

Dr. Roy B. Clariana

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Education

1986-1990 Ed.D., Curriculum and Instruction (with emphasis in Instructional Design and Technology); Memphis State University

1973-1979 B.S., Biology; M.S., Biology Education
University of Central Arkansas

Professional Experience

1997-present *Professor, Learning Design and Technology, Department of Learning and Performance Systems, College of Education, Penn State University*

2007-2010 *Division Head, School of Graduate Professional Studies, Pennsylvania State University.*

1992-1997 *C&I Specialist, Project Director, Field Director (UK)
Jostens Learning Corporation (CompassLearning LLC*), San Diego, CA*

1991-1992 *Education Consultant
WICAT Systems, Inc., Orem, UT (JLC acquired WICAT in 1992)*

1990-1991 *Training Analysis Manager and Manager of Quality Systems
Rocky Flats Nuclear Weapons Facility, EG&G Inc., Golden, CO*

1985-1990 *Graduate Research Assistant, Memphis State University
Technology Coordinator (K-8), St. Anne's Elementary School*

1988 *Executive Program Assistant, Katmandu, Nepal, U.S. Peace Corps*

1984 *Training Director, U.S. Peace Corps, Lilongwe, Malawi*

1982-1984 *Technical Coordinator and Assistant Training Director, U.S. Peace Corps, multiple locations, Kenya*

1979-1982 *Peace Corp Volunteer, Biology teacher; Iten, Kenya*

Thesis Chair or Adviser

- Gustavo Presteria – *Context effects of color on recall: border color as a lesson and posttest cue for factual and conceptual information presented in computer-based instruction*, 2003. (adviser) [link](#)
- John C. Rubisch – *Enhancing social perspective taking in delinquent adolescents through cognitive flexibility in a hypermedia program*, 2004. (adviser) [link](#)
- Lu Bai – *Parallel-pattern versus linear-pattern discussion online collaborations*, 2013. (both) [link](#)
- Dana Webber – *Using technology to develop a collaborative-reflective teaching practice toward synthe-cultural competence: An ethnographic case study in world language teacher preparation*, 2013. (chair) [link](#)
- General Ntsinglinsi – *Instructional effects of conceptual change-oriented refutation text on different types of knowledge*, 2014. (both) [link](#)

Professional Activities

- Editorial Review Board, *Educational Technology Research and Development* (ETR&D, Research Section), 2004 – 2006; 2009 – 2011
- Consulting Editor, *Educational Technology Research and Development* (ETR&D, Development Section), 2001 – present.
- Consulting Editor, *British Journal of Educational Technology* (BJET), 1998 – present.
- *Ad hoc* reviewer: AECT Young Scholar (Manuscript Award for the Association for Educational Communications), *Instructional Science*, *Journal of Information Systems Education*, *Journal of Veterinary Medical Education*, *JURE:EARLI* (European Association for Research on Learning and Instruction), *Language Learning and Technology*,
- Present or past member: AECT, AERA, and APA

Awards

- Fulbright Teaching and Research Award, University of Oulu, Finland, January-June, 2005.
- Research Reviewer Award, *Educational Technology Research and Development*, 1999.
- Software Excellence Award from *Technology and Learning* magazine for *VITAL Tools* web-based software, 1998.
- Graduate Student Research Forum, Memphis State University, first place, 1990.
- Constance Dorothea-Winemann Scholarship for Outstanding Doctoral Students in Instructional Design, 1990.
- Take Pride in America, Federal/Education Division, Curriculum developer of Tennessee Valley Authority's Environmental Curriculum, *TVA: A World of Resources*, 1988. [ED 360152](#)

