Assessing and Evaluating Adult Learning in Career and Technical Education

Victor C. X. Wang



Assessing and Evaluating Adult Learning in Career and Technical Education

Victor C. X. Wang





图书在版编目(CIP)数据

职业技术教育中的成人学习评估=Assessing and Evaluating Adult Learning in Career and Technical Education: 英文/王春学编著. —杭州: 浙江大学出版社,2009.7

ISBN 978-7-308-06585-6

I. 坝... II. 王... III. 职业教育-研究-英文IV. G71

中国版本图书馆 CIP 数据核字(2009) 第 126791 号

Assessing and Evaluating Adult Learning in Career and Technical Education

职业技术教育中的成人学习评估

王春学(Victor C. X. Wang) 编著

责任编辑 伍秀芳

封面设计 张作梅

出版发行 浙江大学出版社

(杭州天日山路 148 号 邮政编码 310028)

(网址: http://www.zjupress.com)

IGI Global

(701 E Chocolate Avenue, Hershey PA 17033-1240, USA)

(网址: http://www.igi-global.com)

排 版 杭州中大图文设计有限公司

印 刷 杭州富春印务有限公司

开 本 710 mm×1000 mm 1/16

印 张 17.25

字 数 414 千

版 印次 2009年8月第1版 2009年8月第1次印刷

书 号 ISBN 978-7-308-06585-6 (浙江大学出版社) ISBN 978-1-61520-745-9 (IGI Global)

定 价 60.00 元

版权所有 翻印必究 印装差错 负责调换

浙江大学出版社发行部邮购电话(0571)88925591

Preface

Purpose

This book advances a framework, a process and meaningful approaches for assessing and evaluating adult learning in career and technical education (CTE). Increased interest in and use of theoretical and empirical assessment and evaluation methods have created a need for this book's unique contributions to the literature in the field of adult education and career and technical education. For years, our students and scholars/practitioners in the field have been without pertinent textbooks used to accurately and effectively assess and evaluate adult learning in the field. Books on assessment and evaluation have been written by scholars/practitioners from other fields of study rather than by people from the field of adult education or career and technical education. It is common sense that we have known more about how animals learn than about how children learn and we know much more about how children learn than about how adults learn. Since most students in the field of career and technical education are adult learners, to help these learners learn requires teachers, trainers, practitioners and even scholars to accurately and effective assess and evaluate their learning so that progress on the part of the learners can be made. To assess and evaluate adult learning in CTE requires a thorough understanding of the nature of adult learners, principles of andragogy, formal and informal evaluation methods, theory of transformative learning, teaching philosophies and technology. Application of traditional assessment and evaluation methods effective for assessing learning of traditional age students may not work for evaluating adult learning in the field. With this purpose in mind, I called for chapters especially from leading scholars/practitioners in the field of adult education and career and technical education. To my great delight, Patricia Cranton, a leading adult educator from Penn State contributed a chapter on self-evaluation. Other authors for the book are also outstanding scholars/practitioners in the field. The book then addresses the key elements of the process of assessment and evaluation: self-evaluation, transformative learning, history of andragogy, teaching philosophies, and much more. At each step in this process, the reader is taken through multiple and meaningful approaches of assessing and evaluating adult learning in the field of career and technical education. Hopefully after reading the whole book, our readers will become well versed in terms of accurately and effectively assessing and evaluating adult learning. Then, it is time to say, "We know much more about how adults learn than about how children learn."

