INTRODUCTION

With the revolution occurred in communication technologies at the beginning of 1990’s, network technologies have emerged as the challenging parameters accelerating improvements of instructional technologies. Online classrooms and management of them appeared as a new domain which necessitates a new paradigm different from the classical ones. User and instructor friendly learning context and management systems (LCMS) have brought new approaches, techniques and tools for the assessment and measurement processes. These approaches, techniques and tools embedded in LCMS have redefined not only the way teachers teach but also students learn. WebCT, Blackboard and eCollege and many others as the online instructional environments have provided new opportunities to construct a coherent instructional system which has never been used as a unique environment any before. Assessment and measurement have been redefined within this framework. The successes of assessment and measurement methodologies or system inevitably depend on conceptualization and then implementation to different educational settings.

ABOUT ONLINE ASSESSMENT AND MEASUREMENT

Problems emerging especially in the conceptualization and implementation of online assessment and measurement have created a demand for sources, particularly printed materials, which discuss possible practice oriented solutions and usage of different online assessment and measurement tools embedded in LCMS. In this sense, case studies from higher education and K-12 will illuminate the construction of new paradigm underlining online assessment and measurement. Thus rich variety of inspirational examples of online assessment and measurement found in this book will contribute the readers wishing to adapt their assessment and measurement to their own indigenous subjects and learning environments. The book makes significant contributions to the growing body of knowledge and experiences academic and applied areas of online assessment and measurement.

ORGANIZATION OF SECTIONS

This edited book was published by Information Science Publishing. The book has eighteen chapters divided into three sections which underline three broad educational and training areas, namely elementary and secondary (K12), higher education and corporate. In addition to section of authors' biography contributing the book and an index, there is a preface in which chapters of the book are shortly introduced. Besides two editors, forty-seven authors have contributed to the book.
Contributions of authors having different backgrounds and institutions enable the book to have very comprehensive spectrum and this makes the book attractive practically for those having different kinds of practice, problems and point of views.

In chapter one – Continuous Assessment for Improved Student Outcomes- Daniel Volchok from WebCT, USA, Maissie Caines from College of The North Atlantic, Canada and David Graf from Nova Southeastern University in USA reviews the many tools and methods available and describes the assessment, grading and reporting capabilities of WebCT through examples from the WebCT Exemplary Course Project.

In chapter two – Coordinating a Distance Learning Software Rollout with the Needs and the Vision of Mature Test Organization: Political and Technical Lessons Learned – Luke Fernandez from Weber State University in USA describes the process that has led Weber State University to reconsider an out-of-the-box implementation of WebCT is a sensible strategy.

In chapter three – Assessing the Relationship between Learner Satisfaction and Faculty Participation in Online Course Discussion – Dana Offerman, Kimberly Pearce, Christopher Tassava from Capella University in USA focus on specific case study realized in Capella University. The chapter focuses on the assessment and evaluation of the instructor and adult learner interaction in online settings by using Capella-developed Faculty Development Feedback System (FDFS).

In chapter four – Authentic Online Assessment: Three Case Studies in Teacher Education – Mike Keppell, Eliza Au Kit Oi, Ada Ma Wai Wing from Hong Kong Institute of Education in Hong Kong focus on an action research conducted over 12-month period and underlining authentic technology- enhanced assessment. Chapter mainly examines three case study experiences in the field of teacher education that attempted to align learning outcomes, activities and assessment tasks in three teaching and learning models.

In chapter five – Electronic Tools for Online Assessments: An Illustrative Case Study from Teacher Education – Jon Margerum-Leys from Eastern Michigan University and Kristin M. Bass from University of California Berkley in USA explores the use of three particular software tools- Rubistar, an assessment database and a documentation comparison feature – within a teacher education course.

In chapter six – Online Assessment of foreign Language Proficiency: Meeting the Development, Design and Delivery Challenges – Paula M. Winke from Michigan State University in USA discusses the challenges involved in creating online Arabic and Russian proficiency tests by using commercial test product.

In chapter seven – Using Web-Enabled Technology in a Performance Based Accreditation Environment – John C. Wise, Dhaneshwar Lall, Peter J. Shull, Dhushy Sahianathan, Sang Ha Lee from Penn State University in USA describe two online system that support the transition from instructor-based to student-outcome based education in an engineering technology context.

