

## **Thomas R. Koballa, Jr.**

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### **EDUCATION**

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- 1981 Ph.D. Curriculum & Instruction, Pennsylvania State University  
Specialization: Science Education
- 1978 M.A.Ed. Science Education, East Carolina University
- 1976 B.S. Biology, East Carolina University

### **PROFESSIONAL APPOINTMENTS**

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- 2010 – present Dean and Professor. Georgia Southern University, College of Education
- 1994 – 2010 Professor. University of Georgia, Department of Science Education [merged to form Department of Mathematics and Science Education in 2004]  
1997 – 2004 Department Head  
2006 – 2010 Principal Investigator. Georgia Improving Teacher Quality Grants Program  
2008 – 2010 Associate Director. University Office of Science, Technology, Engineering, and Mathematics (STEM) Education
- 1997 Guest Professor. Institut für die Pädagogik der Naturwissenschaften (IPN) University of Kiel, Germany, Department of Chemistry Education, April - October
- 1990 – 1993 Associate Professor. University of Georgia, Department of Science Education, 1991 Director, Northeast Center, Georgia Initiative in Mathematics and Science
- 1988 – 1990 Associate Professor. University of Texas at Austin, Science Education Center, Department of Curriculum and Instruction
- 1982 – 1988 Assistant Professor. University of Texas at Austin, Science Education Center, Department of Curriculum and Instruction
- 1981 – 1982 Assistant Professor. Pikeville College, Kentucky, Department of Education
- 1981 – 1982 Adjunct Assistant Professor. Morehead State University, Kentucky, Department of Education

**Graduate Faculty Appointments**

- 2011 – present Georgia Southern University  
1991 – 2012 University of Georgia  
1982 – 1992 University of Texas at Austin  
1982 Morehead State University

**PUBLICATIONS**

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**Books**

- Chiappetta, E. L. & Koballa, T. R. (2015). *Science instruction in the middle and secondary schools*, 8th edition. Boston, MA: Pearson.
- Chiappetta, E. L. & Koballa, T. R. (2010). *Science instruction in the middle and secondary schools*, 7th edition. Upper Saddle River, NJ: Merrill/Prentice Hall.
- Chiappetta, E. L. & Koballa, T. R. (2006). *Science instruction in the middle and secondary schools*, 6th edition. Upper Saddle River, NJ: Merrill/Prentice Hall.
- Chiappetta, E. L. & Koballa, T. R. (2002). *Science instruction in the middle and secondary schools*, 5th edition. Upper Saddle River, NJ: Merrill/Prentice Hall.
- Chiappetta, E. L., Koballa, T. R., & Collette, A. T. (1998). *Science instruction in the middle and secondary schools*, 4th edition. Upper Saddle River, NJ: Merrill/Prentice Hall.
- Matthews, R. W., Koballa, T. R., Flage, L. R., & Pyle, E. J. (1996). *Wowbugs: New life for life science*. Athens, GA: Riverview Press.
- Johnson, G. B. & Raven, P. H. (Koballa, T. R., contributing writer) (1996). *Biology: Principles & explorations*. Austin: Holt, Rinehart & Winston.
- Johnson, G., & Brusca, G. (Koballa, T. R., contributing writer) (1994). *Biology: Visualizing life*. Austin: Holt, Rinehart, & Winston.
- Koballa, T. R. (1994). *Life science experiments - teacher's guide*. Circle Pines, MN: American Guidance Services.
- Bethel, L. B., Barufaldi, J. B., & Koballa, T. R., Jr. (1985). *Teaching science in elementary schools*. Austin: Alpha Graphics Press.

**Edited Books**

- Koballa, T. R., & Tippins, D. J. (2004). *Cases in middle and secondary science education: The promise and dilemmas*, 2<sup>nd</sup> edition. Upper Saddle River, NJ: Merrill/Prentice Hall.
- Gräber, W., Nentwig, P., Koballa, T. R., & Evans, R. (2002). *Scientific literacy: Der beitrag der naturwissenschaften zur allgemeinen bildung*. Oplanden, Germany: Leske & Budrich.
- Tippins, D. J., Koballa, T. R., & Payne, B. D. (2002). *Learning from cases: Unraveling the complexities of elementary science teaching*. Needham Heights, MA: Allyn & Bacon.
- Koballa, T. R., & Tippins, D. J. (2000). *Cases in middle and secondary science education: The promise and dilemmas*. Upper Saddle River, NJ: Merrill/Prentice Hall.
- Warden, M. A., Spurlin, Q., Koballa, T. R., & Bethel, L. J. (1990) *Life science teacher development program-1990*. Austin: University of Texas at Austin.
- Koballa, T. R., & Warden, M. A. (1989). *Life science teacher development program-1989*. Austin: University of Texas at Austin.
- Koballa, T. R., & Warden, M. A. (1988). *Life science teacher development program-1988*. Austin: University of Texas at Austin.
- Koballa, T. R., Jr., & Warden, M. A. (1987). *Life science teacher development program-1987*. Austin: University of Texas at Austin.

**Book Chapters**

- Koballa, T. R., & Bradbury, L. U. (2012). Mentoring in support of reform-based science teaching. B. Fraser, K. Tobin, & C. McRobbie (Eds.), *Second international handbook of science education* (pp. 361-372). New York: Springer.
- Koballa, T. R., & Demir, A. (2010). Making high school science instruction effective. In J. Devitis & L. Devitis (Eds.), *Adolescent education: A reader* (pp. 343-359). New York: Peter Lang.
- Koballa, T. R., & Bradbury, L. (2009). Mentoring in support of science teaching. In A. Collins & N. Gillespie (Eds.), *The continuum of secondary science teacher preparation: Knowledge, questions and research recommendations* (pp. 171-185). Rotterdam: Sense Publishing.
- Koballa, T. R., & Glynn, S. M. (2007). Attitudinal and motivational constructs in science learning. In S. K. Abell & N. Lederman (Eds.), *Handbook for research in science education* (pp. 75-102). Mahwah, NJ: Earlbaum.

- Glynn, S. M., & Koballa, T. R. (2006). Motivation to learn science. In J. Mintzes & W. Leonard (Eds.), *Handbook of college science teaching* (p. 25-32). Arlington, VA: NSTA Press.
- Nichols, S. & Koballa, T. R. (2006). Framing issues of elementary science education: An introduction to conversations. In K. Appleton (Ed.), *Elementary science teacher education: Contemporary issues and practice* (pp. 1-12). Mahwah, NJ: Erlbaum.
- Glynn, S. M., & Koballa, T. R. (2005). Contextual teaching and learning. In R. Yager (Ed), *Exemplary science: Best practices in professional development* (pp. 75-84). Arlington, VA: NSTA Press.
- Koballa, T. R. (2004). Creative planning carried the day. In T. R. Koballa & D. J. Tippins (Eds.), *Cases in middle and secondary science education: The promise and dilemmas*, 2<sup>nd</sup> edition (pp. 79-81). Upper Saddle River, NJ: Merrill/Prentice Hall.
- Koballa, T. R. (2004). Change is not an easy thing. In T. R. Koballa & D. J. Tippins (Eds.), *Cases in middle and secondary science education: The promise and dilemmas*, 2<sup>nd</sup> edition (pp. 79-81). Upper Saddle River, NJ: Merrill/Prentice Hall.
- Koballa, T. R., & Butler, M. B. (2004). Get to know your guest speakers. In T. R. Koballa & D. J. Tippins (Eds.), *Cases in middle and secondary science education: The promise and dilemmas*, 2<sup>nd</sup> edition (pp. 88-91). Upper Saddle River, NJ: Merrill/Prentice Hall.
- Buck, P., Clément, P., Goedhart, M. J., Gräber, W., Kaper, W. H., Koballa, T. R., Linder, C., Maron, F., Schwedes, H., Spiliotopoulou, V., Vogelezang, M., & Tsagliotis, N. (2003). On the methodology of phenomenography as a science education research tool. In D. Psillos, P. Kariotoglou, V. Tselfer, G. Bisdikian, G. Fassouloppulos, E. Hatzikraniotis, & M. Kallery (Eds.), *Science education research in the knowledge based society* (pp. 31-41). Dordrecht, The Netherlands: Kluwer.
- Evans, R. H., & Koballa, T. R. (2002). Umsetzung der theorie in die praxis. In W. Gräber, P. Nentwig, T. R. Koballa, & R. Evans. (Eds.), *Scientific literacy: Der beitrag der naturwissenschaften zur allgemeinen bildung* (pp. 121-134). Oplanden, Leske & Budrich.
- Koballa, T. R., & Upson, L. (2002). A letter to John. In D. J. Tippins, T. R. Koballa & B. D. Payne (Eds.), *Learning from cases: Unraveling the complexities of elementary science teaching* (pp. 110-112). Needham Heights, MA: Allyn & Bacon.
- Koballa, T. R., & Tippins, D. J. (2001). Portraits of professional development models in science teacher education: A synthesis of perspectives and issues. In D. R. Lavoie & W-M. Roth (Eds.), *Models for science teacher preparation* (pp. 213-224). Dordrecht: Kluwer.
- Koballa, T. R. (2000). Creative planning carried the day. In T. R. Koballa & D. J. Tippins (Eds.), *Cases in middle and secondary science education: The promise and dilemmas* (pp. 71-73). Upper Saddle River, NJ: Merrill.