xii Preface

Audience

This book is intended for undergraduate and graduate students and faculty who seek assistance in preparing a comprehensive plan for assessment and evaluation of adult learning in the field of career and technical education. No need to say, this book is an excellent textbook for credential students in CTE and adult education. At a broader level, the book may be useful as both a reference book and a textbook for graduate students in research methods. The rich information, multiple approaches of writing different chapters, exemplary usage of APA style and theoretical bases will all add to our readers' knowledge base in terms of not only assessment and evaluation but also of research methods. To best take advantage of the features in this book, the reader needs a basic familiarity with principles of andragogy, transformative learning theory and teaching philosophies first. Then, the reader needs to proceed to the chapters that address different kinds of assessment and evaluation approaches appropriate for adult learning in the field. Finally, this book also is intended for a broad audience in the social and human sciences. It is commonly argued that those who do not know how to accurately and effectively gauge learning do not know how to make progress. This line of thought says a great deal about the importance of assessment and evaluation. I hope that students, faculty and researchers including those from even K-12 education, higher education and others will find the book useful.

Acknowledgments

To ensure quality of books, editors/authors have their books go through the double blind review process so that their books will become referced books in the field. This book is no exception. As Zhejiang University Press in China agreed to publish more of my books, I began to collect chapter proposals. All proposals were carefully reviewed by the editor in light of their suitability, the researcher's records of similar work in the area of the proposed topics, and the best proposal for topics with multiple proposals. The goal was to assemble the best minds in CTE and adult education to contribute entries to this unique book. Upon receipt, each full entry submission was forwarded to expert external reviewers on a double-blind basis. Only submissions with strong and favorable reviews were chosen as entries for this book. As a result, this book includes more than 10 entries highlighting effective assessment and evaluation of adult learning. All entries are written by knowledgeable, distinguished scholars from many prominent research institutions. The reviewers were invited based on their sustained scholarship in this field. Therefore, I extend a huge thank you to the following reviewers/authors:

- Royce Ann Collins, Kansas State University, USA
- Lesley Farmer, California State University, Long Beach, USA

Preface xiii

- Barbara Hinton, University of Arkansas, Fayetteville, USA
- · John Hope, Auckland University, New Zealand
- Victor Hernandez, University of South Florida, USA
- Kerry Lee, University of Auckland, New Zealand

I wish to thank my fellow authors and Zhejiang University Press, especially Dr. Mary Wu for their contribution to this book. Without their contribution, this book would not be a reality. This book is designed for the teacher-practitioner and is written from both a scholar's and a practitioner's perspective. Because of the rich information provided by this book, individual chapters can be selected according to readers' specific needs and interests. Special thanks go to my family, Katie Wang, Anni Wang and Anthony Wang for their unfailing support and encouragement during the many months it took to give birth to this book. Last but not least, I thank all of our readers who have become consumers of this excellent book. This book will assist you in your educational and scholarly endeavors.

Victor C. X. Wang, Ed.D. Associate Professor of CTE and Adult Education California State University, Long Beach Long Beach, California

May 28, 2009

The Editor

Victor C. X. Wang, Ed.D., an Associate Professor, joined the faculty at California State University, Long Beach (CSULB) in 2002 and has been the credential coordinator of CTE and adult education since 2005. Dr. Wang's research and writing activities have focused on workforce education, the foundations of adult education, adult teaching and learning, training, transformative learning, cultural issues in vocational and adult education, distance education, human performance technology and curriculum development. He has published well over 80 journal articles, book chapters and books during his seven years at CSULB and has been a reviewer for four national and international journals. Currently he serves as the editor in chief of the International Journal of Adult Vocational Education and Technology. He has won many academic achievement awards from the universities in China and the United States, including the Distinguished Faculty Scholarly & Creative Achievement Award in 2009.

Dr. Wang taught extensively as a professor in Chinese universities prior to coming to study and work in the United States in 1997. He has taught adult learners English as a second language, Chinese, computer technology, vocational and adult education courses, research methods, administrative leadership, human resource management and curriculum development for the past 20 years in university settings. Two of the books he has written and edited have been adopted as required textbooks by major universities in the United States, and in China. In addition, numerous universities worldwide including Howard University, Princeton University, Yale University, University of Chicago, Cornell University, UC-Berkeley and Rice University have cataloged his books and journal articles.