In chapter eight - Moving Beyond Objective Testing in Online Assessment – Hellen S. Ashton, Cliff E. Beevers, Colin D. Miligan, David K. Schofield, Ruth C. Thomas, Martin A. Youngson from Heriot-Watt University in UK explore development of a system that also seeks to contribute to improving student learning by enhancing the quality sophistication and authenticity of the assessment delivered.

In chapter nine – Development of Computerized Adaptive Test for Large Scale Testing Program: A Case study of the Development of the North Carolina Computerized Adaptive Testing System – Lori McLeod and Albert Bethke from RTI International USA, Cheryl Hill from University of Northern Carolina at Chapel Hill in USA, Pamela Van Dyk and Kelly Burling from North Carolina Department of Public Instruction in USA focus on the several issues and lessons learned in the development of computerized adaptive test (CAT) in a case study of the design development and delivery of the test in a large scale testing environment.

In chapter ten - Introducing a Computer Adaptive Testing System to a Small School District - Timothy Pelton and Leslee Francis from University of Victoria in Canada describe the essential elements of
meaningful measurement in education and the features of a typical of a computer-adaptive test (CAT). Then they focus on the Measure of Academic Progress (MAP) system of North West Evaluation Association and observation made during the introduction of the system into a small semi-rural school district. Finally they provide a set of recommendations to help guide other districts

In chapter eleven – A Computer Adaptive Mathematics Test Accommodates Third Grade Students with Special Needs in The Pacific North West - Luke Duesbery, Leanne Ketterlin and Gerald Tindal from University of Oregon in USA and Jan D. McCoy Learning Point Associates in USA focus on the case study examining the use of computer adaptive mathematics test administrated to 250 third grade students in the Pacific Northwest with limited reading and writing skills.

In chapter twelve – Designing an Online Formative Assessment that Help Prepare Students and Teachers for a Summative Assessment: A Case Study: A Two Year Pilot Project Pairing an Online Classroom Assessment with a Statewide High-Stakes Test - Stephanie JL Gertz and Michael K. Smith from ThinkLink Learning in USA, underline the case study indicating the role of the online assessment and measurement in better preparing elementary students and their teachers for a mandated statewide test.

In chapter thirteen – Online assessment in the K-12 Classroom: Formative Assessment Model for Improving Students Performance on Standardized Tests – Jacqueline B. Shrago and Michael K. Smith from ThinkLink Learning in USA focus on the an online assessment formative model developed by ThinkLink whose aim is to help teachers and students prepare throughout the year for end-of-year state and national summative assessments. In the chapter four aspects of the ThinkLink system are discussed.

In chapter fourteen – Online Assessment Distribution Models for testing Programs: Lessons Learned from Operational Experience – Anthony R. Zaraf from Pearson VUE in USA discusses three distribution models for online assessments and their characteristics.

In chapter fifteen – From Paper and Pencil to Computerized: A Dental Board’s Perspective – G. Eric Jenson, Thomson Prometric in USA advantages and disadvantages of computerized testing followed by a description of the experience of a state-based dental board as they transitioned from a paper pencil exam to a computerized exam.

In chapter sixteen – Assessment Elements in Web-Based Training – Kimberly Payne from Imedia.it in USA focus on a case study reviewing some of web-based training practices related to assignment design and evaluation and how each was applied to a U.S. Army Web-based training product.

In chapter seventeen – The Seven C’s of Comprehensive Online Assessment: Lessons Learned from 36 Million Classroom Assessment in the Cisco Networking Academy Program – John T. Behrens, Tara A. Collision and Sarah DeMark from Cisco Systems in USA explore the context of online curricula of the Cisco Networking Academy Program and its 36 million online assessments to support the instructors and schools teaching computer networking skills to students. Through the discussion with stake holders concerning the central aspects of the Cisco Networking Academy Program assessment activities, seven themes have evolved each starting with the letter C. In the chapter the seven C’s of comprehensive online assessment are examined and discussed in detail.

In chapter eighteen – Feasibility Studies on Transitioning Assessment programs for Paper and Pencil to CBT Delivery - Sandra Greenberg and I. Leon Smith from Professional Examination Service in USA focus on the conceptualization of feasibility studies on transitioning assessment programs from paper and pencil to computer based delivery. In the chapter the key factors in making effective strategic policy decisions regarding transitions are described on the basis of experiences gained in conducting feasibility studies which is conceptualized as a five-phase.