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- Koballa, T. R. (1997). Imparting values through science education: Some general considerations. In W. Gräber & C. Bolte (Eds.), *Scientific literacy* (181-193). Kiel: Institut für die Pädagogik der Naturwissenschaften.
- Koballa, T. R. (1996). The role of persuasive communication in implementing gender-equity initiatives. In L. Parker, L. J. Rennie, & B. J. Fraser (Eds.), *Gender, science and mathematics: Shorting the shadow* (pp. 143-154). Dordrecht: Kluwer.
- Coble, C. R., & Koballa, T. R. (1996). Science education. In J. Sikula (Ed.), *Handbook of research in teacher education* (pp. 459-484). New York: Macmillan.
- Koballa, T. R. (1995). Children's attitudes toward learning science. In S. Glynn & R. Duit (Eds.), *Learning Science in the Schools: Research Reforming Practice* (pp. 59-84). Mahwah, NJ: Earlbaum.
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- Koballa, T. R., & Warden, M. A. (1992). Changing and measuring attitudes in the science classroom. In F. Lawrenz (Ed.), *Research matters to the science teacher* (pp. 21-34). Manhattan, KS: National Association for Research in Science Teaching.
- Koballa, T. R. (1984). Is there substantial agreement on the goals for science education? If so, what are they? In D. Holdzkom and P. B. Lutz (Eds.), *Research within reach: Science education* (pp. 25-39). Charleston, WV: Appalachia Educational Laboratory.
- Koballa, T. R., & Bethel, L. J. (1984). Is there a relationship between science and other subjects taught in schools? In D. Holdzkom and P. B. Lutz (Eds.), *Research within reach: Science education* (pp. 79-107). Charleston, WV: Appalachia Educational Laboratory.
- Koballa, T. R. (1984). The effect of a persuasive communication on the attitude toward energy use of preservice elementary teachers. In L. J. Bethel (Ed.), *Research in curriculum and development in science education* (pp. 124-131). Austin, TX: Science Education Center, University of Texas at Austin.

### **Monograph**

- Koballa, T. R., Crawley, F. E., & Shrigley, R. L. (1990). A summary of research in science education - 1988. *Science Education*, 74(3), 253-407.

**Journal Articles**

- Deaton, C., Deaton, B., & Koballa, T. (2014). Teachers' awareness of their diverse classrooms: The nature of elementary teachers' reflections on their science teaching practice. *Action in Teacher Education*, 36(3), 211-233.
- Mayes, R., & Koballa, T. R. (2012). Exploring the science framework: Making connections in math with the Common Core State Standards. *The Science Teacher*, 79(9), 27-34.
- Mayes, R., & Koballa, T. R. (2012). Exploring the science framework: Making connections in math with the Common Core State Standards. *Science Scope*, 36(4), 15-22.
- Mayes, R., & Koballa, T. R. (2012). Exploring the science framework: Making connections in math with the Common Core State Standards. *Science and Children*, 50(4), 15-22.
- Note: *The above article was considered sufficiently important to be published in three journals of the National Science Teachers Association (NSTA).*
- Koballa, T. R., Kittleson, J., Bradbury, L. U., & Dias, M. (2010). Teacher thinking associated with science specific mentor preparation. *Science Education*, 94(6), 1072-1091.
- Koballa, T. R., Dias, M. J., & Atkinson, J. (2009). Science conference presenters' images of inquiry. *School Science and Mathematics*, 109(7), 403-414.
- Koballa, T. R., & Bradbury, L. U. (2009). Leading to success. *Principal Leadership*, 9(7), 28-32.
- Bradbury, L., & Koballa, T. R. (2008). Borders to cross: Identifying sources of tension in mentor-intern relationships. *Teaching and Teacher Education*, 24(8), 2132-2145.
- Koballa, T. R., Bradbury, L., & Deaton, C. (2008). Realizing your mentoring potential. *The Science Teacher*, 75(5), 43-47.
- Koballa, T. R. (2008). The point of it all. *Science and Children*, 45(6), 32-35.
- Koballa, T. R., Bradbury, L. K., Glynn, S. M., & Deaton, C. M. (2008). Conceptions of science teacher mentoring and mentoring practice in an alternative certification program. *Journal of Science Teacher Education*, 19(4), 391-411.
- Bradbury, L. K., & Koballa, T. R. (2007). Examining the links between mentor teacher advice and protégé classroom practice within a physical science context. *Journal of Science Teacher Education*, 18(6), 817-840.
- Koballa, T. R., Glynn, S. M., Upson, L., & Coleman, D. C. (2005). Conceptions of teaching science held by novice teachers in an alternative certification program. *Journal of Science Teacher Education*, 16(4), 287-308.
- Chiappetta, E. L., & Koballa, T. R. (2004). Quizzing students on some myths of science. *The Science Teacher*, 71(9), 58-61.

- Glynn, S. M., Koballa, T. R., & Coleman, D. C. (2003). Mnemonic methods. *The Science Teacher*, 70(10), 35-40.
- Koballa, T. R., Gräber, W., Coleman, D. C., & Kemp., A. C. (2000). Prospective gymnasium teachers' conceptions of chemistry learning and teaching. *International Journal of Science Education*, 22(2), 209-224.
- Koballa, T. R., Gräber, W., Coleman, D. C., & Kemp., A. C. (1999). Prospective chemistry teachers' conceptions of the knowledge base for teaching chemistry at the German gymnasium. *Journal of Science Teacher Education*, 10(4), 269-286.
- Pyle, E. J., Matthews, R. W., Koballa, T. R., & Flage, L. R. (1998). The lady or the tiger? Insect decision-making investigations. *Science Scope*, 21(4), 12-16.
- Pyle, E. J., Koballa, T. R., Matthews, R. W., & Flage, L. R. (1997). Bugs in the laboratory: Decisions, decisions...or "The Lady or the Tiger." *Science Activities*, 34(2), 25-30.
- Koballa, T. R., Kemp, A., & Evans, R. (1997). The spectrum of scientific literacy. *Science Teacher*, 64(7), 27-31.
- Koballa, T. R., & French, J. (1995). Dilemmas, decisions, and recommendations: Personal empowerment in an elementary science methods course. *Journal of Science Teacher Education*, 6(2), 61-70.
- Koballa, T. R., & Pyle, E. J. (1995). Teaching meteorology in the middle grades. *Journal of Science Teacher Education*, 6(1), 33-40.
- Koballa, T. R., Meadows, L., Doster, E. C., & Jackson, D. F. (1995). Hot peppers to hurricanes: New ways to measure. *Science Scope*, 18(11), 37-41.
- Warden, M. A., & Koballa, T. R. (1995). Using students' salient beliefs to design an instructional intervention to promote AIDS compassion and understanding in middle school. *AIDS Education and Prevention*, 7, 60-73.
- Crawley, F. E., & Koballa, T. R. (1994). Attitude research in science education: Contemporary models and methods. *Science Education*, 78, 35-55.
- Koballa, T. R., Jr., & Crawley, F. E. (1993). Curriculum reform in Texas. *The Science Teacher*, 60(4), 41-45.
- Meadows, L., & Koballa, T. R. (1993). Elementary teachers' beliefs about joining a professional science teacher organization. *Journal of Science Teacher Education*, 4(4), 115-120.
- Butts, D. P., Anderson, W., Atwater, M., Koballa, T. R., Simmons, P., & Hairston, R. (1993). An inservice model to impact life science classroom practice: Part one. *Education*, 113(2), 294-298, 321.
- Koballa, T. R., & Chen, C. S. (1993). Influencing Chinese prospective elementary teachers' decisions to teach about the environment. *Journal of Elementary Science Education*, 5(1), 27-49.

- Butts, D. P., Koballa, T. R., Anderson, M., & Butts, J. P. (1993). Relationship between teacher intentions and their classroom use of Superscience. *Journal of Science Education and Technology*, 2(1), 349-357.
- Crawley, F. E., & Koballa, T. R. (1992). Hispanic-American students' attitudes toward enrolling in high school chemistry: A study of planned behavior and belief-based change. *Hispanic Journal of Behavioral Sciences*, 14(4), 469-486.
- Koballa, T. R., Eidson, S. D., Finco-Kent, D., Grimes, S., Kight, C. R., & Sambs, H. (1992). Peer coaching. *The Science Teacher*, 59(6), 42-45.
- Koballa, T. R. (1992). Persuasion and attitude change in science education. *Journal of Research in Science Teaching*, 29(1), 63-80.
- Coleman, D. C., Koballa, T. R., & Crawley, F. E. (1992). TLTG Interactive videodisc physical science program: Interest results of the 1988-89 field test. *Journal of Educational MultiMedia and HyperMedia*, 1(1), 223-234.
- Shrigley, R. L., & Koballa, T. R. (1992). A decade of attitude research based on Hovland's learning theory model. *Science Education*, 76(1), 17-42.
- Koballa, T. R., Jr., & Meadows, L. (1991). JCST: Past, present and future. *Journal of College Science Teaching*, 21(2), 76-81.
- Tippins, D., & Koballa, T. R. (1990). Elementary science education: Looking toward the future. *Journal of Elementary Science Education*, 3(1), 23-39.
- Shrigley, R. L., & Koballa, T. R. (1989). Anecdotes: What research suggests about their use in the science classroom. *School Science and Mathematics*, 89(4), 293-298.
- Koballa, T. R. (1989). Using salient beliefs in designing a persuasive message about teaching energy conservation practices to children. *Science Education*, 73(5), 547-567.
- Koballa, T. R. (1988). Attitude and related concepts in science education. *Science Education*, 72(2), 115-126.
- Baird, W. E., & Koballa, T. R. (1988). Changes in preservice elementary teachers' hypothesizing skills following group or individual study with computer simulation. *Science Education*, 72(2), 209-223.
- Koballa, T. R. (1988). The determinants of female junior high school students' intentions to enroll in elective physical science courses in high school: Testing the applicability of the theory of reasoned action. *Journal of Research in Science Teaching*, 25(6), 479-492.
- Koballa, T. R. (1988). Persuading girls to take elective physical science courses in high school: Who are the credible communicators? *Journal of Research in Science Teaching*, 25(6), 465-478.
- Shrigley, R. L., Koballa, T. R. & Simpson, R. D. (1988). Defining attitude for science educators. *Journal of Research in Science Teaching*, 25(8), 659-678.
- Koballa, T. R. (1987). The professional reading patterns of Texas life science teachers. *School Science and Mathematics*, 87(2), 118-124.