The Contributors

Bridget D. Arend, Ph.D., is the Research and Assessment Analyst at the Center for Teaching and Learning at the University of Denver. She teaches in the Morgridge College of Education and the University College Communication Department at the University of Denver. Her background includes teaching, evaluation, and faculty development work within both higher education and corporate environments. Her current research interests are centered on assessment and teaching strategies in distance and technology-enhanced environments.

Jim Berger, Ph.D., is an associate professor in the Department of Education Administration, Leadership, and Research at Western Kentucky University. He received his master's degree and doctorate in Adult Education from the University of Georgia in Athens, Georgia. He is the program coordinator of the Master of Arts in Education in Adult Education program and currently serves on four editorial boards of national and international journals. He has published several articles and three book chapters and presents regularly at national conferences. He is currently serving on two national boards for organizations related to adult education and has been elected as president for the 2010-2012 term of his state association. His current research interests are methodologies for effective instruction and the use of technology as a means to enhance learning within the classroom. His has received funding from local and state agencies to provide access to adult literacy services and General Education Diploma training for Hispanic individuals. He has served as a private tutor for thousands of undergraduate students in facilitating learning in over 40 classes.

Ernest W. Brewer, Ed.D., is a Professor of Educational Administration and Policy Studies and Principal Investigator/Director of Federal Programs at the University of Tennessee. Dr. Brewer has authored/co-authored over 100 books, book chapters, articles, monographs, and technical reports. He has received such awards as the Excellence in Teaching Award, the Outstanding Service Award from the IVETA, and the Outstanding Faculty Counselor Award from Kappa Delta Pi. His current research interests, that are frequently intertwined, include job satisfaction, occupational stress, and job burnout.

Royce Ann Collins, Ph.D., is an Assistant Professor of Adult Education in the Department of Educational Leadership at Kansas State University. She has 17 years' experience in administration of higher education for adult learners with expertise in faculty development and adult learning.

Patricia Cranton, Ph.D., her primary research interests are in the areas of teaching and learning in higher education, transformative learning, and most recently, authenticity and individuation. She is currently a Visiting Professor of Adult Education at Penn State

xviii The Contributors

University in Harrisburg, Pennsylvania. Patricia Cranton's most recent books include a second edition of *Planning Instruction for Adult Learners* (2000), *Becoming an Authentic Teacher* (2001), *Finding our Way: A Guide for Adult Educators* (2003), and the second edition of *Understanding and Promoting Transformative Learning* (2006).

Lesley Farmer, Ed.D., currently is a Professor at California State University Long Beach. Dr. Lesley Farmer has been coordinating their Librarianship program since 1999. She also taught and served as the external examiner for the University of Hong Kong's library science program, as well as worked as a library professional in K-12 school, public, special and academic libraries. Dr. Farmer earned her M.S. in Library Science at the University of North Carolina Chapel Hill, and received her doctorate in Adult Education from Temple University. She serves as the International Association for School Librarianship Vice President for Association Relations, helped edit their newsletter, and was selected for their research award. She edits the International Association of Library Association School Libraries Section Newsletter, and chaired the Education Division of Special Library Association. She has chaired the International Education SIG and the Gender Studies SIG for the Association of Library and Information Science Educators, and serves as treasurer for the Alpha Chapter of Phi Beta Delta (honor society for international scholars). Dr. Farmer presents regularly at national and international professional conferences. She has edited library journals, written twenty-four books and over a hundred articles and chapters; the most current books are titled Teen Girls and Technology (Teachers College Press, 2008) and Your School Library (Libraries Unlimited, 2009). Her research interests include information literacy, collaboration, assessment, and gendered educational technology.

