

## **RICHARD E. CLARK**

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### **Home:**

3664 Hightide Drive,  
Rancho Palos Verdes, CA 90274-6135, USA  
Home (310) 377-7220 Cell: (310) 944 2322 Fax (888) 768-3885  
Private E mail: [DickClark@cox.net](mailto:DickClark@cox.net)

### **Office:**

University of Southern California  
Rossier School of Education  
Center for Cognitive Technology  
250 N. Harbor Drive, Suite 309  
Redondo Beach, CA 90277, USA  
Office (310) 379-0844 x200 Fax (310) 372-7788  
E mail: [clark@usc.edu](mailto:clark@usc.edu)  
Web page: [www.cogtech.usc.edu](http://www.cogtech.usc.edu)

### **EDUCATION**

1970 Ed.D. Indiana University (Bloomington). Educational Psychology and  
Instructional Systems Technology  
1965 M.S. University of Pennsylvania, Annenberg School,  
Mass Communications, Journalism  
1963 B.A. Western Michigan University,  
History and Political Science

### **AREAS OF PROFESSIONAL SPECIALIZATION**

Instructional psychology (Instructional theory)  
Cognitive motivation theory  
Use of media (e.g. computers, television) in education and training  
Research and evaluation design for media studies  
Aptitude-treatment Interaction (ATI) research  
Training design for the professions, business and government organizations  
Cognitive task analysis  
The development of advanced expertise  
Gap analysis and performance improvement in organizations

### **PROFESSIONAL EXPERIENCE**

2008 - Present Professor of Clinical Research (by Courtesy), Department of Surgery,  
Keck School of Medicine, University of Southern California  
2005 - Present Co-Director, Center for Cognitive Technology, University of Southern California  
2004-2005 Elected Chair, Faculty Council, Rossier School of Education

1978 - Present Professor of Educational Psychology and Technology  
 Rossier School of Education, University of Southern California

2000-2004 Chair, Division of Learning and Instruction

1992-1996 Department Chair: Educational Psychology and Technology  
 Director, Professional Studies and Community Programs  
 Rossier School of Education, University of Southern California

1982 - Present Chief Executive Officer, Atlantic Training Inc.

1990 - 1992 Member of the Program Board, Visiting Professor, Graduate program in  
 Organizational Psychology, Dublin City University

1974 - 1978 Associate Professor and then Professor of Education and Psychology and Chair,  
 Department of Instructional Technology, Syracuse University

1971 - 1975 Senior Research and Development Associate, Manager, Technology; Director,  
 ERIC Clearinghouse on Information Resources, Stanford University

1970 - 1971 Associate Professor of Communication Studies Co-Director, Center for  
 Communication Research, California State University, Sacramento

1967 - 1970 USOE Pre-doctoral Research Fellow Indiana University

1965 - 1967 Assistant Professor of General Studies Director of Broadcasting Manager,  
 WMUK-FM, Kalamazoo, Western Michigan University

1964-1965 Associate Producer for Television News and Public Affairs,WHYY - TV and  
 WFIL-TV Philadelphia, PA

## **PROFESSIONAL ACTIVITIES**

### **American Educational Research Association**

Co-editor (with G. Salomon) Technology section of Educational Researcher, 1987 - 1989  
 - Consulting editor, *Journal of Educational Psychology*, *Review of Educational Research*,  
*Review of Research in Education* (selected volumes and issues), 1983 to present.  
 Member, Dissertation Awards Committee, 1982 to 2001. Chairperson, Annual  
 Convention Program Committee for Division C (Learning and Instruction), 1986-87;  
 Reader of proposals for Annual Conference Program, Division C, 1873 to present; Chair,  
 International Symposium on Educational Technology, 1987, Acquisition Editor for  
 Television and Education, 1985 -1986. Founding Chairperson, Special Interest Group on  
 Instructional Technology and Media (SIG/ITM), 1978-1979. Elected Fellow, 2008.

### **American Psychological Association**

Elected Fellow, Division 15 (Educational Psychology). Editorial Board Member,  
 Educational Psychologist, 1989 to present; Chair of International Relations Committee,  
 1988 - present, Member, Dissertation Award Committee. 1986 - 2000, Member  
 Executive Committee, Division 15 1986 - 1988.

### **Association of Applied Psychology**

Fellow, 1997 – present

### **Association for Psychological Science**

Founding Fellow, 1992 - present.

### **Association for Educational Communication and Technology**

Annual Young Scholar Award Panel of Judges, 1978 - 1990; Young Researcher Award Panel of Judges (AECT) 1975-1983; *Educational Technology Research And Development*; Member, Consulting Editorial Board, 1988 - 1990; *Educational Communication and Technology Journal* - Member, Editorial Board, 1984 - 87, Associate Editor for Research, 1975-1981, Associate Editor for Theory, 1985 - 1987 *Audio Visual Communication Review* , Consulting Editor, 1973-1975, Research Abstracts Editor, 1972 - 1977, Elected President of the Research and Theory Division, 1976-1977.

### **European Association for Research on Learning and Instruction.**

Invited Speaker, Tubingen Conference, 1987; Aix en Provance Conference, 1993. International Journal of Educational Research, Guest Editor, 1989, 1996.

### **International Congress of Applied Psychology**

North American Delegate, Jerusalem Conference, 1986

### **International Society for Performance Improvement,**

*Performance and Instruction Journal*, Research Review Editor, 1985 to 1990. Handbook of Human Performance Technology, Editorial Board and section editor, 1989 – 1999; Thomas F. Gilbert Distinguished Professional Achievement Award Selection Committee 2005, 2006.

### **United States Government**

U.S. Congress, Office of Technology Assessment, Consultant on Computers in Education 1988-89, Consultant on Distance Learning Evaluation, 1989; U.S. Delegate to UNESCO Conference "Children in an Information Age", Varna Bulgaria, 1986. North Central Regional Educational Laboratory, external evaluator of media research design; National Center for Research to Improve Post-secondary Education (NCRIPAL) University of Michigan, External evaluator of research plans in instructional technology; U.S. Office of Education and assistant Secretary for Education, D.H.E.W. Invited Chair, National Conference on Future Directions for Lifelong Learning Research, October 1977; Peer reviewer for selected proposals, 1976 - 1986. National Institute for Education, Invited Chair, National Conference on Children and Television, January, 1978, Peer reviewer for selected proposals, 1972 - 1976. Appointed to U.S. Army Distributed Learning Advisory Subcommittee, May 2004 to 2007.