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- Koballa, T. R. (1987). The science-oriented journal reading habits of elementary teachers in central Texas. *School Science and Mathematics*, 87(8), 672-682.
- Koballa, T. R. (1987). Why don't eclipses occur every month? *Science Scope*, 11(2), 10-11.
- Koballa, T. R. (1986). Persuading teachers to reexamine the innovative elementary science programs of yesterday: The effect of anecdotal versus data-summary communications. *Journal of Research in Science Teaching*, 23(5), 437-499.
- Koballa, T. R. (1986). Teaching hands-on science activities: Variables that moderate attitude-behavior consistency. *Journal of Research in Science Teaching*, 23(6), 493-502.
- Koballa, T. R. (1986). What are Texas life science teachers reading? *The Texas Science Teacher*, 15(2), 5-6.
- Koballa, T. R. (1986). Changing attitudes toward energy conservation: The effect of self-generated thoughts on the salience of a two-sided persuasive communication. *Science Education*, 70(1), 53-60.
- Koballa, T. R., Jr., & Crawley, F. E. (1985). The influence of attitude on science teaching and learning. *School Science and Mathematics*, 85(3), 222-232.
- Montague, E. J., & Koballa, T. R. (1985). The effect of supervising teachers trained on instructional supervision on the classroom perceptions of student teachers. *Teacher Education and Practice*, 2(1), 25-30.
- Koballa, T. R., & Montague, E. J. (1985). Creationism and doublespeak. *The Science Teacher*, 52(1), 28-30.
- Koballa, T. R., (1985). The effect of cognitive response on the attitudes of preservice elementary teachers toward energy conservation. *Journal of Research in Science Teaching*, 22(6), 555-564.
- Koballa, T. R., & Rice, D. R. (1985). Six strategies for improving attitudes toward science. *Science and Children*, 22(6), 32-34.
- Koballa, T. R., & Montague, E. J. (1985). Factors that influence science learning. *The Texas Science Teacher*, 14(6), 7-10.
- Shrigley, R. L., & Koballa, T. R. (1984). Attitude measurement: Judging the emotional intensity of Likert-type science attitude statements. *Journal of Research in Science Teaching*, 21(2), 111-118.
- Koballa, T. R. (1984). A validation process for designing one-sided and two-sided communications to use in persuading teachers to teach energy conservation to children. *Science Education*, 68(2), 91-103.
- Koballa, T. R. (1984). Changing attitudes toward energy conservation: The effect of development advancement on the salience of one-sided and two-sided persuasive communications. *Journal of Research in Science Teaching*, 21(6), 659-668.

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- Koballa, T. R. & Barufaldi, J. B. (1984). Meeting the needs of elementary and secondary school science teachers. *The Texas Science Teacher*, 13(1), 5-8.
- Koballa, T. R. (1984). Want to change attitudes? Try discrepant events. *The Texas Science Teacher*, 13(2), 23-25.
- Koballa, T. R., & Shrigley, R. L. (1983). Credibility and persuasion: A sociopsychological approach to changing attitudes toward energy conservation of preservice elementary school science teachers. *Journal of Research in Science Teaching*, 20(7), 683-696.
- Shrigley, R. L., & Koballa, T. R. (1983). Attitudes of preservice teachers toward energy conservation. *Science and Children*, 20(8), 50-51.
- Coble, C. R., & Koballa, T. R. (1983). The rural advantage. *Science and Children*, 21(2), 595-597.
- Koballa, T. R. (1982). Use of persuasive tactics: The evolution-creation controversy. *The Texas Science Teacher*, 11(4), 7-9.
- Koballa, T. R., & Coble, C. R. (1979). Effects of introducing practical applications on preservice elementary teachers' attitudes toward teaching science. *Journal of Research in Science Teaching*, 16(4), 413-417.

## Reports

- Koballa, T. R., Kemp, A., Coleman, D., & Keys, C. (2001). *Teacher support specialist in science (TS cubed): Socializing prospective secondary science teachers into the profession*. (ERIC Document Reproduction No. ED 442 646)
- Koballa, T. R., Pyle, E. J., Matthews, R. W., Flage, L., & Ranger, S. (1997). *Wowbugs: Materials development and classroom implementation of a novel organism*. (ERIC Document Reproduction Service No. ED 403 147)
- McGinnis, J. R., Tobin, K. G., Koballa, T. R. (1997). *Teaching science methods to woman: Three tales of men professors reflecting on their practices*. (ERIC Document Reproduction Service No. ED 406 200)
- Koballa, T. R. (1990). *Attitude: An issue in curriculum reform*. Report prepared for the NARST sponsored Scope, Sequence, and Coordination research agenda-setting meeting, Atlanta, Georgia. (pp. 6)
- Crawley, F. E., & Koballa, T. R. (1990). *Hispanic students' interest in chemistry*. Final project report for the Pharr-San Juan-Alamo Independent School District. (pp. 78)

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- Crawley, F. E., & Koballa, T. R. (1989). *Affective evaluation report of the TLTG physical science curriculum, 1988-89*. Final project report to the Texas Learning Technology Group, Austin, Texas. (pp. 94)
- Koballa, T. R. (1988). *Pre-College Teacher Development in Science Program for Middle School Life Science Teachers*. Final report of project TEI-8651477 to the National Science Foundation. (pp. 43)
- Koballa, T. R. (1988). *Spring Fling with Science-1988: A STAT Regional Conference*. Final project report to the Executive Board of the Science Teachers Association of Texas. (pp. 7)
- Baird, W. E., & Koballa, T. R. (1986). *Changes in preservice teachers' hypothesizing skills and selected attitudes following group and individualized study with computer-presented text or computer simulation*. San Francisco: Paper presented at the annual meeting of the National Association for Research in Science Teaching. (ERIC Document Reproduction Service No. ED 266 946)
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### Comments

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### Proceedings

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- Vellon, R. P., Beeth, M. E., & Koballa, T. R. (2001). Redesign of science teacher education programs. In D. Psillos, P. Kariotoglou, V. Tselfer, G. Bisdikian, G. Fassoulouppulos, E. Hatzikraniotis, & M. Kallery (Eds.), *Proceedings of the Third International Conference on Science Education Research in the Knowledge Based Society* (pp. 207-209). Thessaloniki, Greece: Art of Text Publications.
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- Koballa, T. R., Gräber, W., & Coleman, D. C. (1999). German university students' conceptions of the knowledge base needed for secondary chemistry teaching. In M. Komorek, H. Behrendt, H. Dahncke, R. Duit, W. Gräber, & A. Kross (Eds.), *Proceedings of the Second International Conference of the European Science Education Research Association* (pp. 599-601). Kiel, Germany: ESERA.
- Koballa, T. R., Kemp, A., Coleman, D., & Keys, C. (1999). Teacher support specialist in science (TS3): Socializing prospective secondary teachers into the profession. In P. Rubba, J. Rye, & P. Keig (Eds.), *Proceedings of the 1999 annual international conference of the Association for the Education of Teachers in Science* (p. 1064). Greenville, NC: Association for the Education of Teachers in Science.
- Koballa, T. R., Coleman, D., & Graber, W. (1999). German university students' thoughts about their science teacher education. In P. Rubba, J. Rye, & P. Keig (Eds.), *Proceedings of the 1999 annual international conference of the Association for the Education of Teachers in Science* (p. 1064). Greenville, NC: Association for the Education of Teachers in Science.

### Abstracts

- Koballa, T. R. (1987). Abstract of Lawrence, F., & Herbert, C. (1985). The effect of methods classes and practice teaching on students attitudes toward science and knowledge of science processes. *Science Education*, 69(1), 105-113. In *Investigations in Science Education*, 13(1), 28-35.
- Koballa, T. R. (1985). Abstract of Kozma, R. B. (1982). Instructional design in a chemistry laboratory course: The impact of structure and aptitude on performance and attitude. *Journal of Research in Science Teaching*, 19(3), 261-270. In *Investigations in Science Education*, 11(1), 25-31.
- Koballa, T. R. (1985). Abstract of Towse, P. J. (1983). Do new science courses improve attitudes toward science? A study in Lesotho. *Science Education*, 67(2), 159-169. In *Investigations in Science Education*, 11(4), 43-58.
- Koballa, T. R. (1984). Abstract of Larson, M. A., Forrest, M., & Bostian, L. (1981). Participation in pro-environmental behavior. *Journal of Environmental Education*, 12(3), 21-24. In *Investigations in Science Education*, 10(2), 68-72.
- Koballa, T. R. (1983). Abstract of Glass, L. W. (1981). Outcomes of an energy education workshop for secondary school science teachers. *School Science and Mathematics*, 81(6), 496-502. In *Investigations in Science Education*, 9(2), 3-6.