John A. Henschke, Ed.D., is an Associate Professor of Adult Education at the University of Missouri-St. Louis, and Continuing Education Specialist at University of Missouri Extension. He is the Leader of the Award Winning Adult Education (AE) and Human Resource Development (HRD) M. Ed., Ed. D., and Ph. D. Program at the University of Missouri-St. Louis. Dr. Henschke teaches graduate courses in AE and HRD in the face-to-face classroom, and in the online, virtual classroom. He is author of articles in national and international journals and books on the topics of adult learning, andragogy, corporate education, international and comparative adult education, higher education, and lifelong learning. He has chaired 40 completed doctoral dissertations, and has been a committee member of 35 other completed doctoral dissertations. Dr. Henschke has been President of the American Association for Adult and Continuing Education (AAACE). He is a member of the International Adult and Continuing Education Hall of Fame (IACEHOF) and serves on its Board of Directors. Dr. Henschke has been testing his adult education (andragogical) ideas around the globe since 1970, and has worked in AE and HRD in 16 countries. He has an Andragogy Website http://www.umsl.edu/~henschke/ and he may be reached at henschkei@missouri.edu.

The Contributors xix

E. Paulette Isaac, Ed.D., obtained her B.S.B.A. in Personnel Management from the University of Missouri-Columbia. She received an M.S. in Education with an emphasis in human resource development and an Ed.D. in Adult Education from Georgia State University and the University of Georgia, respectively. Dr. Isaac currently serves as the Chair of the Division of Educational Leadership and Policy Studies in the College of Education at the University of Missouri-St. Louis. She is an Associate Professor of Adult Education.

Kathleen P. King, Ed.D., is a Professor of Adult Education and Human Resource Development at Fordham University in New York City. Her research includes transformative learning, professional development, distance learning, new media, and diversity issues. Internationally recognized for her research, service, and contribution to the fields of adult learning, she is an award winning author, popular keynote and conference speaker, mentor, and private consultant (www.transformationed.com).

Kerry Lee is a Senior Lecturer in Technology Education at the Faculty of Education, University of Auckland, New Zealand, Kerry has a Bachelor of Science degree and a Masters in Education specialising in Technology Education. Her Doctoral thesis currently underway investigates the effects of omega-3 fatty acids on the academic achievement of primary school children. Kerry has presented papers on technology education at numerous national and international conferences including the International Conference on Technology Education Research 2001, 2006 & 2008 and TENZ Conferences 1997, 1999, 2001, 2003 & 2007. Kerry was invited to be the plenary speaker on Technology Education at the 8th five-year planning meeting for 10 South East Asian countries at SEAMEO RECSAM, Malaysia, 2003. She has been published in the International Journal of Technology and Design Education, International Journal of Diversity and Organisations Communities and Nations, International Journal of the Humanities, Journal of the World Universities Forum, Journal of Technology Studies and International Journal of Teaching and Learning and High Education (in press). She has authored chapters in the Handbook of Research on E-Learning Applications for Career and Technical Education: Technologies for Vocational Training, and this chapter in Assessing and Evaluating Adult Learning in Career and Technical Education.

James B. Martin, Ph.D., is the Associate Dean of Academics for the Army's Command and General Staff College at Ft. Leavenworth, Kansas. His career of educating adults began 17 years ago and has encompassed work at adult-focused programs at small liberal arts colleges and working with the Army and other services in educating senior officers. His areas of research currently include faculty development and assessment.

Judith Parker, Ed.D., has carned a doctorate degree and an M.S. degree in Adult and Continuing Education from Teachers College/Columbia University in New York, an M.S. degree in Physics from Purdue University in Indiana, and a B.S. degree in Physics and