### **PROFESSIONAL HONORS AND AWARDS**

2009	Appointed as Senior Consortium Research Fellow, Army Research Institute for the Behavioral and Social Sciences.
2008	Elected Fellow of the American Educational Research Association
2008	Courtesy appointment as Professor of Clinical Research by the faculty of the Department of Surgery, Keck School of Medicine, USC.
2008	Maverick Award for Media Research, U. S. Army Training & Doctrine Command
2007	Outstanding Civilian Service Medal, Department of the Army
2006	ASTD Annual Research Award - American Society for Training & Development

- 2004 Socrates Award for Teaching Excellence, Rossier School Of Education, USC
- 2003 Award of Excellence for “Turning Research into Practice” book by the International Society for Performance Improvement
- 2002 Thomas F. Gilbert Professional Achievement Award, International Society for Performance Improvement
- 2002 Excellence in Research Award, SITE Foundation
- 2002 Presidential Citation for Intellectual Leadership to the President, Officers and Society Members, International Society for Performance Improvement
- 1997 Elected Fellow, Association of Applied Psychology
- 1996 - 2007 Professeur Associé, Université de Montréal, Faculté des sciences de l' éducation. Montréal (Québec), Canada
- 1992 Elected Fellow, Association for Psychological Science
- 1990 - 1992 Visiting Professor, Dublin City University, Ireland, 1990-1992
- 1987 - 1988 Distinguished Visiting Professor, National Institute for Higher Education, University of Limerick, Ireland
- 1985 - 1988 Spanish - North American Joint Committee, Educational Advisor
- 1987 Fulbright Foundation 50th Anniversary Lecturer, Spain.
- 1987 Newport School District, Council of Distinguished Scholars
- 1987 Visiting Professor, Twente University, Netherlands
- 1986 Visiting Professor, University of Witwatersrand, South Africa
- Visiting Professor, University of Murcia, Spain
- 1985 Board of Visitors, University of Minnesota School of Education
- 1985 Elected Fellow of Division 15 (Educational Psychology) of the American Psychological Association
- 1974 - 1978 Visiting Professor, IKIP Jakarta, Jakarta Indonesia
- 1971 - 1972 Visiting Ford Foundation Scholar, Ministry of Education, Bogota, Columbia
- 1968 -1970 U.S. Office of Education Pre-doctoral Research Fellowship at Indiana University
- 1964 - 1965 Annenberg Fellowship for Graduate Studies, University of Pennsylvania

**Lecturing and Advisory Activities (selected)**

- Agency for International Development: Indonesian Educational Technology Project
- California Commission on Post-Secondary Education
- Educational Testing Service, Berkeley, CA
- Electricity Supply Board, Ireland
- European Patent Office, Munich Germany
- Ford Foundation: Fondo De Capacitacion Popular, Bogota, Columbia
- Los Angeles County Superintendents Office
- Los Angeles Police Department
- National Council for Developmental Communication, Karnal India
- Rockefeller Foundation
- San Onofre Nuclear Generating Station
- Southern California Edison Company
- Training and Doctrine Command (TRADOC) U.S. Army
- The Open University, Netherlands
- United Nations Educational and Scientific Organization (UNESCO)

University of Murcia, Spain  
University of Leuven, Belgium

## SELECTED PROFESSIONAL PUBLICATIONS

### Books and Monographs

Clark, R. E. and Estes, F. (2008). *Turning Research into Results: A guide to selecting the right performance Solutions. Second Edition.* Greenwich Conn: Information Age Publishers

Elen, J. and Clark, R. E. (2006) *Handling Complexity in Learning Environments: Research and Theory.* Oxford, GB: Elsevier Science Ltd.

Clark, R. E. (2004) *A Design Document for a Guided Experiential Learning Course.* Technical Report to the United States Army Training and Doctrine Command developed under contract to the Institute for Creative Technologies and the Rossier School of Education at the University of Southern California. URL: [http://www.cogtech.usc.edu/recent\\_publications.php](http://www.cogtech.usc.edu/recent_publications.php)

Clark, R. E. and Estes, F. (2002). *Turning Research into Results: A guide to selecting the right performance Solutions.* Atlanta: CEP Press.

Stolovitch, H., Clark, R. E., & Condly, S. (2002). *Incentives, Motivation and Workplace Performance: Research and Best Practices.* Washington DC: International Society for Performance Improvement.

Clark, R. E. (2001). *Learning from Media: Arguments, Analysis and Evidence.* Greenwich, Conn: Information Age Publishers. ISBN 1-930608-77-2

Clark, R. E. (1992) *Managing Effective Training Design,* Dublin, Ireland: ESB International.

Clark, R. E. (1991) *Designing Effective Training,* Los Angeles: ATI, Inc.

Clark, R. E. (1989) *Evaluating Distance Learning Technology.* Monograph. Washington, D.C.: U.S. Congress, Office of Technology Assessment.

Clark, R. E. (July, 1987) *Improving University Teaching.* Monograph published by Academic Staff Development Centre, Johannesburg: University of the Witwatersrand Press.

Clark, R. E. (1979) *Children's television: The best of ERIC.* Syracuse N.Y.: The ERIC Clearinghouse.

Clark, R. E. (1978) *The growth and impact of instructional technology since the Tickton report.* Monograph published by the United States Office of Education, Commission on Instructional Technology.

Clark, R. E. (1978) *Educational technology research requirements,* Monograph. Washington, D.C.: Division of Educational Technology, United States Office of Education.

Clark, R. E. (November, 1978) *The relationship between television viewing and school performance: Recommendations for an NIE research agenda*. Invited policy monograph published by the National Institute of Education (DHEW).

Clark, R. E. (June, 1978) *An approach to research on learning opportunities for adults*. Monograph published by The Lifelong Learning Project, Office of the Assistant Secretary for Education, (DHEW).

Clark, R. E. (September, 1978) *Schooling and leisure time uses of television: A proposed research agenda*. Monograph published by the National Institute of Education (In collaboration with Comstock, G., Dorr, A., Hornick, R., Levie, H., Medrick, E. and G. Salomon)

Clark, R. E. (September, 1975) *Instructional technology and media for post secondary alternatives*, Sacramento, California: The Post-secondary Education Committee of the California State Assembly. (In collaboration with David Rubin).

Clark, R. E. (1975) *Sources of information about aptitude-treatment interactions*. Washington D.C.: Association for Educational Communications and Technology.

Clark, R. E. (1975) *Technicas de Identificacio de Problemas*, Bogota: Colombia, Fondo de Capacitacion Popular.

Clark, R. E. (1973) *Recent trends in computer assisted instruction*. Syracuse, New York: ERIC Clearinghouse on Educational Media and Technology.

### **Chapters in Published Books**

Clark, R. E. (In Press for 2012) Disagreement About the Benefits of Different Levels of Instructional Guidance. In, Reiser, R.A., & Dempsey, J.V. (Eds.). *Trends and Issues in Instructional Design and Technology (3rd ed.)*. Upper Saddle River, NJ: Pearson Education.

Clark, R.E. and Clark, V. P. (In Press for 2010). From Neobehaviorism to Neuroscience: Perspectives on the Origins and Future Contributions of Cognitive Load Research. In Plass, J., Moreno, R., and Brünken (Eds.) Perspectives, problems and future directions in cognitive load research. New York: Cambridge University Press. 203- 228.

Clark, R. E., Yates, K., Early, S. & Moulton, K. (2010). An Analysis of the Failure of Electronic Media and Discovery-based learning: Evidence for the performance benefits of Guided Training Methods. In Silber, K. H. & Foshay, R. (Eds.). *Handbook of Training and Improving Workplace Performance, Volume I: Instructional Design and Training Delivery*. New York: John Wiley and Sons. 263-297.

Sullivan, M. E., Yates, K. A., Baker, C. J., & Clark, R. E. (2010). Cognitive task analysis and its role in teaching technical skills. In Tsueda, S., Scott, D. and Jones. D. (Eds.). *Textbook of Simulation, Skills and Team Training*. Woodbury, CT: Cine-Med.

Clark, R. E. (2009), How much and what type of guidance is optimal for learning from instruction? In Tobias, S. and Duffy, T. M. (Eds.) *Constructivist Theory Applied to Instruction: Success or Failure?* New York: Routledge, Taylor and Francis. 158 – 183.