**Book Reviews**

- Koballa, T. R. (2002). Review of Abell, S., *Science teacher education: An international perspective*. Dordrecht: Kluwer, 1991. In *Science Education*, 86(4), 593-595.
- Koballa, T. R. (1988). Review of Seixas, J. S., *Vitamins, what they are, what they do*. New York: Greenwillow Books, 1986. In *School Science and Mathematics*, 88(7), 624.
- Koballa, T. R. (1988). Review of Slesnick, I. L., Balzer, L., McCormack, A. J., Newton, D. E., & Rasmussen, F. A., *Scott, Foresman Biology*. Glenview, IL: Scott, Foresman and Company, 1988. In *Bookwatch*, 1 (1), 2-3.
- Koballa, T. R. (1987). Review of Sattler, H. R., *Sharks, the super fish*. New York: Lothrop, Lee & Shepard Books, 1986. In *School Science and Mathematics*, 87(3), 257.
- Koballa, T. R. (1986). Review of Telek, L., & Graham, H. D., *Leaf protein concentrates*. West Point, CN: AVI Publishing, 1983. In *School Science and Mathematics*, 86(4), 349.
- Koballa, T. R. (1986). Review of Thompson, G., Coldfrey, J., & Bernard, C., *The pond*. Cambridge, MA: The MIT Press, 1984. In *School Science and Mathematics*, 86(8), 705-706.
- Koballa, T. R. (1985). Review of Silverman, A., & Silverman, V., *Headaches: All about them*. New York: J. B. Lippincott, 1984. In *School Science and Mathematics*, 85(1), 69-70.
- Koballa, T. R. (1984). Review of Godfrey, L. R., *Scientists confront creationism*. New York: W. W. Norton, 1983. In *The American Biology Teacher*, 46(8), 460-461.

**Other Publications**

- Koballa, T. R., & Thomson, N. (2000). *Science special case course-part 1*. [A five unit, web-based instructional module for teaching about the nature of science.] Georgia Professional Standards Commission, Atlanta, GA.
- Kemp, A. & Koballa, T. R. (1999). *Valuing scientific literacy*. (Edited video clips with accompanying narrative). 2nd International IPN Symposium on Scientific Literacy. IPN: Kiel, Germany.
- Koballa, T. R. (1997). Two communities: One challenge. *NARSTNEWS*, 40(2), 3-4.
- Krajcik, J., Champagne, A., & Koballa, T. R. (1997). Promoting the effective use of NARST-NET. *NARSTNEWS*, 40(2), 1-2.
- Teaching suggestions found in the page margins of chapters 2 - 5 of (1991) *Biology*. Austin: Harcourt Brace Jovanovich.

**AWARDS AND HONORS**

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- 2012 Deborah J. Tippins Mentoring Award, Southeast Association for Science Teacher Education
- 2010 Outstanding Faculty Position Paper, Southeast Association for Science Teacher Education
- 2009 College Level Teacher of the Year, Georgia Science Teachers Association
- 2007 Outstanding Faculty Position Paper, Southeast Association for Science Teacher Education
- 2006 Outstanding Mentoring Award, Association for Science Teacher Education
- 2005 U.S. National Technology Leadership Initiative Fellowship in Science Education and Technology, Society for Information Technology and Teacher Education
- 2005 President, Southeast Association for Science Teacher Education
- 2000 John Shrum Award for Excellence in the Education of Science Teachers, Southeast Association for the Education of Teachers of Science
- 1999 East Carolina University, School of Education's Hall of Fame
- 1997 President, National Association for Research in Science Teaching
- 1987 Vice President, Science Teachers Association of Texas

**GRANTS AND CONTRACT**

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**Eisenhower Higher Education Higher Act, Title II, U.S. Department of Education**

Teacher support specialist in science (TS3): Providing a framework for improving science teaching in Georgia, February 2001 – May 2003; (\$53,040), Principal Investigator.

Georgia science and mathematics staff development opportunities conference, February 2001 – December 2002; (\$24,435), Principal Investigator.

Georgia teaching support specialist in science: Extending the responsibility for supporting beginning middle grades and secondary science teachers, February 2000 – May 2001; (\$46,026), Principal Investigator.

Keystone: Innovative master's program for early childhood and middle grades mathematics and science teachers, March 2000 - May 2001; (\$141,498), Co-Principal Investigator (with L. Hatfield).

Teacher support specialist in science, March 1998 – September 1999; (\$33,131), Co-Principal Investigator (with E. Gustafson).

Using WOWBugs as a vehicle for teaching life science concepts, March 1996 – December 1998; (\$30,829), Co-Principal Investigator (with R. W. Matthews).

Northeast Georgia meteorology project, June 1993 – December 1993; (\$23,401), Principal Investigator.

Study of applied mathematics and principles of technology courses, March 1992 – September 1993; (\$75,741), Co-Principal Investigator (with W. McKillip, E. Davis, & S. Oliver).

Staff development conference, March 1991 – October 1992; (\$29,200), Principal Investigator.

### **Georgia Department of Education**

Project RAMP: Raising academic measures of progress, December 2014 – November 2016, (\$475,908), Co-Principal Investigator; Robert Mayes, Principal Investigator.

DOE complex adaptive systems project, May 2014 – January 2015, (\$44,912), Co-Principal Investigator (with Robert Mayes).

Real STEM: Race to the Top, September 2012 – December 2014; (\$703,296), Co-Principal Investigator; Robert Mayes, Principal Investigator.

Northeast Georgia middle grades science enrichment initiative, March 2000 – June 2001; (\$25,000), Principal Investigator.

Science resource guides for Grades 4-8, March 1991 – September 1993; (\$25,500), Co-Principal Investigator (with M. Padilla).

### **Georgia Systemic Teacher Education Program**

Improving beginning teacher mentoring experiences: GSTEP framework as a guide for using direct evidence to improve practice. October 2004 - May 2004; (\$2,200), Principal Investigator.

### **Improving Teacher Quality, No Child Left Behind, U.S. Department of Education**

The Georgia Shore Program 2015, February 2015 – May 2016; (\$39,400), Co-Principal Investigator (with M. Timmons).

Teacher support specialist in science and mathematics (TS3M): Providing a framework for improving science and mathematics teaching in Georgia, February 2003 – May 2005; (\$72,342), Co-Principal Investigator (with M. Dias & W. Sanchez).

Teacher support specialist in science (TS3): Providing a framework for improving science

teaching in Georgia, February 2001 – May 2003; (\$53,040), Principal Investigator.

Georgia science and mathematics staff development opportunities conference, February 2001 – December 2002; (\$24,435), Principal Investigator.

### **Janet H. and C. Harry Knowles Science Teaching Foundation**

Mentoring and Induction Experiences of Novice Physical Science Teachers: Part II, September 2004 – October 2005; (\$50,000), Principal Investigator.

Mentoring and Induction Experiences of Novice Physical Science Teachers: Part I, July 2003 – July 2004; (\$50,000), Principal Investigator.

### **National Science Foundation**

Preservice secondary science teachers' utilization of frameworks within Evidence Based Inquiry (EBI) methodology and tools. September 2005 – August 2006; (\$4,000), co-principal investigator; Cynthia Minchew, principal investigator. Georgia Partnership for Reform in Science and Mathematics, subcontract from the National Science Foundation.

Mentoring Experiences of Science Education Student Teachers, September 2004 – August 2005; (\$6,000), principal investigator. Georgia Partnership for Reform in Science and Mathematics, subcontract from the National Science Foundation.

Analyzing and Improving Lesson Assessment Benchmarks for Science Teaching, September 2004 – August 2005; (\$4,000), principal investigator. Georgia Partnership for Reform in Science and Mathematics, subcontract from the National Science Foundation.

Developing “Fastwasps” for teaching biology in pre-college science, March 1993 – December 1994; (\$286,000), Co-Principal Investigator; R. W. Matthews, Principal Investigator.

Pre-college teacher enhancement program for middle/junior high school life science teachers, April 1988 – March 1992; (\$325,231), Principal Investigator.

Pre-college teacher development in science program for middle school life science teachers, April 1986 – December 1988; (\$67,363), Principal Investigator.

### **National Science Teachers Association**

National Science Teachers Association drive-in conference, March 1986; (\$150), Coordinator.

National Science Teachers Association drive-in conference, March 1985; (\$150), Coordinator.



**Science Teachers Association of Texas**

MINI-conference for the advancement of science teaching, February 1988; (\$500), Coordinator.

MINI-conference for the advancement of science teaching, February 1987; (\$500), Coordinator.

**University Research Institute, University of Texas at Austin**

Pre-college teacher enhancement program: Middle/junior high school teacher and students data analysis, March 1990 – August 1990; (\$500), Principal Investigator.

Pre-college teacher enhancement program for middle/junior high school life science teachers: Teacher and student data analysis, October 1988 – August 1989; (\$400), Principal Investigator.

Data analysis of a questionnaire to assess stages of concern toward a science teaching innovation, January 1988 – August 1988; (\$100), Principal Investigator.

Characteristics of the life science curriculum: Teacher and student perspectives, November 1986 – February 1987; (\$500), Principal Investigator.

Factors influencing female junior high school students to continue in the science-study sequence, June 1986 – August 1986; (\$5333), Principal Investigator.

Characteristics of Texas junior high School life science teachers and their classrooms, October 1985 – March 1986; (\$700), Principal Investigator.

Designing a Likert-type scale to assess attitudes toward energy conservation, September 1983 - December 1983; (\$240), Principal Investigator.

**University System of Georgia Board of Regents**

Scholarship of STEM teaching and learning conference and research project, July 2014 – July 2015; (\$71,219), Principal Investigator.

Scholarship of STEM teaching and learning conference and research project, July 2013 – July 2014; (\$71,219), Principal Investigator.

Scholarship of STEM teaching and learning conference and research project, July 2012 – July 2013; (\$78,000), Principal Investigator.

Scholarship of STEM teaching and learning conference and research project, July 2011 – July 2012; (\$80,000), Co-Principal Investigator (with B. Danielowicz).

University of Georgia, International development education award program, November 2000 - January 2001; (\$2500), Co-Principal Investigator (with D. Tippins).