Book Chapters

- Clariana, R. B., & Hooper, S. (2012). Adaptive evaluation systems. In N. M. Seel (Ed.), *Encyclopedia of the Sciences of Learning* (pp.104-106). Secaucus, NJ: Springer.
See: [link](#)
- Hooper, S., & Clariana, R. B., (2012). Cooperative learning groups and streaming. In N. M. Seel (Ed.), *Encyclopedia of the Sciences of Learning* (pp. 815-818). Secaucus, NJ: Springer. See: [link](#)
- Clariana, R.B. (2010). Deriving group knowledge structure from semantic maps and from essays. In D. Ifenthaler, P. Pirnay-Dummer, & N.M. Seel (Eds.), *Computer-Based Diagnostics and Systematic Analysis of Knowledge* (Chapter 7, pp. 117-130). New York, NY: Springer. [link](#)
- Clariana, R.B. (2010). Multi-decision approaches for eliciting knowledge structure. In D. Ifenthaler, P. Pirnay-Dummer, & N.M. Seel (Eds.), *Computer-Based Diagnostics and Systematic Analysis of Knowledge* (Chapter 4, pp. 41-59). New York, NY: Springer. [link](#)
- Clariana, R.B., Wallace, P.E., & Godshalk, V.M. (2008). Deriving and measuring group knowledge structure via computer-based analysis of essay questions: the effects of controlling anaphoric reference. In Kinshuk, D. G. Sampson, J. M. Spector, P. Isaías, & D. Ifenthaler (Eds.), *Proceedings of the IADIS international conference on cognition and exploratory learning in the digital age* (88-95). Freiburg, Germany: International Association for Development of the Information Society.
- Clariana, R.B. & Strobel, J. (2007). Modeling technologies. In J. M. Spector, M. D. Merrill, J. J. G. van Merriënboer, & M. P. Driscoll (Eds.), *Handbook of Research on Educational Communications and Technology* (pp. 997-1046). Mahwah, NJ: Erlbaum.
- Shoop, G.H., Nordstrom, P., & Clariana, R.B. (2007). Model-facilitated learning environments: The pedagogy of the design. In R. Zheng and S. P. Ferris (Eds.), *Understanding online instructional modeling: theories and practices* (pp. 11-34). Hershey, PA: IGI Global Press.
- Laru, J., Jarvela, S., & Clariana, R.B. (2006). Augmenting students' collaborative inquiry learning on the nature trail with mobile tools. In Enkenberg, Kentz & Hatakka (Eds.), *Emerging practices in educational technology* (pp. 93-114). Joensuu, FI: University Press.

Peer-Reviewed Journal Articles

- Clariana, R.B., Engelmann, T., & Yu, W. (2013). Using centrality of concept maps as a measure of problem space states in computer-supported collaborative problem solving. *Educational Technology Research and Development*, 61 (3), 423-442.
- Barb, A.S., Clariana, R.B., & Chi-Ren, S. (2013). Applications of Pathfinder Network Scaling for improving the ranking of satellite images. *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing*, 6 (3), 1092-1099. doi: 10.1109/JSTARS.2013.2242254

- Merriman, K.A., Clariana, R.B., & Bernardi, R.J. (2012). Goal orientation and feedback congruence: effects on discretionary effort and achievement. *Journal of Applied Social Psychology*, 42 (11), 2776-2796. (Available from SSRN: <http://ssrn.com/abstract=1687866>)
- Laru, J., Järvelä, S., & Clariana, R. B. (2012). Supporting collaborative inquiry during a biology field trip with mobile peer-to-peer tools for learning: a case study with K-12 learners. *Interactive Learning Environments*, 20 (2), 103-117. (May 2010 on iFirst: <http://www.informaworld.com/10.1080/10494821003771350>)
- DeFranco, J.F., Neill, C.J., & Clariana, R.B. (2011). A cognitive collaborative model to improve performance in engineering teams – A study of team outcomes and mental model sharing. *Systems Engineering*, 14 (3), 267-278.
- Clariana, R.B., & Taricani, E. M. (2010). The consequences of increasing the number of terms used to score open-ended concept maps. *International Journal of Instructional Media*, 37 (2), 163-173. [link](#)
- Koul, R., Clariana, R.B., Jitgarun, K., & Songsriwittaya, A. (2009). The influence of achievement goal orientation and gender on plagiarism. *Learning and Individual Differences*, 19 (4), 506-512. [LAID.pdf](#)
- Koul, R., Clariana, R.B., Kongsuwan, S., & Suji-Vorakul, C. (2009). Students' goal orientations and perceptions of professional competencies. *Journal of Vocational Education and Training*, 61 (3), 307-318.
- Clariana, R.B., Wallace, P.E., & Godshalk, V.M. (2009). Deriving and measuring group knowledge structure from essays: The effects of anaphoric reference. *Educational Technology Research and Development*, 57, 725-737. [ETRD.pdf](#)
- Clariana, R.B., & Prester, G.E. (2009). The effects of lesson screen background color on declarative and structural knowledge. *Journal of Educational Computing Research*, 40 (3), 281 -293. [link](#)
- Clariana, R.B. (2009). Ubiquitous wireless laptops in upper elementary mathematics. *Journal of Computers in Mathematics and Science Teaching*, 28 (1), 5-21. [link](#)
- Clariana, R.B., & Wallace, P. E. (2009). A comparison of pair-wise, list-wise, and clustering approaches for eliciting structural knowledge in information systems courses. *International Journal of Instructional Media*, 36 (3), 287-302. [link](#)
- Clariana, R.B., & Koul, R. (2008). The effects of learner prior knowledge when creating concept maps from a text passage. *International Journal of Instructional Media*, 35 (2), 229-236. [link](#)
- Clariana, R.B., & Wallace, P. E. (2007). A computer-based approach for deriving and measuring individual and team knowledge structure from essay questions. *Journal of Educational Computing Research*, 37 (3), 209-225. [link](#)
- Clariana, R.B., & Marker, A. (2007). Generating topic headings during reading of screen-based text facilitates learning of structural knowledge and impairs learning of lower-level knowledge. *Journal of Educational Computing Research*, 37 (2), 173-191. [link](#)
- Clariana, R.B. & Koul, R. (2006). The effects of different forms of feedback on fuzzy and verbatim memory of science principles. *British Journal of Educational Psychology*, 76 (2), 259-270.
- Clariana, R.B., Koul, R., & Salehi, R. (2006). The criterion-related validity of a computer-based approach for scoring concept maps. *International Journal of Instructional Media*, 33 (3), 317-325.

