

BOOK REVIEW

Pedagogical and Andragogical Teaching and Learning with Information Communication Technologies

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Pedagogical and Andragogical Teaching and Learning with Information Communication Technologies

Victor C. X. Wang, Lesley Farmer, Judith Parker, and Pamela M. Golubski (Eds.)

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242 pp.

\$156.00

ISBN 9781609607913

The advent of information technology affects many aspects of our daily life including education. The role of informational technology in curriculum development and instruction is undisputable. Thus, it is vital for educators to find resources with solid foundation that can help them comprehend the research background for selection, integration, and implementation of various methods and technologies in classrooms. *Pedagogical and Andragogical Teaching and Learning with Information Communication Technologies* serves as such a source. It is a must have book for today's educators who teach young learners or adults. This well-structured book provides rich content on a variety of topics that are interest to educators including e-learning, e-mentoring, academic advising via virtual tools, pedagogical and andragogical teaching methods in online settings as well as age, gender, and cultural issues in online learning.

The book begins with a chapter that explains pedagogical and andragogical learning, which sets the conceptual ground of the book. *Chapter 1 (Pedagogical Teaching and Learning)* can be of an interest to K-12 teachers as well as adult educators as it successfully compares pedagogical learning to andragogical learning. Victor C. X. Wang points out the role of programmed instruc-

tion in the pedagogical instructional model. Wang further discusses the contributions regarding teaching and learning approaches by some historic characters (i.e., Socrates, Confucius and Plato) as well as more recent ones (i.e., Rogers, Knowles, Watson, Skinner, etc.). He also discusses the role of Web 2.0 technologies as a teaching and learning environment for pedagogical instructors. The author views Web 2.0 technologies as an enhancing teaching and learning tool since it offers many capabilities providing one access point to knowledge at the same time. For instance, it allows instructors to create text, audio, and video based pedagogical lectures, grade assignments via grading rubrics or in quantifiable terms only, organize learning resources or activities online in a sequential manner' and use standardized exams to assess learning. Wang states that school systems continue practicing the pedagogical model characterized by behaviorism, yet teachers and researchers should be provided with instructional approaches with information communication technologies (i.e., Web 2.0 tools) to make this model serve the learners in various age groups more effectively. He finally invites the readers to critically read other chapters in the book and share their feedback about the discussions of pedagogical and andragogical teaching with information communication technologies.

The role of student engagement cannot be denied for retention in higher education. It is imperative for faculty and staff to promote student engagement through ongoing interaction with the students inside and outside the classroom. The advances in technology have made it possible to supplement face-to-face interactions with students. Web 2.0 and other virtual technologies can be of great assistance to ensure continuous interactions between classmates, faculty members, and staff. With this in mind, Pamela M. Golubski examines two of such technologies (Google Wave and Wimba Collaboration Suite:Voice, Pronto, and Classroom) to assist those who seek active collaboration in higher education settings in *Chapter 2 (Utilizing Interactive Technologies to Engage, Integrate, Involve, and Increase Community amongst College Students)*. For example, Google Wave is a tool that enables instructors to assign group projects where students can collaborate outside the classroom virtually. This technology not only allows students to brainstorm ideas, create documents, discuss concepts, assign tasks to group members, attend virtual meetings, and provide feedback, but it also allows the instructor observe, reply, and make edits as the group is working on the project. Finally, various groups can be linked and classmates can comment on other group projects. Wimba Collaboration Suite is another collaboration tool that offers audio/voice (VOIP), text, instant messaging, application sharing, polling, and content display.

Chapter 3 (E-learning for K-12 Learners and Adult Learners) in the book is devoted to e-learning. Lesley S. J. Farmer explains e-learning in terms of communication cycle and its application in a learning cycle. Farmer also addresses social and development aspects of e-learning. She points out the differences among adolescents and millennial and adult e-learners. To promote cooperative e-learning, she suggests a list of Web 2.0 technologies such as threaded discussions, blogs, wikis, online chats, web-based conferencing, multimedia and image sharing programs and so on. The author also describes the steps in individual engagement with information (i.e., attention, processing, evaluating information, manipulating information, and acting on information) since not only each step has an impact on the learning process but also the technology affects these steps. She makes a distinction between "learning *with* technology" and "learning *about* technology" by stating that "the former focuses on process while the latter emphasizes content matter" (p. 35). Finally, Farmer provides strategies to scaffold e-learning in an attempt to provide guidance to educators.