Internationalizing the curriculum: A cross-cultural case-based approach, September 1998 – May 1999; (\$4500), Co-Principal Investigator (with D. Tippins & J. Riley).

### **U.S. Department of Education – as Director of Georgia Teacher Quality Program**

Improving Teacher Quality Grants-SAHES, July 2009 – July 2011; (\$2,097,134), Principal Investigator.

Improving Teacher Quality Grants-SAHES, July 2008 – July 2010; (\$2,034,530), Principal Investigator.

Improving Teacher Quality Grants-SAHES, July 2007 – July 2009; (\$2,008,840), Principal Investigator.

Improving Teacher Quality Grants-SAHES, July 2006 - July 2008; (\$2,013,158), Principal Investigator.

### **INVITED TALKS**

Mayes, R., & Koballa, T. R. (2013, April). *Mathematics connections – Common Core State Standards and the NGSS* (Next Generation Science Standards). Invited presentation to the Council of State Science Supervisors, San Antonio, TX.

Koballa, T. R. (2012, June). Next generation science standards and implications for teacher preparation. Invited keynote presentation to the membership of the Science and Mathematics Teacher Imperative of the Association of Public Land-Grant Universities, Portland, OR.

Koballa, T. R. (2005, September). *Mentoring as a means of teacher professional development: Exploring functionalist and radical humanist perspectives*. Invited presentation to faculty and students of Kasetstan University, Bangkok, Thailand.

Koballa, T. R. (2001, October). *Induction into the science teacher education culture: Mentoring or tormenting*. Keynote address presented annual meeting of the Southeast Association for the Education of Teachers in Science, Tampa, FL.

Koballa, T. R. (1999, May). *Cases in science education*. 13th Dolores F. Hernandez Lecture. University of the Philippines Institute for Science and Mathematics Education Development, Manila, The Philippines.

Koballa, T. R. (1997, March). *Two communities: One challenge*. Presidential address to members of the National Association for Research in Science Teaching, Oak Brook, IL.

## **CONFERENCE PAPERS AND PRESENTATIONS**

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### **International Conference Papers**

- Koballa, T. R. (2009, September). *Experimentation, modeling, and persuasion analysis*. Paper presented at the Gesellschaft für Didaktik der Chemie und Physik, Dresden, Germany.
- Koballa, T. R. (2009, March). *Experimentation, modeling, and persuasion analysis: Tools on the road to scientific literacy*. Paper presented at the PARSEL Conference, Berlin, Germany.
- Koballa, T. R. (2003, September). *The special case course: An introduction of the nature of science investigation*. Paper presented at the Royal Society of Chemistry, Dublin, Ireland.
- Koballa, T. R., & Gräber, W. (2001, August). *Prospective science teachers' conceptions of science teaching and learning: A methodological reconsideration*. Paper presented at the Third International Conference of the European Science Education Research Association, Thessaloniki, Greece.
- Vellon, R. P., Beeth, M. E., & Koballa, T. R. (2001, August). *Redesign of science teacher education programs*. Paper presented at the Third International Conference of the European Science Education Research Association, Thessaloniki, Greece.
- Koballa, T. R., Gräber, W., & Coleman, D. C. (1999, September). *German university students' conceptions of the knowledge base needed for secondary chemistry teaching*. Paper presented at the Second International Conference of the European Science Education Research Association, Kiel, Germany.
- Crawley, F. E., & Koballa, T. R. (1998, February). *German teacher students' conceptions of effective chemistry teaching*. Paper presented at the Seventh International Consortium of Research in Science and Mathematics Education, St. Clair, Trinidad.
- Crawley, F. E., & Koballa, T. R. (1991, March). *Attitude research in science education: Contemporary models and methods*. Paper presented at the Third International Consortium of Research in Science and Mathematics Education, Merida, Yucatan, Mexico.
- Coleman, D. C., & Koballa, T. R. (1990, March). *Interactive video for ninth grade science*. Paper presented at the Seventh International Conference on Technology and Education, Brussels, Belgium.
- Koballa, T. R. (1983, October) *The effect of developmental advancement on changing attitudes toward energy conservation via one-sided and two-sided persuasive communications*. Paper presented at the International Science Educators' Conference, Winnipeg, Manitoba, Canada.

### **National Conference Papers**

- Brkich, K., Koballa, T. R., & Brkich, C. (2015, April). *Naturalistic inquiry of SoTL conference impact on university faculty practice*. Paper presented at the annual meeting of the American Educational Research Association, Chicago, IL.

- Brkich, K., Koballa, T. R., & Brkich, C. (2015, January). *The impact of SoTL conferences on university STEM faculty teaching practices*. Paper presented at the annual meeting of the Association of Science Teacher Education, Portland, OR.
- Koballa, T. R., & Beyer, C. (2013, June). *Conference participation impact on university STEM instructors' thinking and practice*. Paper presented at the annual conference of the APLU Science and Mathematics Teacher Imperative Conference, St. Louis, MO.
- Koballa, T. R., & Bradbury, L. U. (2010, March). *What is known about mentoring in support of reform-based science teaching*. Paper presented at the annual meeting the National Association for Research in Science Teaching, Philadelphia, PA.
- Dias, M., Koballa, T. R., Bradbury, L. U., & Kittleson, J. (2010, March). *Teacher thinking associated with science-specific mentor preparation*. Paper presented at the annual meeting the National Association for Research in Science Teaching, Philadelphia, PA.
- Doney, P., & Koballa, T. R. (2010, January). *Portraits of first year teacher resilience in high school science*. Paper presented at the annual meeting of the Association for Science Teacher Education, Sacramento, CA.
- Deaton, C. M., Koballa, T. R., & Bryan, L. (2009, January). *Examining elementary teachers' uses of the video analysis tool (VAT) and explanations to reflect on their science teaching practice*. Paper presented at the annual meeting of the Association for Science Teacher Education, Hartford, CT.
- Koballa, T. R., Kittleson, J., Bradbury, L., & Dias, M. (2008, March). *Science teacher thinking about mentoring as revealed through written cases*. Paper presented at the annual conference of the National Science Teachers Association. Baltimore, MD.
- Koballa, T. R. (2008, January). *Mentoring in support of science teaching*. Paper presented at the annual meeting of the Association for Science Teacher Education, St. Louis, MO.
- Koballa, T. R., & Glynn, S. M. (2007, April). *Developing a questionnaire to assess conceptions of science teacher mentoring*. Paper presented at the annual conference of the National Science Teachers Association. New Orleans, LA.
- Koballa, T. R., & Leach, K. (2007, January). *Mentoring cases and what they reveal about the practice of science teacher mentors*. Paper presented at the annual meeting of the Association of Science Teacher Education, Clear Water Beach, FL.
- Koballa, T. R., Upson, L., Minchew, C., & Glynn, S. (2006, May). *Conceptions of mentoring and mentoring practice in alternative secondary science teacher education*. Paper presented at the Science, Technology, Engineering, and Mathematics Education Alternative Certification of Teachers Conference, Arlington, VA.
- Koballa, T. R. (2006, April). *Mentoring for standards-based science teaching*. Paper presented at the annual conference of the National Science Teachers Association, Anaheim, CA.
- Koballa, T. R., Tippins, D. J., Magrood-In, P., Soparat, S., & Steethunyoo, A. (2006, April). *Preparing science education leaders for Thailand: A Thai-U.S. partnership*. Paper presented at the annual conference of the National Science Teachers Association, Anaheim, CA.

- Koballa, T. R., Upson-Bradbury, L., & Draper, J. (2006, January). *Promoting an evidence-based approach to planning and teaching among preservice science teachers*. Paper presented at the annual meeting of the Association for Science Teacher Education, Portland, OR.
- Upson, L., Koballa, T. R., Minchew, C., Inyega, J., & Parlo, A. (2005, April). *Examining the link between mentor teaching advice and protégé classroom practice within a physical science context*. Paper presented at the annual meeting the National Association for Research in Science Teaching, Dallas, TX.
- Koballa, T. R., & Upson, L. (2005, April). *Inside science teacher mentoring*. Paper presented at the annual meeting the National Science Teachers Association, Dallas, TX.
- Koballa, T. R., Upson, L., Minchew, C., & Inyega, J. (2005, March). *Using technology to support evidence-based science teaching and mentoring*. Paper presented at the Society of Information Technology in Teacher Education conference, Phoenix, AZ. [Presentation was associated with the acceptance of an award, National Technology Leadership Initiative Science Education Fellow, 2005.]
- Koballa, T. R., Upson, L., Minchew, C., Inyega, J., Parlo, A. (2005, January). *Using technology to support evidence-based science teaching and mentoring*. Paper presented at the annual meeting of the Association for Science Teacher Education, Colorado Spring, CO.
- Koballa, T. R., & Upson, L. (2003, March). *Mentoring beginning science teachers—What all veterans should know*. Paper presented at the annual meeting the National Science Teachers Association, Philadelphia, PA.
- Koballa, T. R., & Atwater, M., Butler, M., Crawley, F., Miles, R., Mason, C., Ross, D., & Yerrick, R. (2002, April). *Professors, proteges, perspectives, and practices: Mentoring new faculty in science education*. Paper presented at the annual meeting of the National Association for Research in Science Teaching, Boston, MA.
- Koballa, T. R., Nichols, B. K., & Lyon, G. (2002, January). *The conceptions and actions of participants in the program for alternative certification in secondary science*. Paper presented at the annual meeting of the Association for the Education of Teachers in Science, Charlotte, NC.
- Koballa, T. R., Tsoi, M. Y., Upson, L., Gerber, B., Gannaway, S., & Coleman, D. (2001, January). *Georgia teacher support specialist in science: An on-line collaboration*. Paper presented at the annual meeting of the Association for the Education of Teachers in Science, Costa Mesa, CA.
- Matthews, R. W., Pyle, E. J., Koballa, T. R., Emory, A.L., Hua, L. (2000, April). *The impact of WOWBugs on students' learning of key life science concepts*. Paper presented at the annual meeting of the National Association for Research in Science Teaching, New Orleans, LA.