- Poindexter, M. T., & Clariana, R.B. (2006). The influence of relational and proposition-specific processing on structural knowledge and traditional learning outcomes. *International Journal of Instructional Media*, 33 (2), 177-184.
- Taricani, E. M. & Clariana, R.B. (2006). A technique for automatically scoring open-ended concept maps. *Educational Technology Research and Development*, 54, 61-78.
- Koul, R., Clariana, R.B., & Salehi, R. (2005). Comparing several human and computer-based methods for scoring concept maps and essays. *Journal of Educational Computing Research*, 32 (3), 261-273. [link](#)
- Clariana, R.B. & Koul, R. (2005). Multiple-try feedback and higher-order learning outcomes. *International Journal of Instructional Media*, 32 (3), 239-245.
- Prester, G.E., Clariana, R.B., & Peck, A.C. (2005). Memory-context effects of color in computer-based instruction: Does color-coding make screen text more memorable? *Journal of Educational Multimedia and Hypermedia*, 14 (4), 415-436.
- Wallace, P. E., & Clariana, R.B. (2005). Perception versus reality—determining business students' computer literacy skills and need for instruction in information concepts and technology. *Journal of Information Technology Education*, 4, 141-152.
- Wallace, P. E., & Clariana, R.B. (2005). Test mode familiarity and performance - gender and race comparisons of test scores among computer-literate students in advanced information systems courses. *Journal of Information Systems Education*, 16 (2), 177-182.
- Wallace, P. E., & Clariana, R.B. (2005). Gender differences in computer-administered versus paper-based tests. *International Journal of Instructional Media*, 32 (2), 175-183.
- Clariana, R.B. (2004). An interaction of screen color and lesson task in CAL. *British Journal of Educational Technology*, 35 (1), 35-43.
- Clariana, R.B. (2004). The instructional effects of matching or mismatching lesson and posttest screen color. *International Journal of Instructional Media*, 31 (4), 393-400.
- Clariana, R.B. (2003). The effectiveness of constructed-response and multiple-choice study tasks in computer aided learning. *Journal of Educational Computing Research*, 28 (4), 397-408.
- Clariana, R.B., & Wallace, P. E. (2002). Paper-based versus computer-based assessment: Key factors associated with the test mode effect. *British Journal of Educational Technology*, 33 (5), 595-604.
- Clariana, R.B., & Lee, D. (2001). Recognition and recall study tasks with feedback. *Educational Technology Research and Development*, 49 (3), 23-35.
- Wallace, P. E., & Clariana, R.B. (2000). Achievement predictors for a computer-applications module delivered online. *Journal of Information Systems Education*, 11, (1/2), 13-18.
- Clariana, R.B. (2000). Colloquia: Change in instruction-related web sites in an 18-month period. *British Journal of Educational Technology*, 31 (3), 251-253.
- Clariana, R.B., Wagner, D., & Murphy, L. R. (2000). Applying a connectionist description of feedback timing. *Educational Technology Research and Development*, 48, 5-11.