Clark, R. E. (2008). Resistance to change: Unconscious knowledge and the challenge of unlearning. In, Berliner, D. C. and Kupermintz, H. (Eds.). *Changing Institutions, Environments and People*. New York: Rutledge, 75-94.

Clark, R. E. (2008) Instructional strategies guideline's, In O'Neil, H. (Ed.), *What works in distance learning: Sample lessons based on guidelines*. . Greenwich, Connecticut: Information Age Publishers. 43 – 60.

Clark, R. E., Feldon, D., vanMerriënboer, J., Yates, K, and Early, S. (2008). Cognitive Task Analysis. In Spector, J. M., Merrill, M. D., van Merriënboer, J. J. G., & Driscoll, M. P. (Eds.) *Handbook of research on educational communications and technology* (3<sup>rd</sup> ed.). Mahwah, NJ: Lawrence Erlbaum Associates. 577-593.

Clark, R. E. (2006). Not knowing what we don't know: Reframing the importance of automated knowledge for educational research. In, Clarebout, G. and Elen, J. *Avoiding Simplicity, confronting complexity: Advances in studying and designing (computer based) powerful learning environments*. ISBN 90-77874-43-7. Sense Publishers, Rotterdam. 3 – 15.

Clark, R. E. and Elen, J. (2006). When Less is More: Research and Theory Insights about Instruction for Complex Learning, in Elen, J. and Clark, R. (Eds). *Handling Complexity in Learning Environments: Research and Theory*. Oxford: Elsevier Science Limited. 283-297.

Feldon, D. F., & Clark, R. E. (2006). Instructional implications of cognitive task analysis as a method for improving the accuracy of experts' self-report. In G. Clarebout & J. Elen (Eds.), *Avoiding simplicity, confronting complexity: Advances in studying and designing (computer-based) powerful learning environments*, Rotterdam, The Netherlands: Sense Publishers. 109-116.

Elen, J. and Clark, R.E. (2006). Setting the stage: Complexity and Learning Environments. In Elen, J. and Clark, R. E. (Eds.). *Handling complexity in learning environments: Research and Theory*. Oxford: Elsevier Science Ltd, 1-13.

Clark, R. E., Howard, K. and Early, (2006). Motivational challenges experienced in highly complex learning environments. In Elen, J. and Clark, R. E. (Eds.). *Handling complexity in learning environments: Research and Theory*. Oxford, G.B.: Elsevier Science Ltd, 27-43.

Clark, R. E. (2006). Motivating Individuals, Teams and Organizations. In Pershing, J. (Ed.). *Handbook of Human Performance Improvement, Third Edition*. San Francisco: Jossey-Bass

Pfeiffer, 268-286.

Clark, R. E., Feldon, D., Howard, K. and Choi, S. (2006). Five critical issues for web-based instructional design research and practice. In O'Neil, H. and Perez, R. (Eds.). *Web-based learning: Theory, Research and Practice*. Mahwah NJ: Lawrence Erlbaum Associates. 343-370.

Clark, R. E., Bewley, W. L., and O'Neil, H. (2006). Heuristics for selecting distance or Classroom settings for courses. In O'Neil, H. and Perez, R. (Eds.). *Web-based learning: Theory, Research and Practice*. Mahwah NJ: Lawrence Erlbaum Associates. 133-142.

Clark, R. E. (2005) How to turn research into successful practice: A technology of performance design for organizations, teams and individuals. In Sugrue, B. and Carliner, S. (Eds) *Research to Practice*. American Society for Training and Development. 9 – 18. ISBN 105826-417-3

Clark, R. E. & Feldon, D. F. (2005). Five common but questionable principles of multimedia learning. In Mayer, R. (Ed.) *Cambridge Handbook of Multimedia Learning*. Cambridge: Cambridge University Press. 97-117.

Clark, R. E. (2005). What Works In Distance Learning: Instructional Strategies. In, O'Neil, H. (Ed.) *What Works in Distance Learning: Guidelines*. Greenwich, Connecticut: Information Age Publishers. 25 – 40.

Clark, R. E. (2005). What Works In Distance Learning: Motivation Strategies. In, O'Neil, H. (Ed.) *What Works in Distance Learning: Guidelines*. Greenwich, Connecticut: Information Age Publishers. 89 - 110.

Clark, R. E. (2003) Research on Web-based Learning: A half-full glass. In Bruning, R. Horn, C. A., & PytlikZillig, L. M. (Eds.) *Web-Based Learning: What do we know? Where do we go?* Greenwich, Conn: Information Age Publishers, 1-22.

Clark, R. E. and Morrison, G. (2002) Media and Learning. In J. W. Guthrie (Ed.). *Encyclopedia of Education, Second Edition*. New York: Macmillan Reference USA.

Clark, R. E. (2001). Educational Media. In N. J. Smelser and Paul B. Baltes (editors) 2001 *International Encyclopedia of the Social & Behavioral Sciences*. Pergamon, Oxford. 4279-4283.

Clark, R. E. (2001). What is next in the media and methods debate? In R. E. Clark (Ed.). *Learning from Media*. Greenwich Conn: Information Age Publishers, Inc., 327-337,

Clark, R. E. (2000). Educational media, for Smelzer, N. and Baltes, P. (Eds.) *International Encyclopedia of the Social and Behavioral Sciences*. Oxford, G.B.: Elsevier Science Ltd, 725-730.

Sugrue, B. and Clark, R. E. (2000), Media Selection for Training. In, Tobias, S. and Fletcher, D. (Eds.), *Training Handbook*, New York: Macmillan

Clark, R. E. (1999), Yin and Yang Cognitive Motivational Processes Operating in Multimedia Learning Environments. In van Merriënboer, J. (Ed.) *Cognition and Multimedia Design*. Herleen, Netherlands: Open University Press. 73 – 107.

Clark, R. E. (1999), The cognitive sciences and human performance technology. In Stolovitch, H. and Keeps, E. (Eds.) , *Handbook of Human Performance Technology: Second Edition*. 82-95. San Francisco: Jossey Bass.

Clark, R. E. (1999) The CANE model of motivation to learn and to work: A two-stage process of goal commitment and effort. Lowyck, J. (Ed.) *Trends in Corporate Training*. Leuven Belgium, University of Leuven Press.

Clark, R. E. (1998) Motivation Systems. In D. Langdon, K. Whitesides & M. McKenna (Eds) *Intervention Resource Guide: 50 Performance Improvement Tools*. 227-236.

Clark, R. E. (1998) Bloodletting, media and learning. In Russell, T. L. (Ed.) *The No Significant Difference Phenomenon*. Raleigh, NC: North Carolina State University Press.

Clark R. E. & Blake. S. (1997) Analyzing cognitive structures and Processes to Derive Instructional Methods for the Transfer of Problem Solving Expertise, S. Dijkstra and N. M. Seel (Eds.) *Instructional Design Perspectives. Volume II, Solving Instructional Design Problems*. Oxford, Pergamon. 183-214.

Clark, R. E. (1995) A History of Instructional Psychology, In T. Heusen, T. N. Postelwait (Eds.) *The International Encyclopedia of Education, Second Edition*. Oxford: Pergamon.

Clark, R. E. (1995). Media and Learning, In T. Heusen, T. N. Postelwait (Eds.) *The International Encyclopedia of Education, Second Edition*. Oxford: Pergamon.