Mathematics from Notre Dame College in Ohio. Dr. Parker has over 20 years experience in leadership positions within business organizations emerging into the global market and has been instrumental in leading them toward becoming global learning organizations. She has worked extensively with technical managers and technical employees in Asia and Europe in leadership education and training and technical employee skill development. Dr. Parker's academic experience includes teaching adult learning and leadership theory and practice, staff development and training, and organizational development, in graduate programs at Teachers College/Columbia University and St. Mary's University of Minnesota using totally online format, totally classroom format and blended delivery. She also teaches College Physics and Astronomy at Muhlenberg College in Pennsylvania, She has presented numerous papers at conferences globally including the Academy of Management, American Association of Physics Teachers, American Society of Training and Development, College Industry Education Conference, Quality and Productivity Management Association, Business and Multimedia Conference in Ireland, Lisbon 2000 European Conference on ODL Networking for Quality Learning, and World Open Learning for Business Conferences in the UK. She has authored numerous articles in publications including the Compendium on Uses of Distance Learning Technologies in Engineering Education and the Journal of the International Association for Continuing Engineering Education and book chapters including "Cyber Action Learning and Virtual Project Teams for Leadership and Management Development" with L. Yiu in the book Workplace Training and Learning: A Cross-Cultural Perspective and the chapter "The Online Adult Learner: Profiles and Practices" in Handbook of Research on E-Learning Applications for Career and Technical Education edited by Victor Wang. She has been elected a Fellow of the American Association for the Advancement of Science, and has received the American Association of Physics Teachers Innovative Teaching Award and the Park College Educational Partnership Award.

Mary C. Ware, Ph.D., is a Professor of Education in the Department of Foundations and Social Advocacy at State University of New York—College at Cortland. A native of Virginia, she has degrees from Westhampton College, University of Richmond (VA) (B.S.) and Syracuse University (M.S. and Ph.D.). Her terminal degree is in Instructional Design, Development and Evaluation. In the last ten years, she has been active in developing hybrid courses and teaching online. She has collaborated with her colleague, Dr. M. Stuck on many presentations and publications regarding instructional design and improvement of instruction.

Brief Contents

	х
	or X/
The Conf	ributors xvi
Chapter 1	Working Toward Self-Evaluation Patricia Cranton
Chapter 2	Transformative Learning and Ancient Asian Educational Perspectives 13
	Victor C. X. Wang, and Kathleen P. King
Chapter 3	Philosopher or Philistine? 27 Kerry Lee
Chapter 4	A Productive Decade of Andragogy's History and Philosophy 2000-2009 53
	John A. Henschke
Chapter 5	New Perspectives of Andragogy in Relation to the Use of Technology87
	Lesley Farmer
Chapter 6	Learning Contracts as Part of Instructional Design and Evaluation 107
	Mary Ware
Chapter 7	Evaluation Models for Evaluating Educational Programs 129 Ernest W. Brewer
Chapter 8	Formative and Summative Evaluation in the Assessment of Adult Learning
	James B. Martin, and Royce Ann Collins
Chapter 9	Assessing Adult Learning and Learning Styles 173 E. Paulette Isaac
Chapter 10	Using Assessment to Promote Critical Thinking and Problem Solving
	Skills in Adults 187
	Bridget D. Arend

Chapter 11	Learning the Effectiveness of Instruction Using Principles of Adult Learning 209 Jim Berger
Chapter 12	Assessing Adult Learning in Online Courses 231 Lesley Farmer, and Judith Parker
Index	253

Detailed Contents

	or ····	
The Cont	ributors ·····	··· xvi
	Working Toward Self-Evaluation	
	Kinds of Evaluation of Learning	
1.2	Overview of Kinds of Knowledge	5
1.3	Aligning Kinds of Assessment with Kinds of Knowledge	8
1.4	A Continuum for Moving Toward Self-Evaluation	9
	Recommendations for Practice	
Re	ferences	11
Chapter 2	Transformative Learning and Ancient Asian Educational	
	Perspectives	
	Theoretical Framework	
	Ancient Asian Educational Perspectives	
2.3	Western Concepts of Transformative Learning	18
	Reflections	
	Integration of Educational Perspective in Transformative Learning	
	Recommendations	
Re	ferences	25
Chapter 3	Philosopher or Philistine?	27
3.1	Introduction	
	Background	
	Future Research Directions	
3.4	Conclusion	46
Rei	ferences·····	47
Chapter 4	A Productive Decade of Andragogy's History and Philosophy	
	2000-2009	
4,1	Introduction	53
	Investigating Andragogy's Value 2000-2003	
	Andragogy and Distance Education 2003-2004	
4.4	Hesitations about and New Applications of Andragogy 2005-2006	64
	Peering into a Long Range View of Andragogy 2006-2009	