- Marcinkiewicz, H. R., & Clariana, R. B. (1997). The performance effects of headings within multiple-choice tests. *British Journal of Educational Psychology*, 67, 113-119.
- Clariana, R.B. (1997). Pace in computer-assisted learning. *British Journal of Educational Technology*, 28 (2), 135-138.
- Clariana, R.B. (1997). Considering learning style in computer-assisted learning. *British Journal of Educational Technology*, 28 (1), 66-68.
- Clariana, R.B. (1996). Differential achievement gains for mathematics computation, concepts and application with an Integrated Learning System. *Journal of Computers in Mathematics and Science Teaching*, 15 (3), 21-26.
- Clariana, R.B. (1994). The Effects of an Integrated Learning System on Third Graders' Mathematics and Reading Achievement. *Journal of Computer-Based Instruction*, 21 (1), 12-17.
- Clariana, R.B. & Schultz, C. W. (1993). Gender by content achievement differences in computer-based instruction. *Journal of Computers in Mathematics and Science Teaching*, 12 (3/4), 277-288.
- Clariana, R.B. (1993). The motivational effect of advisement on attendance and achievement in computer-based instruction. *Journal of Computer-Based Instruction*, 20 (2), 47-51.
- Clariana, R.B. (1993). A review of multiple-try feedback in traditional and computer-based instruction. *Journal of Computer-Based Instruction*, 20 (3), 67-74.
- Clariana, R.B. & Bond, C. L. (1993). Using readability formulas to establish the grade level difficulty of software. *Journal of Computing in Childhood Education*, 4 (3), 255-261.
- Clariana, R.B. (1993). The effects of item organization and feedback density using computer-assisted multiple-choice questions as instruction. *Journal of Computer-Based Instruction*, 20 (1), 26-31.
- Clariana, R.B. (1992). Prescriptions in reading computer-assisted instruction: Reading versus writing. *Journal of Computer-Based Instruction*, 19 (2), 58-63.
- Clariana, R.B. (1992). The effects of public reports of progress on rate of lesson completion in computer-based instruction. *Journal of Computing in Childhood Education*, 3 (2), 127-136.
- Clariana, R.B. (1991). A computer administered cloze placement test and a standardized reading test. *Journal of Computers in Mathematics and Science Teaching*, 10 (3), 107-112.
- Clariana, R.B. (1991). pH and rate of enzymatic reactions. *American Biology Teacher*, 53 (6), 119-121.
- Clariana, R.B., Ross, S. L., & Morrison, G. R. (1991). The effects of different feedback strategies using computer-assisted multiple-choice questions as instruction. *Educational Technology Research and Development*, 39 (2), 5-17.
- Clariana, R.B. (1990). Gender and ability differences in galvanic skin response during pair and individual computer-assisted mathematics instruction. *Journal of Computing in Childhood Education*, 2 (1), 69-82.
- Clariana, R.B. (1990). A comparison of answer until correct feedback and knowledge of correct response feedback under two conditions of contextualization. *Journal of Computer-Based Instruction*, 17 (4), 125-129.

- Clariana, R.B. (1990). Rate of activity completion by achievement, gender, and report in computer-based instruction. *Journal of Computing in Childhood Education*, 1 (3), 81-90.
- Clariana, R.B. (1989). Galvanic skin response biosensor. *Journal of Computers in Mathematics and Science Teaching*, 8 (3), 44-45.
- Bond, C. L., & Clariana, R.B. (1989). Prescriptions in reading computer-assisted instruction: A study considering the effects of three instructional combinations with for reviewing either computer-adaptive or controlled placement on reading achievement. *Journal of Computing in Childhood Education*, 1 (1), 59-72.
- Clariana, R.B. (1989). Computer simulations of science laboratory experiences. *Journal of Computers in Mathematics and Science Teaching*, 8 (2), 14-19. [link](#)

Peer Reviewed Proceedings

- Asino, T., Clariana, R.B., Dong, Y., Groff, B., Ntshalintshali, G., Taricani, E., Techatassanasoontorn, C. & Yu, W. (2012). The effect of independent and interdependent group collaboration on knowledge extent, knowledge form, and knowledge convergence. *Proceedings of Selected Research and Development Papers Presented at the National Convention of the Association for Educational Communications and Technology*, 35, 20-29 (Louisville, KY, November 2012)

a few missing, need to be added (e.g., Finland sabbatical 2005)