Clark, R. E. (1994) Assessment of Distance Learning Technology, In Baker, E.L., O'Neil, H.F. Jr. (Eds.), *Technology Assessment*. Hillsdale, N.J.: Lawrence Erlbaum.

Clark, R. E. (1992), Facilitating domain-general problem solving: Computers, cognitive processes and instruction. In E. DeCorte, M. C. Linn, H. Mandl, and L. Verschaffel (Eds.), *Computer-based learning Environments and problem solving*, New York: Springer-Verlag. pp. 265-285.

Clark, R. E. (1992) Six definitions of media in search of a theory, In D. P. Ely and B.B. Minor (Eds.) *Educational Media and Technology Yearbook, 1992. Volume 18*, Littletown Co: Libraries Unlimited Inc.. pp. 65-76.

Clark, R. E. & Terry Craig, (1992) Research and theory on multimedia learning effects. In M. Giardina (Ed.) *Interactive Multimedia Learning Environments*. New York: Springer Verlag.

- Clark, R. E. (1992), Media use in education, In Alkin, M. (Ed.), *Encyclopedia of Educational Research, Sixth Edition*, New York: Macmillan. pp. 805-814.
- Clark, R. E. (1991) Designing for meaningful learning and transfer. In P. DePotter, J. Lowyck and J. Elen (Eds.) *Instructional Design: Implementation Issues*. LaHulpe Belgium: International Business Machines. 91-109.
- Clark, R. E. (1991), Ten cognitive science principles for human performance technologies. In Stolovitch, H. & Keeps, E. (Eds.), *Handbook of Human Performance Technology*. New York: Macmillan.
- Clark, R. E. (1989), When Teaching Kills Learning: Research on Mathemathantics., In H.N. Mandl, N. Bennett, E. de Corte and H.F. Freidrich, *Learning and Instruction. European Research in an International Context. Volume II*. London: Pergammon Press Ltd. 1-22.
- Clark, R. E. & Sugrue, B. (1989), Research on Instructional Media, 1978-1988. In Ely, D. (Ed.) *Educational Media Yearbook 1988-89*. Littleton, Co.: Libraries Unlimited. Major responsibility.
- Clark, R. E. (1989), Recent Directions in Media and Technology Evaluation, *Educational Media Yearbook 1990*. Littleton, Co.: Libraries Unlimited.
- Clark, R. E. (1989) The singer as Iconoclast: Six arguments about the use of video disk for teaching. In Simonson, M. R. and D. Frey (Eds.), *1989 Proceedings of Selected Paper Presentations of the Research and Theory Division*. Washington, D.C.: Association for Educational Communication and Technology. 111 - 121.
- Clark, R. E. (1988) The Future of Technology in Educational Psychology, In Wittrock, M.C. and F. Farley, (Eds.), *The Future of Educational Psychology*, Hillsdale, N.J.: Lawrence Erlbaum Publishers.
- Clark, R. E. (1987) The role of media in the evaluation of training. In May, L., Moore, C. A. & S. Zammit (Eds.) *Issues in Evaluating Business and Industry Training*. New York: Kluwer-Ninjhof Publishing. 154-167.
- Clark, R. E. & Gavriel Salomon (1986) Media in teaching. In M. Wittrock (Ed.) *Handbook of Research on Teaching*, Third Edition. New York: Macmillan, 464-478.
- Clark, R. E. (1982) The Indonesian Educational Communication Technology Project (ECTP). In Brown, J. (Ed.) *Educational Media Yearbook, 1982* Littleton, CO: Libraries Unlimited.
- Clark, R. E. (1980) What aptitude-treatment interaction research has to offer the educational media producer. Invited chapter for Brown, J. (Ed.) *Educational Media Yearbook, 1980*, Littleton, CO: Libraries Unlimited.
- Clark, R. E. (1978) Research on visual instruction and visual aptitude. In Sullivan, A.M. (Ed.)

*Experimental research on video-taped instruction*, Social Science and Humanities Research Council and Memorial University, St. Johns, Newfoundland.

Clark, R. E. (1978) Research on Television, In: Brown, J. (Ed.) *Educational Media Yearbook, 1978*. Bowker Publishing Company.

Clark, R. E. (1978). Five promising directions for media research. In Brown, J. (Ed.) *Educational Media Yearbook, 1978*, Bowker Publishing Co.

Clark, R. E. (1976) Research and practice in instructional media. In J. Edwards (Ed.), *The Handbook of Contemporary Education*. New York: R.R. Bowker Company.

Clark, R. E. (1974) Information resources: A new ERIC clearinghouse, In J. Brown (Ed.), *Educational Media Yearbook 1974*, New York: Bowker, 99-105.

Clark, R. E. (November, 1972) Research on instructional media. In C. Bailey (Ed.), *Communication and Educational Redesign*. New York: New York State Educational Communication Association.

#### **Refereed and Invited Journal Articles:**

Sweller, J., Clark, R. E. and Kirschner, P. (In Press for 2010). Teaching general problem-solving skills is not a substitute for, or a viable addition to, teaching mathematics. *Notices of the American Mathematical Society*. 57(7).

Pugh, C. M., Santacaterina, S., DaRosa, D. A. and Clark, R. E. (In Press for 2010) Intra-operative Decision Making: More than meets the eye. *Journal of Biomedical Informatics*.

Clark, R. E. (2009) A' la recherché des ingrédients actifs de l'apprentissage (In search of the active ingredients of learning). *Distances et Savoirs*. 7(1). 113-124.

Clark, R. E. (2009) Évaluer l'enseignement à distance. Stratégies et avertissements (Evaluating distance education. Strategies and cautions), 7(1). 93 – 112.

Clark, R.E. (Spring 2009) How do we learn? *Canadian Journal of Learning and Technology*, 12 – 14.

Clark, R. E. (2009). Translating Research into New Instructional Technologies for Higher Education: The Active Ingredient Process. *The Journal of Computing in Higher Education*. 1(1). 4-18.

Clark, R. E. (2009) Q&A with Ed Tech Leaders: Richard E. Clark. *Educational Technology*. 49(1). 40-44

Sullivan, M., Ortega, A., Wasserberg, N., Kaufman, H., Nyquist, J., & Clark, R. E. (2008), Can

cognitive-task analysis add to our traditional teaching methods. *The Journal of Teaching and Learning in Medicine*. 20(1). 92 – 97.

Clark, R.E. (May-June, 2008). What evidence would change your mind about the learning benefit of serious games? *Educational Technology*. 56-57.

Sullivan, M., Ortega, A., Wasserberg, N., Kaufman, H., Nyquist, J., & Clark, R. E. (2008), Assessing the teaching of procedural skills: Can cognitive task analysis add to our traditional teaching methods? *The American Journal of Surgery*. 195, 20-23.

Dean, A. C., Keim, R. G., Clark, R. E., & Hyatt, B. M. (2007). Limits on the generalizability of the relationship between state anxiety and categorization: Moderation by feature salience. *Personality and Individual Differences*. 42(2).

Sweller, J., Kirschner, P. A. and Clark, R. E. (2007) Why minimally guided teaching techniques do not work. *Journal of Educational Psychology*, 43(2), 115 – 121.

Clark, R. E. and Choi, S. (2007) The questionable benefits of pedagogical agents. *Journal of Educational Computing Research*. 36(4), 379-381

Clark, R. E. (May-June, 2007) Learning from serious games? Arguments, evidence and research suggestions. *Educational Technology*. 56 – 59.