- Tippins, D. J., Koballa, T. R., Leonard, R., Kang, N., Jackson, D., Lyon, G. (2000, January). *Science classroom cases as a context for research: Investigating teachers' responses to a classroom controversy*. Paper presented at the annual meeting of the Association for the Education of Teachers in Science, Akron, OH.
- Koballa, T. R., Keys, C., & Kemp, A. (March 1999). *Teacher support specialist in science: A true Georgia resource*. Paper presented at the annual meeting of the National Science Teachers Association, Boston, MA.
- Koballa, T. R., Kemp, A., Coleman, D., & Keys, C. (1999, January). *Teacher support specialist in science (TS3): Socializing prospective secondary teachers into the profession*. Paper presented at the annual international conference of the Association for the Education of Teachers in Science, Austin, TX.
- Koballa, T. R., Coleman, D., & Gräber, W. (1999, January). *German university students' thoughts about their science teacher education*. Paper presented at the annual international conference of the Association for the Education of Teachers in Science, Austin, TX.
- Koballa, T. R., Coleman, D. C., & Gräber, W. (1998, January). *Preservice teachers perceptions of chemistry teacher education in Germany*. Paper presented at the annual meeting of the Association for the Education of Teachers in Science, Minneapolis, MN.
- Koballa, T. R., Coleman, D. C., & Gräber, W. (1998, April). *Prospective gymnasium teachers' conceptions of chemistry teaching and learning*. Paper presented at the annual meeting of the National Association for Research in Science Teaching, San Diego.
- Matthews, R. W., & Koballa, T. R. (October, 1997). *Wow your students with Wowbugs*. Workshop presented at the annual convention of the National Association of Biology Teachers, Minneapolis, MN.
- McGinnis, J. R., Tobin, K. G., Koballa, T. R. (1997, March). *Teaching science methods to women: Three tales of men professors on their practices*. Paper presented at the annual meeting of the National Association for Research in Science Teaching, Oak Brook, IL.
- Elliott, T., Koballa, T. R., Riley, J. P., & Butts, D. P. (1996, April). *Does participation in an undergraduate methods course make a difference?* Paper presented at the annual meeting of the National Association for Research in Science Teaching, St. Louis, MO.
- Koballa, T. R., & Pyle, E. J. (1996, March). *Teachers' conceptions of wasps as revealed by their drawings*. Paper presented at the annual meeting of the National Association for Research in Science Teaching, St. Louis, MO.
- Rennie, L., Paker, L., Harding, J., Jorde, D., Kahle, J., Koballa, T. R., & Jarvis, T. (1995, April). *Gender and science: Recasting the long shadow*. Symposium presented at the annual meeting of the National Association for Research in Science Teaching, San Francisco, CA.

- French, M., Koballa, T. R., Doster, E. C., & Calvert, R. (1994, March). *A case study of prospective elementary teachers' beliefs concerning empowerment in science teaching and learning*. Paper presented at the annual meeting of the National Association for Research in Science Teaching, Anaheim, CA.
- Koballa, T. R., & Pyle, E. J. (1994, March). *Effects of meteorology inservice program on teachers' beliefs and behaviors*. Paper presented at the annual meeting of the National Association for Research in Science Teaching, Anaheim, CA.
- Meadows, L., Oliver, J. S., & Koballa, T. R. (1994, March). *Determinants of chemistry students' intentions to major in science: A LISREL model using Ajzen's theory of planned behavior*. Paper presented at the annual meeting of the National Association for Research in Science Teaching, Anaheim, CA.
- Meadows, L., & Koballa, T. R. (1994, March). *Student experiences in college general chemistry: Emergent influences on continuing a science major*. Paper presented at the annual meeting of the National Association for Research in Science Teaching, Anaheim, CA.
- Koballa, T. R., & Pyle, E. J. (1994, January). *Teaching meteorology in the middle grades*. Paper presented at the annual meeting of the Association for the Education of Teachers in Science, El Paso, TX.
- Butts, D. P., & Koballa, T. R. (1993, April). *Relationship between teacher intentions and their use of Superscience*. Paper presented at the annual meeting of the National Association for Research in Science Teaching, Atlanta, GA.
- Callan, M., French, D., Hernandez, S. P., Hughes, J., Koballa, T. R., Rigdon, G., Yoho, G., & Yuratich, R. (1993, April). *Perspectives of preservice elementary teachers on an alternative teaching and learning model*. Paper presented at the annual meeting of the National Association for Research in Science Teaching, Atlanta.
- French, D., Koballa, T. R., Jackson, D. F., Meadows, L., Tippins, D., Hook, K., & Roth, W-M. (1993, April). *Critical issues in action research*. Symposium presented at the annual meeting of the National Association for Research in Science Teaching, Atlanta, GA.
- Hill, G., French, D., Richardson, L., Sparks, R., Kight, C., & Koballa, T. R. (1993, April). *Evaluation of the doctoral program in science education at the University of Georgia*. Paper presented at the annual meeting of the National Association for Research in Science Teaching, Atlanta, GA.
- Jackson, D. F., Koballa, T. R., Padilla, M. J., McGinnis, J. R. (1993, April). *The role of action research in curriculum development for a preservice science teacher education*. Paper presented at the annual meeting of the National Association for Research in Science Teaching, Atlanta, GA.
- Koballa, T. R. (1993, April). *Synthesis of science attitude research for the elementary grades*. Paper presented at the annual meeting of the National Association for Research in Science Teaching, Atlanta, GA.

- Meadows, L., & Koballa, T. R. (1993, April). *Student experiences in collegiate general chemistry: Effects on attitude and intention to major in science*. Paper presented at the annual meeting of the National Association for Research in Science Teaching, Atlanta, GA.
- Meadows, L., French, D., Jackson, D., & Koballa, T. R. (1993, April). *Approaches to personal empowerment of preservice teachers: Action research in science education classrooms*. Paper presented at the annual meeting of the American Education Research Association, Atlanta.
- Koballa, T. R., & French, D. (1993, January). *Instructors' reflections on student empowerment in an elementary methods course*. Paper presented at the annual meeting of the Association for the Education of Teachers of Science, Charleston, SC.
- Dana, N., Tippins, D., Dana, T., Koballa, T. R., Meadows, L., & Nichols, K. (1993, January). *Ethical conflicts*. Workshop presented at the Qualitative Research in Education Conference, Athens, GA.
- Koballa, T. R. (1992, November). *The biological equivalent of discrepant events--biological anomalies*. Paper presented at the annual meeting of the National Association of Biology Teachers, Denver, CO.
- Oliver, J. S., Sparks, R. T., & Koballa, T. R. (1992, October). *The implementation of applied science/technology courses in secondary schools*. Paper presented at the annual meeting of the School Science and Mathematics Association, Marquette, MI.
- Butts, D. P., Anderson, W., Atwater, M. M., Koballa, T. R., Simmons, P. E., & Hairston, R. (1992, March). *Evaluating an inservice model that impacts science classroom practice*. Paper presented at the annual meeting of the National Association for Research in Science Teaching, Boston, MA.
- Crawley, F. E. & Koballa, T. R. (1992, March). *Attitude/behavior change in science education: Part 1-models and methods*. Paper presented at the annual meeting of the National Association for Research in Science Teaching, Boston, MA.
- Koballa, T. R., & Crawley, F. E. (1992, March). *Attitude/behavior change in science education: Part 2-results of an on-going research agenda*. Paper presented at the Annual Meeting of the National Association for Research in Science Teaching, Boston, MA.
- Oliver, J. S., & Koballa, T. R. (1992, March). *Science educators us of the concept of belief*. Paper presented at the annual meeting of the National Association for Research in Science Teaching, Boston.
- Warden, M. A., Koballa, T. R., & Bethel, L. J. (1992, March). *A national science foundation pre-college teacher enhancement program for middle/junior high school life science teachers*. Paper presented at the Annual Meeting of the National Association for Research in Science Teaching, Boston, MA.
- Koballa, T. R., & Meadows, L. (1992, March). *Why join NSTA as a first-year teacher?* Paper presented at the annual meeting of the National Science Teachers Association, Boston, MA.
- Koballa, T. R. & Oliver, J. S. (1992, March). *The affective domain deserves attention too!* Paper presented at the annual meeting of the National Science Teachers Association, Boston.
- Koballa, T. R. (1991, April). *Attitude changes and gender-equity in science: Contemporary*