- Clariana, R.B., & Koul, R. (2004). A computer-based approach for translating text into concept map-like representations. In A.J.Canas, J.D.Novak, and F.M.Gonzales, Eds., *Concept maps: theory, methodology, technology*, vol. 2, in the Proceedings of the First International Conference on Concept Mapping, Pamplona, Spain, Sep 14-17, pp.131-134. See <http://cmc.ihmc.us/papers/cmc2004-045.pdf>.
- Prestera, G.E., & Clariana, R.B. (2003). When do headings improve learning? A synthesis of verbal signals research. *Proceedings: Selected Research and Development Papers Presented at the 2003 National Convention of the Association for Educational Communications and Technology*, 1, 356-364.
- Clariana, R.B. (2000). A connectionist model of instructional feedback effects. *Twenty-third Annual Proceedings of Selected Research Papers from the Annual Convention of the Association for Educational Communications and Technology*, 23, 23-26.
- Clariana, R.B. (1999). *CBT design: A feedback aptitude treatment interaction*. [Proceedings of Selected Research and Development Papers Presented at the National Convention of the Association for Educational Communications and Technology](#), 21, 87-91 (Houston, TX, February 10-14, 1999). [link to ED436137](#)
- Marcinkiewicz, H. R., & Clariana, R. B. (1997). Text Design: The Influence of Headings on Multiple-Choice Tests. *Nineteenth Annual Proceedings of Selected Research Presentations of the Association for Educational Communications and Technology*, 19, 205-208.
- Cook, C. & Clariana, R.B. (1994). Kids get the good stuff: A progress report on Jostens Learning Corporation's networked interactive multimedia mathematics product. *Proceedings of the 35th International Association for the Development of Computer-Based Instructional Systems Conference*, 35, 2-3.

- Clariana, R.B., Ross, S. L., & Morrison, G. R. (1992). The effects of different feedback strategies using computer-assisted multiple-choice questions as instruction. *Fourteenth Annual Proceedings of Selected Research Presentations of the Association for Educational Communications and Technology, 14*, 154-174.
- Clariana, R.B. (1992). The effects of different forms of computer-mediated feedback on lesson completion time. *Fourteenth Annual Proceedings of Selected Research Presentations of the Association for Educational Communications and Technology, 14*, 148-153. [link to ED347982](#)
- Clariana, R.B. (1991). Prescriptions in reading computer-assisted instruction: Reading versus writing. *Proceedings of the 33rd International Association for the Development of Computer-Based Instructional Systems Conference, 33*, 148-154.

Peer-reviewed Conference Presentations (those not published in Proceedings)

- Klois, S.S., Segers, E., Clariana, R.B., & Verhoeven, L. (2013). *Effects of links in children's digital text comprehension*. 20th Annual Meeting of the Society for the Scientific Study of Reading (SSSR), The Chinese University of Hong Kong, July 10-13.
- Kim, K., Clariana, R.B., & Garbrick, A. (2013). *The effect of computer-supported independent and interdependent collaboration on information sharing*. A Paper presented at the 10th International Conference of Computer Supported Collaborative Learning. (Madison, WI, June 2013).
- Draper, D., Clariana, R., & Land, S. M. (2011). *An Automated Measure of Group Knowledge Structure Convergence*. Presentation at the AECT Annual meeting, Association for Educational Communications & Technology, Jacksonville, FL.
- Draper, D., Land, S. M., & Clariana, R., (2011). *Knowledge building activities and knowledge convergence in workplace communities of practice*. Presentation at the AECT Annual meeting, Association for Educational Communications & Technology, Jacksonville, FL.
- Clariana, R. (2011). *Symposium: Measures of Group Knowledge Structure Convergence in an Online Collaborative Learning Environment*. Symposium presentation title: Knowledge Maps for Representation of Higher-Order Cognitions: Potentials and Limitations From an International Perspective. American Educational Research Association, New Orleans, LA.
- Draper, D., Land, S. & Clariana, R B. (2010). *The Instructional Effects of Knowledge-based CoP Learning Environments on Student Achievement and Knowledge Convergence*. Paper presented at the annual meeting of the AECT Convention, Hyatt Regency Orange County, Anaheim, CA, Oct 26.
- Clariana, R.B. (2006). *A demo of free essay scoring software*. A presentation at the 5th Annual Wyoming Math and Science Teachers Conference in Casper, WY, January 13-14, 2006. PowerPoint presentation at [link to PPT file](#)
- Clariana, R.B. (2006). *Free software that scores biology field reports and essays*. T3 International Conference sponsored by Texas Instruments. Denver, CO, February 24-25.
- Laru, J., Järvelä, S., & Clariana, R. (2005). *Scaffolding collaborative inquire learning in the nature with mobile tools based on peer-to-peer grid technologies*. A paper to be