Choi, S. and Clark, R. E. (2006), Cognitive and affective benefits of animated pedagogical agents for learning English as a second language. *Journal of Educational Computing Research*, 33(2). 455-480.

Kirschner, P., Sweller, J. and Clark, R. E. (2006). Why minimally guided learning does not work: An analysis of the failure of discovery learning, problem-based learning, experiential learning and inquiry-based learning. *Educational Psychologist*. 41(2), 75-86.

Clark, R. E. and Choi, S. (2005). Five design principles for experiments on the effects of animated pedagogical agents. *Journal of Educational Computing Research*. 32(3). 209-225.

Clark, R. E. (2005) Flying planes can be expensive (and dangerous): Do media cause learning or sometimes make it less expensive (and safer)? *Educational Technology*, 52-53.

Clark, R. E. (January 2005) Five Research-Tested Group Motivation Strategies. *Performance Improvement Journal*. 13-17.

Grunwald, T., Clark, R. E., Fisher, S., McLaughlin, M. Narayanan, S. and Piepol, D. (2004). Using cognitive task analysis to facilitate collaboration in development of simulators to accelerate surgical training. In: *Proceedings of the Annual Medicine Meets Virtual Reality (MMVR) conference*. 114-120.

- Clark, R. E. (October 2004). Good news and bad news about learning, motivation and instruction. *UrbanEd*. 16-20.
- Velmahos, G. C., Toutouzas, K. G., Sillin, L. F., Chan, L., Clark, R. E. Theodorou, D. and Maupin, F. (2004) Cognitive task analysis for teaching technical skills in an inanimate surgical skills laboratory. *The American Journal of Surgery*. 18. 114-119.
- Clark, R. E. (May 2004). See the forest, tend the trees: Analyzing and Solving Accountability Problems. *UrbanEd*.
- Clark, R. E. (May-June 2004). Debate, Dialogue and Conceptual Change: A reply to Wilson et. al. *Educational Technology*. 60-62.
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### **Technical Reports**

Clark, R. E. (2007). *The use of cognitive task analysis and simulators for after action review of medical events in Iraq*. Report submitted under contract W81XWH-04-C-0093 from U.S Army Medical Research and Materiel Command to the Center for Cognitive Technology, Rossier School of Education, University of Southern California.

Clark, R. E., Pugh, C. M., Yates, K. A. and Sullivan, M. (June 2008). The use of cognitive task analysis and simulators for after action review of medical events in Iraq. Technical Report 5-21-2008 developed for the Center for Cognitive Technology, Rossier School of Education, University of Southern California. [www.cogtech.usc.edu](http://www.cogtech.usc.edu)

### **Op Ed and Non Refereed Articles (Recent and Selected)**

Clark, R. E. (September-October, 2009) Multimedia Learning Second Edition: A Review. *Educational Technology*. 49(5). 59-61.

Clark, R. E. (August 2005) Why minimal guidance during training does not work. *International Society for Performance Improvement, Science Community Newsletter*, 1(1). 2-3.

### **Refereed and invited paper presentations (Selected)**

Clark, R. E. (2010) Research on Training and Development: What have we learned about the ADDIE Model? Invited presentation to the ICT NCOE Immersive Training Workshop. Marina Del Rey, CA, January 26, 2010.

Clark, R.E. (2010) What's New in Training and Development? Invited presentation to the Annual Conference and Trade Show of the Human Resources Professional Association (HRPA), Toronto, Canada, January 28, 2010.

Clark, R. E. (2010) Cognitive Task Analysis. Invited presentation to the Annual Conference and Trade Show of the Human Resources Professional Association (HRPA), Toronto, Canada, January 28, 2010.

Clark, R. E. (2009). Past and future research in online education. Invited address to the American Educational Research Association Annual Meeting. San Diego, CA. April 15, 2009.

Clark, R. E. (2009) Adaptability Research: Results and Design Issues. Presentation to an Invitational ICT Research Conference. Marina Del Rey, CA. April 10, 2009.

Pugh, C., DaRosa, D., Santacaterina, S. and Clark, R. E. (2009) Faculty Evaluation of Newly

Developed Instructional Modules for Teaching and Assessing Intra-operative Judgment. Annual conference of the Association of Program Directors in Surgery, Salt Lake City, Utah, 28 April, 2009.

Clark, R. E. (2009). Research on Teaching for Adaptability. Paper presented at the Annual Meeting of the American Psychological Association, Toronto Canada, August 7, 2009.

Pugh, C., DaRosa, D. and Clark, R. E. (2009) The Theoretical Basis for Fabricating High Fidelity Simulation Tools for Honing Complex Surgical Skills. Paper presented to the annual Clinical Conference of the American College of Surgeons, October 11, 2009.

Clark, R. E. (2009) Five Research-Based Principles to Consider When Training for Adaptability. Invited address to the Human Social Cultural Behavior Modeling Association (HSCB) meeting “Developing Intercultural Adaptability”, November 4-5, 2009 in Orlando, Florida.

Sullivan, M. E., Yates, K. A., & Clark, R. E. (2009). Cognitive task analysis in medical education: Where we are and where we are headed. Invited address to the Innovations in Medical Education Conference. Los Angeles: March, 2009.

Clark, R. E., Pugh, C, Yates, K, & Earli, S. (2008), The Use of Cognitive Task Analysis and Simulators for After Action Review of Medical Events in Iraq. Paper read at the annual convention of the American Educational Research Association, April, New York, NY.

Condly, S., Clark, R. E., & Stolovitch, H., (September, 2006) Incentives and workplace performance: research, practice, and guidance from the PIBI model. Paper read at the annual meeting of the International Conference on Motivation, Landau Germany.

Clark, R. E. (September, 2006) Invisible Pedagogy: Why We Ignore Effective Methods for Distance Education. International Society for Performance Improvement annual conference. Montreal, Quebec, Canada

Clark, R. E. (August, 2006) Evaluating the learning and motivation effects of serious games. Invited presentation to the researchers of the Institute for Creative Technologies, University of Southern California as part of the ICT Seminar Series.

Clark, R. E. (August, 2006). Learning Model. Invited keynote address at the Science of Learning Workshop, Institute for Defense Analysis and Army Research Institute, Hampton VA, August 1, 2006.

Clark, R. E., Early, S. & Yates, K. (August 31, 2006) The Suspension of Disbelief: Effects of Mediated “Presence“ on Motivation and Learning. Invited presentation to the researchers of the Institute for Creative Technologies as part of the ICT Seminar Series.

Clark, R. E. (July, 2006) The Army's New Training Design and Performance Analysis System. Invited presentation to the researchers of the Institute for Creative Technologies, University of Southern California as part of the ICT Seminar Series.

Clark, R. E. (June 2006). Not Knowing What We Don't Know: The Impact of Automated Knowledge on Our Understanding of Learning and Instruction. Invited keynote address to the European Association for Learning and Instruction. Leuven Belgium, June 21, 2006.

Feldon, D. and Clark, R. E. (June 2006). Instructional implications of task analysis for improving experts self report. Presentation to the European Association for Learning and Instruction. Leuven Belgium, June 21, 2006.

Clark, R. E. (May, 2006) Research on the design of technology-based training. Invited address to the Immersive Training Seminar, Institute for Creative Technologies, University of Southern California. May 19, 2006.

Pugh, C. & Clark, R. E. (April, 2006) Use of Cognitive Task Analysis and Simulators to Reduce Errors in Surgical Training. Paper presented in a symposium at the annual meeting of the American Educational Research Association in San Francisco, CA, April 10, 2006.