Chapter 4 (Assessing Online Learning Pedagogically and Andragogically) draws teachers' attention to the differences among young and adult learners. The difference grows in the virtual learning environment. In his second article in the book, Victor C. X. Wang underlines the fact that many instructors use pedagogical assessment and evaluation methods to address the needs

of all learners regardless of their age as they are not aware of andragogical methods. While pedagogical assessment tools are mainly characterized by objectively-scored tests or criterion-referenced tests, andragogical assessment methods are characterized by subjectively-rated tests or learner self-evaluation. Wang explains the role of Bloom's taxonomy (both the original and current form) in assessment and evaluation in detail. He further suggests that educators can use pedagogical assessment approaches when their focus is on the lower order thinking skills, yet they use andragogical assessment approaches while stressing the higher order thinking skills. The author also points out that the knowledge of pedagogy and andragogy will allow instructors to shift from pedagogical assessment to andragogical assessment or vice versa as needed.

The main purpose of *Chapter 5 (Utilizing a Virtual Environment for Academic Advising)* is to inform the readers about the use of various virtual and web 2.0 technologies (e.g. Facebook, Instant Message (IM), Skype, chat sessions, electronic mailing lists, blogs, Twitter, online testing, and training) while providing academic advising. Pamela M. Golubski does not undermine the value of traditional, face-to-face methods. She, however, stresses the fact that if used effectively, virtual and Web 2.0 technologies can promote the holistic development of students since they have a great potential to provide students with increased access to advising and convenient methods of communication with advisors. In this chapter, Golubski addresses the legal issues that are related to virtual advising as well.

Similarly, *Chapter 6* focuses on mentoring using virtual and Web 2.0 technologies. In her second article (*Utilizing Virtual Environments for the Creation and Management of an E-Mentoring Initiative*), Pamela M. Golubski points out the cost-effectiveness of e-mentoring compared to traditional, face-to-face mentoring and recommends e-mentoring initiative as a viable solution for colleges as all communication and interaction is conducted through various virtual and Web 2.0 technologies such as Facebook, Instant Message (IM), Skype, Google Groups, Virtual Common Reading Program, and Virtual Reflection Journals. Golubski also highlights the fact that any user is able to write and publish to the Web without possessing any specialized technological or design skills; therefore, mentoring programs can greatly benefit from the Web 2.0 technologies listed above as they promote an active, participatory role for users and they resemble that of face-to-face interactions. In addition to the information about the specific functions of each web-based tool, the author explains the necessary steps to develop an e-mentoring program. This chapter is an excellent resource for colleges that are interested in creating e-mentoring programs.

Chapter 7 aims to address some of the issues with the development of online-delivered curriculum development. In her second article (*Curriculum Development for Online Learners*), Lesley S. J. Farmer points out that curriculum for online education are affected by several factors such as social forces (at local, state, regional, national, and international levels), the treatment of knowledge, human development, the learning process, technology, and management issues and raises excellent questions for curriculum developers to consider. Farmer further explains the crucial steps (i.e., assessing needs; identifying learners, outcomes, indicators, pre-requisite skills, content, and instructional format; contextualizing curriculum; implementing and assessing the plan) that should be taken for a successful online curriculum. She finally highlights the importance of constant auditing, assessing, and negotiating the factors above in curriculum development for efficient online educational experiences.

Chapter 8 discusses the role of gendered learning and self-identity in online education. In her third article (*Gender Issues in Online Education*), Lesley S. J. Farmer provides gender-sensitive instructional design and technology for gender-equitable practices in online education. Farmer addresses various issues in this area including biological-based learning, gendered schooling, societal changes, gender and technology, developmental issues, and millennial attitudes. She provides valuable recommendations for instructors who are eager to create engaging and in-

clusive learning environment in online courses. The author suggests various technologies for gender-sensitive curriculum (e.g., collaborative Web 2.0 technologies, announcements, emails, discussion boards, group pages, synchronous online chats, etc.) and assessment (e.g., content analysis, text document creation, image document creation, multimedia document creation, interviews, performance assessment, etc.)