- presented at Interlearn 2005 Multidisciplinary Approaches to Learning. December 1-2, 2005, Helsinki, Finland.
- Laru, J., Järvelä, S., & Clariana, R. (2005). *Augmenting students' collaborative inquiry learning in the nature trail with mobile tools*. A paper presented at LETTET'05 Conference - Learning technology and telematics in Education and training 2005. August 3-5, 2005, Savonlinna, Finland.
- Clariana, R.B. (2005). *How to use free ALA-Reader software to score science essays*. A workshop presented at the Technology in Education Conference 2005 at Copper Mountain, CO, June 20-22, 2005. PowerPoint presentation at <http://www.protoapp.com/tie/tie2005/sessions/detail.cfm?sessionID=124>.
- Koul, R., & Clariana, R.B. (2004). *Some relationships between concept maps and written summaries*. Online presentation of the 36th Annual International Visual Literacy Association (IVLA) Conference in Plainesburg, South Africa, October, 2004.
- Clariana, R.B., & Koul, R. (2004). *A computer-based approach for translating text into concept map-like representations*. Paper presented at the meeting of CMC-2004, Pamplona, Spain. September, 2004.
- Taricani, E. M., & Clariana, R. B. (2003). *Semantic map automated assessment techniques*. Paper presented at the meeting of Association for Educational Communications and Technology (AECT), Anaheim, CA, October, 2003.
- Prester, G.A., & Clariana, R.B. (2003). *Using signaling devices to promote learning from text*. Paper presented at the meeting of Association for Educational Communications and Technology (AECT), Anaheim, CA, October, 2003.
- Harvey, D.M., & Clariana, R.B. (2003). *Measuring conceptual understanding and change: A visual-spatial approach using concept mapping*. Presented at the International Visual Literacy Association (IVLA) Conference, Newport, RI, October 1-5, 2003.
- Clariana, R. B. & Poindexter, M. T. (2003). *The influence of relational and proposition-specific processing on structural knowledge*. Paper presented at the Annual Meeting of American Educational Research Association (AERA), San Diego, CA, April, 2003.
- Clariana, R. B. (2003). *An automatic approach for marking concept maps*. An invited presentation at the College of Education, University of Northern Colorado, Greeley, CO on April 3, 2003.
- Clariana, R. B. (2003). *An automatic approach for marking concept maps*. A poster presented at the Annual Conference of the International Society for Technology in Education (ISTE) in Albuquerque, NM on March 26, 2003.
- Clariana, R. B. (2003). *An automatic approach for marking concept maps*. An invited presentation at the College of Education, University of Colorado-Denver, Denver, CO on March 12, 2003.
- Clariana, R. B. (2003). *An automatic approach for marking concept maps*. An invited presentation at the College of Education, University of Missouri. Columbia, MO on March 5, 2003.
- Clariana, R.B. (2002). *Semantic Map Assessment Project Overview*. An invited presentation at the Mid-Continent Research for Education and Learning (McREL) in Aurora, CO on December 18, 2002.