Clark, R. E. (March, 2006) Research on Motivation for Learning and Performance. Invited presentation to the researchers of the Institute for Creative Technologies, University of Southern California as part of the ICT Seminar Series.

Clark, R. E. (March, 2006) The Changing Face of Learning Technologies. Invited keynote address to the annual ISA Conference. Phoenix, AZ.

Clark, R. E. (February, 2006) A cognitive model of learning and expertise development. Invited presentation to the researchers of the Institute for Creative Technologies, University of Southern California as part of the ICT Seminar Series. February 13, 2006.

Clark, R. E. (January, 2006). Critical Thinking: Research and Practice. Invited presentation to the researchers of the Institute for Creative Technologies, University of Southern California as part of the ICT Seminar Series.

Clark, R. E. (December 2005). Research-based design standards for distributed learning. Invited International Video Teleconference presentation, USC Institute for Creative Technology, Maria del Rey California, December 9, 2005.

Clark, R. E. (October 2005). The bad news about instructional systems and how to make it better. Invited keynote address to the International Society for Performance Improvement annual Advocates Meeting, Costa Mesa California, October 2, 2005.

Clark, R. E. (October 2005). Managing organizational performance: What works? Invited afternoon address to the board of directors of the Albuquerque Chapter of the International

Society for Performance Improvement, Albuquerque, New Mexico, October 11, 2005.

Clark, R. E. (October 2005). Guided Experiential Learning: Training Design and Evaluation. Invited address to the Secretary of The Army's Distance Learning Subcommittee. Williamsburg Virginia, October 5, 2005.

Clark, R. E. (October 2005) Managing performance: Where have we gone wrong and what can we do about it? Invited evening address to the membership Albuquerque Chapter of the International Society for Performance Improvement, Albuquerque, New Mexico, October 11, 2005.

Clark, R. E. (September 2005). What's New in Instructional Systems Research? Invited keynote address to the Annual Fall Conference of the International Society for Performance Improvement, Las Vegas Nevada, September 19, 2005.

Clark, R.E. (September 2005). Assessment insights from the use of cognitive task analysis to study expertise development. Invited address to the 2005 CRESST conference. Los Angeles California, September 8, 2005.

Clark, R. E. and Pugh, C. (July 2005). Use of cognitive task analysis in surgical simulations. Invited address to the Office of Naval Research Conference titled "Metrics for evaluating performance in simulations". Redondo Beach California, July 12, 2005.

Clark, R. E. (June 2005) Turning Research into Successful Practice, Invited keynote address to the American Society for Training and Development's International Conference and Exposition, Orlando Florida, June 5<sup>th</sup>, 2005.

Clark, R. E. (May 2005). Guided Experiential Learning for Leadership Training. Invited address to the Army Senior Leadership Conference, Nashville Tennessee, May 30, 2005.

Clark, R. E. (May 2005). Research on the design of technology-based training. Invited International Video Teleconference presentation, USC Institute for Creative Technology, Maria del Rey California, May 13, 2005.

Clark, R. E. and Feldon, D. (February 2005). Cognitive task analysis and simulators for after action reviews of medical events. Invited address to the annual meeting of the Telemedicine and Advanced Technology Research Center (TATRC), Marina del Rey, California, February 15, 2005.

Clark, R. E. (January 2005) Guided Experiential Learning. Invited International Video Teleconference presentation, USC Institute for Creative Technology, Maria del Rey California, January 12, 2005.

Clark, R. E. (2004) Designing Case Studies for Training. Invited presentation to the senior training designers at Fort Bliss, Texas, December 15, 2004.

Clark, R. E. (2004). Media as a Causal Variable in Research on Learning. Invited Video Tele Conference Presentation to the University of Maastricht, Netherlands “Master Class Series” from USC. November 18, 2004

Clark, R. E. (2004). Research on the Design of Technology-Based Training. Invited address given by Video Tele Conference to Army TRADOC Training Designers worldwide at the Institute for Creative Technology, Marina Del Rey, CA. May 13 2004

Clark, R. E. (2004). Learning from Media. Invited address given to senior training designers at Fort Leonard Wood Missouri. October 21, 2004

Clark, R. E. (2004) What works in instructional strategies? Paper presented at a symposium titled “Accountable Instruction: Toward the next generation of Distance Learning” at the American Educational Research Association Annual Convention in San Diego California, April 2004.

Choi, S. and Clark, R. E. (2004) Five suggestions for the design of experiments on the effects of animated pedagogical agents. Symposium paper presented at the American Educational Research Association Annual Convention in San Diego California, April 2004.

Clark, R. E. (2004) Experiential learning: Research and best practice. Invited interactive video teleconference address given to Army TRADOC training designers at the Institute for Creative Technology, University of Southern California, March 11, 2004

Clark, R. E. (2004) Learning from Media. Invited address given to the Army Engineer Training Summit, Fort Leonard Wood Missouri, February 18, 2004.

Clark, R. E. (2003) Is Distance Education Equivalent to Classroom Instruction? A review of the Abrami et al Meta Analysis of Distance Education Studies. Invited presentation at the American Educational Research Association Annual Convention in Chicago Illinois, April, 2003

Clark, R. E. (Feb 7, 2003) Six promising directions for web-based learning research. Invited Address to the ONR/NSF Technology Assessment of Web-Based Learning Conference. Redondo Beach California.

Clark, R. E. (March, 2003) Misconceptions about web-based design. Invited address to the Army Training Command (TRADOC) meeting in Venice California.

Clark, R. E. (April 12, 2003) The Fantasy and Fallacy of Downsizing. Invited symposium address to the annual meeting of the International Society for Performance Improvement. Boston Massachusetts.

- Clark, R. E. (April 12, 2003) Cognitive task analysis for training complex knowledge in surgery. Invited symposium address to the annual meeting of the International Society for Performance Improvement. Boston Massachusetts.
- Clark, R. E. & Estes, F. (April 12, 2003) Motivating teams for superior performance. Paper delivered to the annual meeting of the International Society for Performance Improvement. Boston Massachusetts.
- Clark, R. E. (October, 2003) Grocery Trucks and Media Research: The current state of the debate about media and learning. Paper presented at the annual convention of the Association for Educational Communications and Technology (AECT), Anaheim California.
- Clark, R. E. & Choi, S. (October, 2003) Six suggestions for research on animated pedagogical agents. Paper presented at the annual convention of the Association for Educational Communications and Technology (AECT), Anaheim California.
- Wainess, R., Clark, R. E. & O'Neil, H. (October 2003). The relationship of learner control and navigation to cognition and learning. Paper presented at the annual convention of the Association for Educational Communications and Technology (AECT), Anaheim California.
- Clark, R. E. (November 2003) Motivating performance in difficult times: Lessons from research and best practice in motivation. Invited address to the Benchmarking Forum of the American Society for Training and Development. San Diego, California.
- Clark, R. E. (March 1, 2003) How to increase work motivation: Lessons from International Research and Organizational Practice in Motivation. Invited keynote address to the Spring Conference of the Los Angeles Chapter of the International Society for Performance Improvement.
- Clark, R. E., (April 2003) Work Motivation. Invited "Masters" Keynote presentation at the annual meeting of the International Society for Performance Improvement. Boston Massachusetts.
- Clark, R. E. (April 7 2003) Learning from Media: Arguments, Analysis and Evidence. Invited address to the UCLA Spring Colloquium on Applied Human Development. Westwood, California
- Clark, R. E. (May 15, 2003) Misconceptions about web-based instructional design. Invited address to the ICT Immersive Training Workshop, Marina Del Rey California.
- Clark, R. E. (May 2003) Modeling complex surgical skills for training. Invited keynote address to the Association of Residency Directors in Surgery. Vancouver, British Columbia, Canada.

