, information technology and systems. He has worked at different international universities; received several privileged awards; co-edited several books in the area of e-commerce, software agents, multimedia systems and networking; published more than 100 papers in journals and conference proceedings; and served in different roles in international peer-reviewed journals.

Followed by an enlightening and appealing preface by the editor focusing on unique contributions of each chapter with a reference to emerging technologies in distance learning, **the first chapter** introduces a new generation of e-learning development which provides enhanced interactivity and better training experiences through integrating synchronous groupware applications.

Through reporting the results of a quasi-experiment conducted with 96 undergraduate students in Taiwan, **chapter two** discusses online training by questioning whether effective face-to-face approaches carry over to different online environments in the long run. **Chapter three** focuses on the efficacy of case method teaching in both face-to-face and online asynchronous learning environments suggesting advantages of an online asynchronous environment in promoting student participation in certain cases. **Chapter four** aims to identify motivation related variables which are important for student engagement in online learning. Through reporting an exploratory and robust two-factor structure, the chapter meticulously explores the importance of some motivation-to-e-learn variables emerging from the results of real instructional settings. **Chapter five** introduces a new approach to explain algorithms aiming to overcome several pedagogical limitations of the current visualization systems. The Structured Hypermedia Algorithm Explanation (SHALEX) system presented in the chapter reminds reader of the fundamentals of cognitive load theory and its implementation both in distance education and face-to-face instruction settings. **Chapter six** scrutinizes on a collaborative education model, which seems quite applicable to distance education environments, along with a reference to the development of its conceptual, operational and software architecture. **Chapter seven** focuses on the necessity for continuous professional development activities, and addresses the need for an asynchronous learning environment for professionals who have tight schedules and who need a greater learning-centeredness and flexibility. Contributive suggestions to harness personalized learning to serve the diversity of continuous professional development training needs are also stated with references to relevant emerging technologies. **Chapter eight** discusses the development of a lecture video player and maker system considering the usability and operability factors for the stakeholders of the learning process. Evaluations of the system by students are discussed along with the desirable style of lecture videos for students. **Chapter nine** investigates the expectations and behaviors of business aviation pilots towards online learning with a reference to the importance of an integrated, individualized and useful training experience to gain competitive advantages. **Chapter ten** introduces a tool based on a suite of visual languages, which is conceived to support instructional designers in the generation of learning processes; and explains the implementation of the visual languages in SEAMAN (System for E-Learning Activity MANagement) to support designers in the design, development and implementation of e-learning processes. **Chapter eleven** aims to bring e-learning to the traditional laboratory experiment, and presents a framework for an online laboratory e-learning system to foster the design and implementation of lab-based courses for education. **Chapter twelve** presents the design and implementation of a virtual digital signal processing laboratory whose prototype has been successfully implemented leading to positive feedbacks from both students and teachers. **Chapter thirteen** focuses on information retrieval in virtual universities dealing with the representation, organization and access to learning objects. The relevance of two information retrieval models – keywords based search versus the vector model – along with the performance of four algorithms for computing the similarities are meticulously analyzed. **Chapter fourteen** describes the completion of a web-based programmed instruction tutor by graduate and undergraduate students in Information Systems to have a technical training exercise in a computer programming course, and claims that the competency-based instructional system designed for individualized distance learning has the capacity to generate meaningful learning. **Chapter fifteen** provides readers with a framework for research in promoting personalization in Web-based learning environments with a reference to the concepts of adaptability and adaptivity along with the limitations of completely adaptive systems. In addition, algorithms to be used to offer personalization in the framework are described. **Chapter sixteen** demonstrates the development, implementation and evaluation of a WWW conference system, which can communicate between the mental health care professionals and their students through implementing the live video on WWW browser. **Chapter seventeen** proposes an approach supporting task oriented mobile distance learning paradigm.

**It is maintained that the capability of Web-based seamless migration to carry the task for mobile distance learning with the learner from place to place and from machine to machine without learner's awareness or intervention by active service can be realized through the architecture of component smart platform and agent-based migrating mechanism.**

**Finally, chapter eighteen proposes a design framework to construct digital rights management that enables learning objects in legal usage.**

**As the summaries of the chapters are paraphrased superficially in this review, practitioners who are interested in the design, development and implication of e-learning should definitely look through the chapters carefully since each chapter involves unique and invaluable recommendations most of which are based on relevant theoretical framework and reflective practice. Except for several deviations from the ordinary format of the book which stems from the unique structure of each work, and except for slight ambiguities stemming from abundant technical terminology and abbreviation use, most parts are reader friendly for an active practitioner in the field. The source addresses relevant and up-to-date technologies that provide increased interactivity among the stakeholders of the distance learning process.**

**The paradigm shifts in distance education practices stemming from rapid developments in technology are exemplified with interesting and effective distance learning applications supported by relevant emerging technologies. In addition, the use of these emerging technologies to overcome the boundaries of real time interactivity in distance learning to a certain extent is exemplified through inspiring strategies.**

**Finally, implementations provided within the source guide distance education practitioners to minimize the time and distance separation between the learners, educators and facilitators. Readers will be able to locate relevant information through checking specific headings and abstracts all of which are organized effectively. In this respect, the book might also serve as a premium reference source to be used whenever and wherever it is necessary to ameliorate current distance education practices.**