- Clariana, R.B. (2002). *Screen design: the effects of background color on posttest performance*. A poster presented at the Annual Meeting of the Association for Educational Communications and Technology (AECT) in Atlanta, GA on November 15, 2002
- Clariana, R.B. (2002). *CAL design: The effectiveness of constructed-response and multiple-choice study tasks*. Presented at ED-MEDIA 2002, the annual international meeting of the Association for the Advancement of Computing in Education (AACE) in Denver, CO, June 28, 2002.
- Clariana, R.B. (2002). *Does feedback on error impact the association weight of continuously active traces?* Poster session at the 6th International Conference on Cognitive and Neural Systems, Boston College, MA, June 1, 2002.
- Clariana, R.B. (2001). *Online versus paper-and-pencil test performance: A test mode effect*. Presented at the Annual Conference of the Association for Educational Communications and Technology, Atlanta, GA, November 8, 2001.
- Clariana, R.B. & Wallace, P. E. (2001). *Learner characteristics that negatively impact online versus paper-and-pencil test performance*. Presented at the annual international meeting of ED-MEDIA 2001, Tampere, Finland, June 28, 2001.
- Clariana, R.B., & Moller, L. (2000). *Distance learning profile instrument: Predicting online success*. Presented at the Annual Conference of the Association for Educational Communications and Technology, Denver, CO, October 25 – 28, 2000.
- Clariana, R.B. (2000). *A connectionist model of instructional feedback effects*. Presented at the Annual Conference of the Association for Educational Communications and Technology, Denver, CO, October 25 – 28, 2000.
- Clariana, R.B. (2000). *A delta rule description of the effects of feedback in computer-based instruction*. Presented at the Fourth International Conference on Cognitive and Neural Systems, Boston, MA, May, 2000.
- Harvey, D.M., Jonassen, D.H., & Clariana, R. (2000). *Cognitive Flexibility Hypertext and the Role of the Learning Task*. Presented at the ED-MEDIA 2000 World Conference on Educational Multimedia, Hypermedia, and Telecommunications, Montreal, Canada, July, 2000.
- Harvey, D. M., Clariana, R.B., & Jonassen, D. H. (2000). *Exploring the role of task in learning with cognitive flexibility hypertexts*. Presented at the annual meeting of the Association for Educational Communications and Technology (AECT), Long Beach, CA, February, 2000.
- Clariana, R.B. (1999). *Differential memory effects for immediate and delayed feedback in computer-assisted learning*. Presented at the annual meeting of the Association for Educational Communications and Technology (AECT), Houston, TX, February, 1999. [link to ED430550](#)
- Clariana, R.B. (1999). *Feedback selection for print-based and computer-based instruction*. Presented at the annual meeting of the American Educational Research Association (AERA) in Montreal, Canada, April, 1999.
- Clariana, R.B. (1998). *Smarter Tools, Better Teachers: Applying Neural Network Technology to Curriculum Alignment*. Presented at the 9th International Conference of the Society for Information Technology and Teacher Education, Washington, DC, March, 1998. (ERIC Document Reproduction Service: ED349943)

- Clariana, R.B. (1998). *Curriculum Alignment via the Internet*. Presented at TECHSPO'98, the Third Annual New Jersey Association of School Administrators Technology Conference, Long Branch, NJ, January, 1998.
- Clariana, R.B. (1994). *Multiple-try feedback and prior knowledge levels*. Presented at the 35th International Association for the Development of Computer-Based Instructional Systems Conference, Nashville, TN, February, 1994.
- Clariana, R.B. (1992). *Media research with a galvanic skin response biosensor: Some kids work up a sweat!* Presented at the annual meeting of the Association for Educational Communications and Technology (AECT), Washington, DC, February, 1992. (as ERIC Document Reproduction Service: ED381141)
- Clariana, R.B., & Smith, L. J. (1989). *Progress reports improve students' course completion rate and achievement in mathematics computer-assisted instruction*. Presented at the annual meeting of the Mid-South Educational Research Association, Little Rock, AR, November, 1989. (ERIC Document Reproduction Service: ED317170)
- Clariana, R.B., & Smith, L. J. (1989). *Comparative effects of ability and feedback form in computer-assisted instruction*. Presented at the annual meeting of the Mid-South Educational Research Association, Little Rock, AR, November, 1989. (ERIC Document Reproduction Service: ED313387)
- Clariana, R.B., & Schultz, C. W. (1988). *St. Anne Consensus School: The second year*. Presented at the annual meeting of the Mid-South Educational Research Association, Louisville, KY, November, 1988. (ERIC Document Reproduction Service: ED301442)
- Clariana, R.B., & Smith, L. J. (1988). *Learning style shifts in computer-assisted instruction*. Presented at the annual meeting of the International Association for Computers in Education (IACE, New Orleans, LA, April, 1988. (ERIC Document Reproduction Service: [ED295796](#))
- O'Dell, J.K., Clariana, R.B., Morrison, G.M., & Ross, S.M. (1987). *The implications of the effect of text density levels in the design of classroom computer-based instruction*. Presented at the annual meeting of the Mid-South Educational Research Association, Mobil, Alabama.

Grant Review and Evaluation Projects

Panel member reviewing ongoing projects under *Evaluating State Educational Technology Programs (ESETP)*, U.S. Department of Education, Washington, DC, 2004.

Panel member reviewing the grant, *Review of the Iowa Professional Development Model (IPDM)*, U.S. Department of Education, Washington, DC, 2003.

Panel member reviewing proposals under *Evaluating State Educational Technology Programs (ESETP)*, U.S. Department of Education, Washington, DC, 2003.

Chair of the panel reviewing proposals for the *Small Business Innovation Research (OERI SBIR)*, U.S. Office of Educational Research and Improvement Program, 2002.

External Reviewer for Harcourt College Publishers – Second round of formative evaluation of their product, the *Virtual Biology Laboratory on the Web* by Beneski and Waber, 2002. See: <http://darwin.wcupa.edu/beneski/index.html>.