Clark, R E.(May, 2003) Cognitive task analysis and design for complex knowledge. Invited address to a workshop on User Modeling and Education for the Board of the Federation of American Scientists, Seattle Washington.

Clark, R. E. & Feldon, D. (June 2003) Key Ideas and Back Story of the RSOE PhD Program. Invited address to the Carnegie Foundation Initiative on the Doctorate. Palo Alto, California.

Clark, R. E. (August 12, 2003). Inexpensive ways to increase work motivation: Lessons from Research and Organizational Best Practice. Invited address to the Orange County Chapter of the International Society for Performance Improvement. Costa Mesa , California.

Clark, R. E. (September 10, 2003) Learning from Media. Invited participation in a National Army (TRADOC) Teleconference held at Ft. Eustis, Virginia.

Clark, R. E. (2003) Five promising directions for Web-based Instruction Research. Paper presented to the Office of Naval Research – National Science Foundation Conference on Web-Based Learning and Assessment. Redondo Beach, CA. February 6-7.

Clark, R. E. (2002) What does the future hold for web-based education? Invited presentation to the Nebraska Symposium on Information Technology in Education. May 15-17. Lincoln Nebraska.

Clark, R. E. and Farrington, J. (2002) Powerful ideas nobody uses. Paper presentation to the Annual Convention of the International Society for Performance Improvement. April 21-25, Dallas Texas.

Clark, R. E. (2002) Meta-analysis of field and laboratory research on the impact of incentives in performance improvement. Invited address to the Annual Convention of the International Society for Performance Improvement. April 21-25, Dallas Texas

Stolovitch, H., Clark, R. E. and Condly, S. (2002) Incentives study results. Paper presentation to the Annual Convention of the International Society for Performance Improvement. April 21-25, Dallas Texas.

Lin, S-J., Clark, R. E., and Hocevar, D. (2002) An Investigation of Task Interdependence in Group Members' Perceptions of Group Efficacy and Self Efficacy. Invited paper presented at the American Educational Research Association annual convention in New Orleans, LA. April 2002.

Velmahos, G., Toutouzas, K., Sillin, L., Chan, L., Clark, R. E. Theodorou, D., Maupin, F., Murray, J., Sullivan, M, Demetriades, D., DeMeester, T. M. (2002) Cognitive Task Analysis for Teaching Technical Skills in an Animate Surgical Skills Laboratory: A Randomized Controlled Trial With Pertinent Clinical Outcomes. Presented at the 2002 Annual meeting of the Association for Surgical Education, April 4-6, Baltimore Maryland.

Condly, S. and Clark, R. E. (2002) A meta-analytic review of the effects of incentives on learning and performance. Paper presented at the 47<sup>th</sup> annual Florida Educational Research Association Conference. Gainesville, FL.

Clark, R. E. (2001) Learning from Media: What works and what doesn't? Invited address to the Symposium on Assessing the Quality of Online Instruction, Naval Postgraduate school. October 24-45, 2001 Monterey CA

Clark, R. E. (2001) To measure or not to measure. Invited presentation at the annual conference of the International Society for Performance Improvement. San Francisco CA

Clark, R. E. (2001) Incentives and Motivation: What works? Invited presentation at the annual conference of the International Society for Performance Improvement. San Francisco CA

Farrington, J. and Clark, R. E. (2001) Things that make you stupid: Common performance methods that make performance worse. Invited presentation at the annual conference of the International Society for Performance Improvement. San Francisco CA

Clark, R. E. (1999) Research on the costs and benefits of selecting different communication media. Invited paper read at the Shanghai International Studies University Symposium on Communications. October 29, 1999, Shanghai, China.

Clark, R. E. (1999) Developing effective technologies from research and theory. Invited address to the 11<sup>th</sup> Annual Utah State University Instructional Technology Institute. Logan Utah, September 2, 1999.

Clark, R. E. (1999) Research on cognitive processes operating in multimedia learning environments. Invited inaugural address at the Open University of the Netherlands, July 1, 1999. Herleen, Netherlands.

Clark, R. E. (1999) Student self-assessment. Invited presentation to the faculty of Bellevue Community College, Bellevue Washington, April 6, 1999.

Clark, R. E. (1999) A Framework for Cross Discipline Assessment. Invited presentation to the faculty of Bellevue Community College, Bellevue Washington, April 6, 1999.

Estes, F. & Clark, R. E. (1999) Concept Mapping as a Tool for Cognitive Task Analysis. Presentation to the annual meeting of the International Society for Performance Improvement, Long Beach CA, March 24, 1999.

Clark, R. E. (1999) Motivation Research. Presentation to the annual meeting of the International Society for Performance Improvement, Long Beach CA, March 24, 1999.

Clark, R. E. (1999) Developing Effective Performance Technologies for Research and Theory.

Presentation to the annual meeting of the International Society for Performance Improvement, Long Beach CA, March 24, 1999.

Clark, R. E. (1999) Knowledge Types and their Assessment at All Levels. Invited presentation to the faculty of Bellevue Community College, Bellevue Washington, April 26, 1999.

Farrington, J., & Clark, R. E. (1999) Performance Improvement Snake Oil: What the research has to say about popular performance improvement strategies. Presentation to the annual meeting of the International Society for Performance Improvement, Long Beach CA, March 24, 1999.

Blake, S., Clark, R. E. and Baker, R. (1998) Effects of criterial feature salience on schema formation and novel problem solving: Examining the cognitive processes underlying analogical problem solving. Paper presented at the American Educational Research Association convention in San Francisco, California.

Clark, R. E. and Blake, S. (1998) Multimedia and Multi mode effects on learning: Two experiments testing competing claims. Paper presented at the American Educational Research Association convention in San Francisco, California.

Clark, R. E. (February 6, 1998) The latest research on learning and motivation strategies. Invited address to the faculty of Big Bend Community College, Big Bend Washington.

Clark, R. E. (April 2, 1998). How to solve motivation and knowledge problems at work. Invited address to the International Society for Performance Improvement. San Diego, CA.

Clark, R. E. (April 7, 1998) What does research on expertise have to offer teaching. Invited address to the 1998 Teaching Symposium; Focus on Graduate Education, School of Education,

Clark, R. E. (April 24, 1998) The latest research in learning and motivation strategies. Invited address to the faculty of Bellevue Community College, Bellevue, Washington.

Clark, R. E. (May 11, 1998) Does technology really enhance learning? Invited address to the Education Faculty and Graduate Students, UCLA.

Clark, R. E. (September 15, 1998). Motivating your child for success in school. Paper presented at the "Helping Children with Special Needs" conference. Bureau of Jewish Education of Greater Los Angeles.

Clark, R. E. & Blake, S. & Baker, R. (April 1998) Novel problem solving: Examining the cognitive processes underlying analogical problem solving. Paper presented at the annual meeting of the American Educational Research Association in Chicago Illinois.

Clark, R. E. & Blake (April, 1998) Multi media and Multi mode Effects on Learning: Two Experiments testing Competing Claims by Clark and Mayer. Paper presented at the annual meeting of the American Educational Research Association in Chicago Illinois.