- qualities that enhance persuasion*. Paper presented at the annual meeting of the National Association for Research in Science Teaching, Lake Geneva, WI.
- Crawley, F. E., & Koballa, T. R. (1991, April). *Hispanic students' attitudes toward enrolling in high school chemistry: A study of planned behavior and belief-based change*. Paper presented at the annual meeting of the National Association for Research in Science Teaching, Lake Geneva, WI.
- Warden, M. A., & Koballa, T. R. (1991, April). *The effect of two videotaped persuasive messages on 7th grade science students' intentions to perform an AIDS-related laboratory behavior*. Paper presented at the annual meeting of the National Association for Research in Science Teaching, Lake Geneva, WI.
- Coleman, D. D., Koballa, T. R., & Crawley, F. E. (1990, April). *TLTG interactive videodisc physical science program: Results of the 1988-89 field test*. Paper presented at the annual meeting of the National Association for Research in Science Teaching, Atlanta, GA.
- Koballa, T. R. (1989, December). *Designing science-related persuasive messages using salient beliefs*. Paper presented at the annual meeting of the School Science and Mathematics Association, Austin, TX.
- Koballa, T. R. (1989, April). *Persuasion and attitude change in science education*. Paper presented at the annual meeting of the National Association for Research in Science Teaching, San Francisco, CA.
- Koballa, T. R. (1989, April) *Persuasion: A legitimate instructional strategy in science*. Paper presented at the annual meeting of the National Science Teachers Association, Seattle, WA.
- Koballa, T. R. (1988, March). *The determinants of eighth grade students' intentions to enroll in elective science courses in high school*. Paper presented at the annual meeting of the National Association for Research in Science Teaching, Lake Ozark, MO.
- Koballa, T. R. (1987, November). *Who do girls listen to about taking physical science courses in high school?* Paper presented at the Every Teacher A Researcher special session of the regional meeting of the National Science Teachers Association, San Antonio, TX.
- Koballa, T. R., & Evans, R. (1987, November). *Hurricane preparedness and response: A simulation*. Paper presented at the regional meeting of the National Science Teachers Association, San Antonio, TX.
- Koballa, T. R. (1987, March). *Credible communicators and persuading girls to take elective physical science courses in high school*. Paper presented at the annual meeting of the National Association for Research in Science Teaching, Washington, D. C.
- Shrigley, R. E., Koballa, T. R., & Crawley, F. E. (March, 1987). *The theory of reasoned action: Can it be used to predict and understand the behavior of science teachers and students?* Paper presented at the annual meeting of the National Association for Research in Science Teaching, Washington, D. C.
- Baird, W. E., & Koballa, T. R. (1986, March). *Changes in preservice elementary teachers' hypothesizing skills following group cooperative or individual study with computer-presented text or computer simulation*. Paper presented at the annual meeting of the National Association for Research in Science Teaching, San Francisco, CA.

- Shrigley, R. L., Koballa, T. R., & Simpson, R. D. (1986, March). *The attitude concept: Can it be defined?* Paper presented at the annual meeting of the National Association for Research in Science Teaching, San Francisco.
- Koballa, T. R. (1986, March). *Changing preservice teachers' attitudes: The effect of anecdotal and data-summary persuasive communications.* Paper presented at the annual meeting of the National Association for Research in Science Teaching, San Francisco, CA.
- Koballa, T. R. (1985, April). *Improving students' attitudes toward science within the context of day-to-day instruction: The influence of social psychological research.* Paper presented at the annual meeting of the National Science Teachers Association, Cincinnati, OH.
- Koballa, T. R. (1985, April). *Preservice teachers' retention of changed attitudes toward energy conservation: Cognitive response or recall of message arguments.* Paper presented at the annual meeting of the National Association for Research in Science Teaching, French Lick Springs, IN.
- Koballa, T. R. (1984, April). *Self-generated thought as a result of a persuasive message and its implications on the attitudes toward energy conservation of preservice elementary teachers.* Paper presented at the annual meeting of the National Association for Research in Science Teaching, New Orleans, LA.
- Koballa, T. R. (1983, April). *The evolution-creation controversy: Use of persuasive tactics.* Paper presented at the annual meeting of the National Science Teachers Association, Dallas, TX.
- Koballa, T. R. (1983, April). *Constructing one-sided and two-sided communications for use in persuading preservice teachers of the importance for including energy conservation topics in the elementary school curriculum.* Paper presented at the annual meeting of the National Association for Research in Science Teaching, Dallas, TX.
- Shrigley, R. L., & Koballa, T. R. (1982, April). *Assessing the emotional intensity of Likert-type attitude statements.* Paper presented at the annual meeting of the National Association for Research in Science Teaching, Fontana, WI.
- Koballa, T. R. (1982, April). *The effect of a persuasive communication on the energy attitudes of college students.* Paper presented at the annual meeting of the National Association for Research in Science Teaching, Fontana, WI.
- Koballa, T. R. (1981, April). *Designing a Likert-type scale to assess attitudes toward energy conservation.* Paper presented at the annual meeting of the National Association for Research in Science Teaching, New York, NY.
- Koballa, T. R. (1980, April). *The correlation of two female teacher attitudes: Sex fairness and science.* Paper presented at the annual meeting of the National Science Teachers Association, Anaheim, CA.
- Koballa, T. R. (1978, April). *Attitudes of preservice teachers toward science.* Paper presented at the annual meeting of the National Science Teachers Association, Washington, D. C.

**Regional and State Conference Papers**

- Koballa, T. Brkich, K, and Render, J. (2014, September). *Scholarship of STEM Teaching and Learning Conferences: Exploring the impact on university-level STEM faculty pedagogy*. Paper presented at the conference of the Southeast Association of Science Teacher Education, Savannah, GA.
- Render, J., and Koballa, T. (2014, March). *Scholarship of STEM teaching and learning conference and follow-up: Efforts to enhance STEM teaching at Georgia universities*. Poster presentation made at the Georgia Sothern University Research Symposium, Statesboro, GA.
- Koballa, T. R. (2010, February). *Should all drivers be riding on nitrogen-filled tires?* Paper presented at the annual conference of the Georgia Science Teachers Association, Savannah, GA.
- Koballa, T. R. (2009, October). *Experimentation, modeling, and persuasion analysis: Tools for building scientific literacy*. Paper presented at the annual conference of the Southeastern Association or Science Teacher Education, Kennesaw, GA.
- Doney, P., & Koballa, T. R. (2009, October). *Portrait of a resilient first year high school science teacher*. Paper presented at the annual conference of the Southeastern Association or Science Teacher Education, Kennesaw, GA.
- Koballa, T. R., Reeves, M., & Atkinson, J. (2008, October). *Are we speaking the same language? Science teachers' conceptions of inquiry*. Paper presented at the annual conference of the Southeastern Association or Science Teacher Education, Columbia, SC.
- Doney, P, Willis, R., & Koballa, T. R. (2008, October). *The mentoring needs of beginning secondary science teachers*. Paper presented at the annual conference of the Southeastern Association for Science Teacher Education, Columbia, SC.
- Koballa, T. R. & Bradbury, L. (2008, October). *Leadership and mentoring in support of science teacher learning*. Paper presented at the annual conference of the Southeastern Association for Science Teacher Education, Columbia, SC.
- Koballa, T. R. (2007, October). *Assessing conceptions of science teacher mentoring*. Paper presented at the annual conference of the Southeastern Association for Science Teacher Education, Valdosta, GA.
- Koballa, T. R., & Glynn, S. M. (2006, October). *Assessing conceptions of science teacher mentoring*. Paper presented at the annual conference of the Southeastern Association for Science Teacher Education, Macon, GA.
- Koballa, T. R. (2006, April). *Mentoring experiences of science education student teachers*. Paper presented at the 2006 PRISM research symposium, Atlanta, GA.
- Minchew, C. C., Deaton, B., & Koballa, T. R. (2006, April). *Pre-service secondary science teachers' utilization of frameworks within the Evidence Based Inquiry (EBI) methodology and tools*. Paper presented at the 2006 PRISM research symposium, Atlanta, GA.

- Koballa, T. R. (2006, February). *Using the GPS to engage students in standards-based science learning*. Paper presented at the annual conference of the Georgia Science Teachers Association, Columbus, GA.
- Glynn, S. M., & Koballa, T. R. (2006, February). *Dilemmas in the science classroom*. Paper presented at the annual conference of the Georgia Science Teachers Association, Columbus, GA.
- Koballa, T.R. (2005, October). *The construction and testing of lenses to promote evidence-based reflection*. Paper presented at the annual meeting of the Southeast Association for Science Teacher Education, Athens, GA.
- Minchew, C., Koballa, T. R., Upson, L., Inyega, J., & Parlo, A. (2004, October). *Idealized versus realized: Science teachers' beliefs about mentoring*. Paper presented at the annual meeting of the Southeast Association for Science Teacher Education, Gainesville, FL.
- Koballa, T. R., Upson, L., Minchew, C., & Inyega, J. (2004, May). *Improving beginning teacher mentoring experiences: GSTEP framework as a guide for using direct evidence to improve practice*. Paper presented at the Georgia Systemic Teacher Education Program Research Symposium, Athens, GA.
- Koballa, T. R., & Thomson, N. (2003, October). *A special case course to introduce middle school science teachers to the nature of science and scientific investigation*. Paper presented at the annual meeting of the Southeast Association for the Education of Teachers of Science, Greenville, SC.
- Koballa, T. R., Abayomi, B., Gerber, B., Dias, M., Upson, L., Wheeler, J. (2003, February). *Mentoring in science: Promises and dilemmas*. Paper presented at the annual meeting of the Georgia Science Teachers Association, Jekyll Island, GA.
- Upson, L., Koballa, T. R., & Wheeler, J. (2002, October). *"I would have been lost for real:" Mentor and protégé experiences with the teacher support specialist in science program*. Paper presented at the annual meeting of the Southeast Association for the Education of Teachers in Science, Kennesaw, GA.
- Koballa, T. R., Graber, B., Abayomi, B., Seay, J., Johnson, M., Leach, K., Waldon, J., & Jones R. (2002, February). *Mentoring in science*. Paper presented at the annual meeting of the Georgia Science Teachers Association, Atlanta, GA.
- Koballa, T. R., & Upson, L. (2001, October). *Uncertified science teachers' conceptions of science teaching*. Paper presented at the annual meeting of the Southeast Association for the Education of Teachers in Science, Tampa, FL.
- Upson, L., Koballa, T. R., & Gerber, B. (2001, October). *Use of electronic means to foster communication between science teacher mentors*. Paper presented at the annual meeting of the Southeast Association for the Education of Teachers in Science, Tampa, FL.
- Koballa, T. R., Gerber, B., Gannaway, S., Coleman, D., Anderson, L., Barton, M., Bennett, P., Daniels, P. C., Dotson, L. K., Guerrero, S., Jones, R. M., Keys, M., McAdams, S., Smith, J., Smith, M., Winchester, J., Zevin, S. (2001, February). *The promise and dilemmas of mentoring in science*. Paper presented at the annual Science and Leadership Conference of the Georgia Science Teachers Association, Macon, GA.