Extramural Funding (grants)

Peck, K. L., Terenzini, P. T., Wijekumar, K. J., Clariana, R.B., Van Horn, B. L., Prins, E. S. (2006). U.S. Department of Education \$1,220,000 Mid-Atlantic Collaborative for Applied Research in Education (M-Care) Tasks 1–5; 3/23/06–12/31/06 (Clariana 3%; see: <http://www.ed.psu.edu/news/pubs0506.asp>)

Reports of Funded Projects

- Clariana, R.B. (2012). *Alternative measures of knowledge structure as measures of text structure and of reading comprehension*. A keynote presentation and workshop for The Behavioural Science Institute (BSI) at Radboud University Nijmegen, May 14, 2012 (travel grant: \$2000)
- Clariana, R.B. (2008). *Meaningful time on task: Practical guidelines for implementing CompassLearning software*. Downloaded January 4, 2008 from <http://meaningful-time-on-task.wikispaces.com/> (CompassLearning LLC contract #20890).
- Clariana, R.B. (2007). *Principles of engagement in next generation instructional software design*. Downloaded February 1, 2007 from <http://nextgenerationsoftware.wikispaces.com/> (CompassLearning LLC contract #20874).
- Clariana, R.B. (2005). *Alternative Assessment of Learners and Learning Outcomes*. Educational Technology Research Unit Team within the Department of Education Sciences, University of Oulu, Finland. Fulbright Award , January 7th through June 2nd, 2005 (grant for travel and cost of living expenses).
- Clariana, R.B. (2003). *Establishing an automatic method of scoring concept maps of science content*. An experimental investigation that examined the criterion-related validity of my *ALA-Mapper* software tool (SRS grant - \$7,150)
- Clariana, R.B. (2001). *The effects of test expectation on recognition posttest performance*. An experimental investigation comparing test expectation in a computer mediated lesson (SRS grant - \$5,700)
- Clariana, R.B. (2000). *Feedback in computer-assisted learning*. NETg University of Limerick Lecture Series. (travel funds: \$4500). See <http://www.ul.ie/techcomm/NETgLectureSeries.htm>
- Clariana, R.B. (1999). *Recognition and Recall Study Tasks with Feedback*. An experimental investigation comparing several methods of feedback in a computer mediated lesson (SRS grant - \$5,280)
- Clariana, R.B. (1998). *Extending the knowledge base on headings*. An experimental investigation examining the effects of learner-generated headings in a computer mediated lesson (PSU research development grant - \$1,480)
- Clariana, R.B. (1997). *Do writing and dictating draw from the same internal knowledge base?* An experimental investigation of the efficacy of speech-to-text software in instruction. (PSU research development grant - \$830)
- Clariana, R.B. (1992). *Integrated learning systems and standardized test improvement*. An invited presentation at the World Institute for Computer-Assisted Teaching

(WICAT) User's Conference, Sandy, UT. (ERIC Document Reproduction Service: ED 349 943)

Clariana, R.B. (1988). *Peace Corps Nepal Pre-service Technical Training Manual: Science and Mathematics Teacher Training*. Washington, DC: Publication of the United States Peace Corps Information Collection and Exchange (ICE) and also available from ERIC Document Reproduction Service: ED300276. I conducted job and task analyses in Nepal for a new math and science teacher-as-trainer job classification and then developed appropriate curriculum and assessment materials for pre-service training for this job classification.

Clariana, R.B. (1986). *TVA: A World of Resources*, Ann Lyons (Ed.). Chattanooga, TN: Tennessee Valley Authority Press (and also available from the ERIC Document Reproduction Service: ED284722). I was project director and the lead curriculum developer for this 600-page middle-school environmental education sourcebook that was funded by the Tennessee Valley Authority. In 1988, this curriculum sourcebook was awarded 1st place in the "Take Pride in America", Federal/Education Division,

Clariana, R.B. (1984). *Peace Corps Malawi 1984 Final Training Report*. Washington, DC: Publication of the United States Peace Corps Information Collection and Exchange (ICE) and also available from ERIC Document Reproduction Service: ED285968. I was the training director for this 3-month pre-service training in Malawi.

Clariana, R.B. (1984). *Teaching biology in Kenya: A practical manual*. Nairobi, Kenya: Peace Corps Publication. Peace Corps Kenya contracted me to write this biology laboratory manual to provide appropriate technology solutions for rural biology teachers that addressed the national "O" level biology curriculum requirements.