Clark, R. E. (May, 1998) Does technology really enhance learning? Invited address to the UCLA Graduate Education faculty and students.

Clark, R. E. (September, 1993) Do Media Influence Learning? Invited paper presented at the international meeting of the European Association for Research on Learning and Instruction. Aix en Provence, France.

Clark, R. E. (April, 1992) Cognitive Performance Interventions for Organisations. Invited address to the Royal Irish Academy of Sciences Conference on Work and Organisational Psychology, Dublin, Ireland.

Clark, R. E. (March, 1992) Effective Training Management. Invited address to the Irish Institute of Training and Development, Cork, Ireland.

Clark, R. E. (September, 1990) Facilitating Domain-General Problem Solving: Computers, Cognitive Processes and Instruction. Invited address to the NATO Advanced Research Workshop on Computers and Problem Solving, University of Leuven, Belgium.

Clark, R. E. (April, 1990) A cognitive theory of instructional design. Paper read at the national convention of the American Educational Research Association, Boston, Massachusetts.

Clark, R. E. (September, 1989). "Helping" Intelligent Students to Become Less Efficient Learners: An experimental study. Paper read at the Biannual meeting of the European Association for Research on Learning and Instruction in Madrid, Spain.

Clark, R. E. (September, 1989) North American Disputes about Research on Learning from Media. Paper read at the Biannual meeting of the European Association for Research on Learning and Instruction in Madrid, Spain.

Clark, R. E. (March, 1989) Metacognitive processes supporting far transfer: Selecting and connecting. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, CA. (In collaboration with S. Blake, S. & V. Knostman)

Clark, R. E. (March, 1989), Cognitive Task Analysis. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, CA. (In collaboration with P. Wendt).

Clark, R. E. (March, 1989) When teaching kills the learning of gifted students. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, CA. (In collaboration with Hession, M. A., Winters, C. & Claire, R.).

Clark, R. E. (1988) Analysis of the research on the contributions of computers to learning from Physics instruction: A counter-intuitive conclusion. Invited paper for the National Science Foundation supported, "Computer in Physics Instruction" conference, August 1 - 2, Raleigh,

North Carolina.

Clark, R. E. (April, 1988) An Experimental Investigation in the Training of Metacognitive Monitoring Skills, Paper presented at the annual meeting of the American Educational Research Association, New Orleans, LA. (With J.A. Dennis).

Clark, R. E. (April, 1987) When Teaching Kills Learning: Types of Mathemathantic Effects. Paper read at the annual meeting of the American Educational Research Association, Washington, D.C. (In collaboration with D. Aster and M.A. Hession).

Clark, R. E. (August, 1987) Research on Information and Education: State of the Art and Future Perspectives. Invited address to the Education Faculty of the University of Leuven, Belgium.

Clark, R. E. (September, 1987) Technology and Instruction: Cognitive and Behavioral Origins. Invited address to the Education faculty of the University of Twente, Netherlands.

Clark, R. E. (October, 1987) The Contributions of Cognitive Psychology to Educational Technology. Invited address to the Councail Interuniversitaire des Professeurs en Technologie Educative (CIPTE), Montreal, Quebec Canada.

Clark, R. E. (April, 1986) Psychological Problems with Research on Learning from Computers, Invited address to the Annual Meeting of the International Applied Psychology Congress, Jerusalem, Israel.

Clark, R. E. (April, 1986) Science, Values and Social Technology, Invited address to the Students and faculty of the California State University at Long Beach in the Symposium "Science, Technology and Social Values".

Clark, R. E. (August, 1985) Problems with Practical Applications of Computer-based Instruction Research. Invited Symposium paper presented to Division 15 of the American Psychological Association's annual convention in Los Angeles, CA.

Clark, R. E. (May, 1985) Research on Learning from Media: The half-full cup. Invited Address to the Institute for Psychology, Free university of Berlin, Berlin, West Germany.

Clark, R. E. (May, 1985) Applying media research to media-based instruction. Invited address to the faculty of the Open University, Milton Keynes, Great Britain.

Clark, R. E. (August, 1985) Communication skills in completing tasks with ambiguous instructions. (August, 1985) Paper presented to Division 15 of the American Psychological Associations annual convention in Los Angeles, CA. (In collaboration with C. Cohen).

Clark, R. E. (May, 1985) Choosing Educational Technologies: Lessons from the Past and Directions for the Future. Invited address to the United Nations Educational Scientific and Cultural Organization (UNESCO) Conference titled: "Children in an Information

Age: Tomorrow's Problems Today", Varna, Bulgaria.

Clark, R. E. (March, 1985) Computer research confounding Paper read at the annual meeting of the American Educational Research Association, Chicago Illinois. (In collaboration with S. Leonard).

Clark, R. E. (March, 1985) Demands for communication skills in ambiguous instructional messages, (March, 1985) Paper read at the annual meeting of the American Educational Research Association, Chicago Illinois. (In collaboration with C. Cohen).

Clark, R. E. (January, 1985) The future of research in Educational Communication and Technology, Invited Presidential Address to the annual convention of the Association for Educational Communication and Technology, Anaheim, CA.

Clark, R. E. (September, 1984) Future trends in media research. Invited keynote address to the Internacional del Video Educativo Convention at the University of Murcia, Spain.

Clark, R. E. (April, 1984) Learning from computers: Theoretical problems, Paper presented at the annual meeting of the American Educational Research Association, New Orleans, LA.

Clark, R. E. (March, 1982) Instructional Methods: Operational Definitions and Criterial Attributes. Invited address presented at the annual meeting of the American Educational Research Association, New York.

Clark, R. E. (March, 1980) Issues in the Transfer of Instructional Technology Between Nations. Presented at the annual conference of the Comparative and International Education Society, Vancouver, B. C. Canada.

Clark, R. E. (March, 1978) The engaging features of broadcast television and their relationship to the engaging features of instruction and schooling. Invited symposium presentation to the American Educational Research Association national Convention, Toronto, Canada.

Clark, R. E. (June, 1976) Interaction designs for research on radio. Presented to the Seminar on Quality in Instructional Radio. Center for International Education, University of Massachusetts, Amherst, Massachusetts.

Clark, R. E. (March, 1976) Clinical models for graduate education in Instructional Technology. Paper Presented at the Annual Convention of the Association for Educational Communications and Technology (AECT). Los Angeles, California.

Clark, R. E. (November, 1973) Instructional Technology: What works? Invited keynote speech presented at the New York State Educational Communications Association Convention at Grossinger's, New York.

Clark, R. E. (May, 1970) Pre-decisional information search as a function of subjective response

uncertainty, importance, prior knowledge and dogmatism. Paper presented at the meeting of the International Communications Association. Minneapolis, Minnesota.

### **COURSES TAUGHT**

Learning Theory  
Motivation Theory  
Organizational Theory  
Motivation Theory and Research Design  
The Development of Advanced Expertise  
Training and Development Systems at Work  
Instructional Theory  
Instructional Technology Research  
Instructional Design for Training  
Research on Media and Technology in Instruction  
Computer Based Training Research  
Analogy and Metaphor in Thinking and Problem Solving  
Individual Differences in Learning and Motivation  
Communication Theory  
Research on Problem Solving  
Uncertainty and Creativity  
Aptitude-Treatment Interaction Research  
Evaluation Design  
Statistics and Research Design