Chapter 9 (Instructional Methods for Online Learners) examines various instructional methods for online learners. In this chapter, Judith Parker discusses selected methods (i.e., lecturing, discussion, action-learning, experiential learning, and active learning) and provides examples of each method along with student comments.

In her second article in *Chapter 10 (Comparing Traditional Teaching with Andragogical Teaching via Web 2.0 Technologies)*, Judith Parker compares traditional teaching to andragogical teaching via Web 2.0 technologies. As the author states, “developing technology made possible desktop models, then laptops, then net-books, then handheld devices. These ubiquitous miniature communication devices provide almost constant connectivity. Fueled with Web 2.0 features, they have the possibility of having a dramatic impact on both traditional and andragogical teaching” (p. 137). Parker discusses how social networking and other Web 2.0 technologies affect instructional methods used both in traditional (instructor focused) and andragogical (student focused) learning environments through case studies and student comments. While separating traditional and andragogical teaching to better discuss these two types of teaching, she notes that they complement each other in many real or virtual classrooms.

Chapter 11 (Age Issues in Online Teaching) is devoted to the impacts of age on online instructional design and delivery from developmental/biological and social/cultural perspectives. In her fourth article in this book, Lesley S. J. Farmer makes an important statement: “as the brain develops, it processes and communicates information in different ways. Furthermore, the time period in which individuals live shapes their online experience” (p. 150). Farmer then explains how children, adolescents, and adults differ developmentally and socially and suggest innovative ways to incorporate technology in education for different age groups. She draws attention to generational differences in online education as they impact learner attitudes towards technology and its social use.

In her third article in *Chapter 12 (Engaging Traditional Learning and Adult Learning via Information Technologies)*, Judith Parker highlights the vital role of student engagement in teaching and examines how Information technology can facilitate engaging traditional and adult students in classes. Parker argues that “good educational practice engages students. Information technologies have the capability to enrich that engagement or block it.” The author provides various approaches to engage students in classes via information technology to enhance the learning and teaching process.

Chapter 13 (Encouraging Student Motivation in Distance Education) explores ways to increase student motivation in distance education. The author, Judith Parker, discusses development of distance education and the internal and motivational factors that may impact student motivation in her fourth article in this book. Parker provides numerous examples of distance education and motivating factors in order to better understand the argument made in this chapter.

Chapter 14 (Online Knowledge Dictator or Learning Facilitator) questions the role of teachers in online education: online knowledge dictators versus learning facilitators. In his third article, Victor C. X. Wang defines these roles and examines what factors may contribute each role. Wang also points out the importance of cultural backgrounds in relation to learning to provide better understanding of this dichotomy. The author provides specific recommendations for teachers to become learning facilitators both in traditional and virtual teaching/learning environments.

In her fifth article in *Chapter 15 (Addressing Cultures in Online Teaching)*, Lesley S. J. Farmer underlines the importance of addressing cultures in online teaching settings, which can be a more challenging task in face-to-face classroom settings. The author examines the role of students, teachers, curriculum and learning environment in designing a culturally-sensitive curriculum and teaching/learning environment.

In the final chapter of the book (*Chapter 16: Summarizing Teaching Approaches in the Traditional Classroom and in the Virtual Environment*), Victor C.X. Wang provides an overview of pedagogical teaching methods with andragogical approaches both in traditional classrooms and virtual environments by comparing and contrasting them. *As the author* states, it is particularly important to select right teaching methods as online teaching requires physical separation between instructors and learners who may be at a remote learning site. The comparison and contrast of widely used methods in this chapter can assist teachers in selecting the methods that will best fit their students' needs and maximize their learning experiences in virtual classroom settings.

Overall, this book provides an in depth analysis of teaching learners in various age groups using information technology. It provides a foundation to effectively use technology so that teachers can enhance learning experiences of young and adult learners in their classrooms. Through the high-quality theoretical and empirical frameworks employed in the chapters, this book will bring experienced educators up-to-date on pedagogical and andragogical theories and it will allow the novice instructors benefit from highlights of how theory can be applied in both virtual teaching and learning environments. *Pedagogical and Andragogical Teaching and Learning with Information Communication Technologies* is undoubtedly a valuable addition to an educator's library, whether he or she already has an interest in using technology in instruction or not.

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