		Trends of Research	
		Conclusion	
]	Ref	Perences	77
Chapter	5	New Perspectives of Andragogy in Relation to the Use of	
		Technology	
5	5.1	Introduction	37
5	5.2	Technology's Impact on Society	37
5	5.3	Technology and Adult Education	39
5	5.4	Adult Education Responses to Changing Adult Learning Needs) 3
		Trends10	
		Conclusion	
F	Ref	erences 10)3
Chapter	6	Learning Contracts as Part of Instructional Design and	
		Evaluation)7
		Introduction10	
6	5.2	Background10	8
6	5.3	Definitions11	10
6	5.4	Recent Uses of Contracts in Distance and Hybrid Learning11	2
6	5.5	Pros and Cons of Contract Learning/Contract Grading	2
6	5.6	A Specific Instructional Design Problem Proble	.3
		A Contract "How To"	
6	8.6	Pros and Cons of Contract Grading from the Author's Experience11	8
		Student Feedback on Courses Using Contract Grading12	
		Propositions and Recommendations 12	
6	.11	Suggestions for the New User of Contracts 12	3
6	.12	Future Trends 12	5
6	.13	Conclusion 12	6
R	lefe	erences 12	7
Chapter 7		Evaluation Models for Evaluating Educational Programs12	9
		Introduction 12	
7.	.2	Defining Program Evaluation12	9
7.	.3	Uses of Program Evaluation 13	0
		Introducing the Models 13	
7.	.5	Constructional Framework of the CIPP Evaluation Model13	4
		Employing the Kirkpatrick Model 13	
		Outcome-Base Evaluation Processes14	
7.	.8	Advantages and Disadvantages14	8

	Conclusion	
Ref	ferences	149
Chapter 8	Formative and Summative Evaluation in the Assessment of Ad	lu l t
•	Learning	
8.1	Introduction	153
8.2	Background	155
8.3	One Instructor's Journey	160
8.4	Assessment of a Program	167
8.5	Future Trends	169
8.6	Conclusion	169
Ref	ferences·····	170
Chapter 9	Assessing Adult Learning and Learning Styles	173
	Introduction	
	Adult Learning	
	Learning Styles	
9.4	Adult Learning and Learning Styles Assessments	177
	Summary	
Ref	erences	182
Chapter 10	Using Assessment to Promote Critical Thinking and Problem	Solving
	Skills in Adults	_
10	1 Introduction	
	2 The Need for Higher Order Thinking Skills	
	3 Using Assessment to Develop Thinking Skills	
	4 Recommendations for Practice	
	5 Future Trends·····	
	5 Conclusion	
	erences	
Chapter 11	Evaluating the Effectiveness of Instruction Using Principles of	f Adult
	Learning	209
11.1	Introduction	209
	2 What Is Assessment?	
	3 Assessing Cognitive Levels	
11.4	Assessment Activities Within Each Cognitive Level	215
11.5	Instructor Designed Assessments	223
	Authentic Tasks and Their Assessment	
	Future Trends	

Detailed Contents

x

11.8	Conclusion	228
Refe	rences	229
Chapter 12	Assessing Adult Learning in Online Courses	231
12.1	Introduction	231
12.2	Background Overview of Assessment	231
12.3	Determining the Assessment Instrument	238
12.4	Representative Assessment Instruments for Online Use	240
12.5	Making Use of the Data	242
12.6	Case Study in Online Assessment Using an LMS	244
12.7	Online Assessment Trends	247
12.8	Conclusion	251
Refe	rences	251
Index		253