- Koballa, T. R., & Riley, J. P. (2000, October). *Informing science teacher education redesign in the US with knowledge and practices in Germany and Japan*. Paper presented at the Redesign in Science Education conference, Columbus, OH.
- Koballa, T. R., & Coleman, D. C. (1998, November). *German university students' thoughts about their science teacher education*. Paper presented at the southern regional meeting of the National Science Teachers Association, Birmingham, AL.
- Koballa, T. R., & Tippins, D. J. (1998, October). *Developing a middle and secondary science case handbook: The issues and promises*. Paper presented at the Southeast Association for the Education of Teachers in Science, Atlanta, GA.
- Koballa, T. R., & Meadows, L. (1992, February). *Beliefs about joining a professional science teacher organization*. Paper presented at the annual meeting of the Southeastern Association for the Education of Teachers in Science, Wakulla Springs, FL.
- Koballa, T. R. (1992, February). *Blowin' in the wind*. Workshop presented at the annual meeting of the Georgia Science Teachers Association, Atlanta, GA.
- Koballa, T. R. (1991, December). *Attend to students' attitudes*. Paper presented at the regional meeting of the National Science Teachers Association, New Orleans, LA.
- Koballa, T. R. (1991, February). *Ascomycetes anyone?* Paper presented at the annual meeting of the Georgia Science Teachers Association, Columbus, GA.
- Koballa, T. R. (1988, March). *Theory building in attitude research: The applicability of Hovland's learning theory approach in science education*. Paper presented at the annual meeting of the Texas Academy of Science, Commerce, TX.
- Koballa, T. R. (1986, December). *Research matters ... to the science teacher: Improving students' attitudes toward science*. Paper presented at the regional meeting of the National Science Teachers Association, Anchorage, AK.
- Koballa, T. R. (1986, November). *Wind vanes: An invitation to inquiry*. Paper presented at the annual Conference for the Advancement of Science Teaching, College Station, TX.
- Koballa, T. R. (1986, November). *Exploring life science*. Paper presented at the annual Conference for the Advancement of Science Teaching, College Station, TX.
- Koballa, T. R., & Rice, D. R. (1985, December). *Improving students' attitudes toward science*. Paper presented at the regional meeting of the National Science Teachers Association, New Orleans, LA.
- Koballa, T. R. (1985, October). *Six strategies for changing students' attitudes toward science*. Paper presented at the annual Conference for the Advancement of Science Teaching, San Marcos, TX.
- Koballa, T. R. (1985, March). *Changing attitudes towards hands-on science: The effect of anecdotal versus data-summary persuasive communications*. Paper presented at the annual meeting of the Texas Academy of Science, Richardson, TX.
- Koballa, T. R. (1984, November). *Appraising creation scientists' use of doublespeak: A three-step model*. Paper presented at the regional meeting of the National Science Teachers Association, Charlotte, NC

- Koballa, T. R. (1984, November). *Using a three-step model to evaluate creation scientists' use of doublespeak*. Paper presented at the annual Conference for the Advancement of Science Teaching, Beaumont, TX.
- Koballa, T. R. (1984, March). *A nine-step process for developing a Likert-type scale to measure attitude toward energy conservation*. Paper presented at the annual meeting of the Texas Academy of Science, San Antonio, TX.
- Koballa, T. R. (1984, March). *The influence of attitudes on science teaching and learning*. Paper presented at the annual meeting of the Texas Academy of Science, San Antonio, TX.
- Koballa, T. R. (1983, December). *Mystery birds: A rationale for classroom decision making*. Paper presented at the regional meeting of the National Science Teachers Association, Biloxi, MS.

### **State or Regional Conference Symposia, Presentations and Workshops**

- Koballa, T. R. (2006, August). *Improving teacher quality state grants*. Presentation at the Northeast Georgia Regional Coordinating Committee Meeting, Athens, GA
- Riley, J., Padilla, M., Bryan, L., Koballa, T. R., Oliver, J. S., Thomson, N. F., Tippins, D., & Ikeda, H. (2001, March). *The development of science teachers in Japan and the United States: Implications of international border crossings*. Symposium presented at the annual meeting of the National Association for Research in Science Teaching, St. Louis, MO.
- Harlen, W., Stage, E., Raizen, S., Bakker, S., Orpwood, G., & Koballa, T. R. (2000, April). *Assessment of scientific literacy in the OECD/PISA project*. Symposium presented at the annual meeting of the National Association for Research in Science Teaching, New Orleans, LA.
- Tippins, D. J., Koballa, T. R., Thomson, N., Glynn, S., Bilbao, P., Arellano, E., Barcenal, T., & Castellano, M. (2000, April). *Internationalizing the science teacher education curriculum: Culture and educational contexts*. Presentation at the annual meeting of the National Science Teachers Association, Orlando, FL.
- Prenzel, M., Duit, R., Harlen, W., & Koballa, T. R. (1999, September). *OECD/PISA-Programme for international science assessment: Monitoring student knowledge and skills in the new millennium*. Symposium presented at the second international conference of the European Science Education Research Association, Kiel, Germany.
- Nentwig, P., DeBoer, G., Evans, R. H., Gallagher, J. J., Graber, W., Koballa, T. R., & Ramsey, J. M. (1999, March). *Scientific literacy: Bridging the gap between theory and practice*. Symposium presented at the annual meeting of the National Association for Research in Science Teaching, Boston, MA.
- Pyle, E. J., & Koballa, T. R. (1999, March). *Decisions, decisions: Testing animal stimulus response patterns by experimentation*. Workshop presented at the annual meeting of the National Science Teachers Association, Boston, MA.

- Bryan, L., Koballa, T. R., Riley, J., Thomson, N., & Tippins, D. (1999, January). *Constructing international research relations*. Panel presentation at the 1999 Conference on Qualitative Research, Athens, GA.
- Schneider, D., Allen, J. B., Reinking, D., Koballa, T. R., & Newberry, L. (1998, February). *Responding to the media portrayal of teacher education*. Presentation at the annual meeting of the Georgia Association of Teacher Education, Jekyll Island, GA.
- Koballa, T. R., & Matthews, R. W. (1997, December). *Wow your students with Wowbugs!* Workshop presented at the southern area convention of the National Science Teachers Association, Nashville, TN.
- Matthews, R. W., & Koballa, T. R. (1997, December). *Mud dauber nests as a resource for teaching ecology concepts*. Workshop presented at the southern area convention of the National Science Teachers Association, Nashville, TN.
- Koballa, T. R., & Kemp, A. (1997, December). *Geotropism and photosynthesis: What do students know?* Workshop presented at the southern area convention of the National Science Teachers Association, Nashville, TN.
- Matthews, R. W., Flage, L., Koballa, T. R., & Pyle, E. J. (1996, October). *Wowbugs: A new organism for life science instruction*. Workshop presented at the southern area convention of the National Science Teachers Association, Atlanta, GA.
- Koballa, T. R. (1996, February). *Writing for the Georgia Science Teacher*. Workshop presented at the annual meeting of the Georgia Science Teachers Association, Augusta, GA.
- Koballa, T. R., Matthews, R. W., & Flage, L. (1996, February). *Wowbugs: Let them wow you*. Workshop presented at the annual meeting of the Georgia Science Teachers Association, Augusta, GA.
- Koballa, T. R., & Pyle, E. J. (1994, February). *Hands-on meteorology activities for the elementary and middle grades*. Workshop presented at the annual meeting of the Georgia Science Teachers Association, Savannah, GA.
- Koballa, T. R., & Meadows, L. (1993, February). *Elephants, ecology, and erosion--all in the 4th and 5th grade QCC*. Workshop presented at the annual meeting of the Georgia Science Teachers Association, Atlanta, GA.

## **TEACHING AND SUPERVISION**

### **University of Georgia**

Affective Domain in Science Education – Spring 1996, 1993, 1991

Meteorology for Teachers – Summer 1993

Practicum in Secondary Science Education – Fall 2007, 2006; Spring 2006, 2005

Research Seminar, Educational Evaluation – Spring 2004, 1999; Winter 1995, 1994, 1992;

Summer 1991

Secondary Student Teaching in Science Education – Fall 2005, 2004, 2003, 2002, 2001, 1999, 1998, 1995; Spring 2004, 2002, 1998, 1996, 1994; Winter 1997, 1993

Science for Early Childhood Education – Fall 1996

Science Supervision – Spring 2010, 2008; Summer 2002, 2001, 2000, 1995, 1994, 1992, 1991

Science Teacher Education – Fall 2008

Science Education Masters Portfolio – Spring 2000

Science Curriculum for the Secondary School – Fall 2009, 2008, 2007, 2006; Spring 2006, 2005; Summer 1991

Science in Early Childhood – Fall 1994, 1991, 1990; Spring 1996, 1992, 1991

Science Instruction in the Secondary School – Fall 2007, 2006; Spring 2006

Secondary Student Teaching in Science Education – Fall 2005, 2004, 2003, 2002, 2001, 1999, 1998, 1995; Spring 2005, 2004, 2002, 1998, 1996, 1994; Winter 1997, 1993

Student Teaching in the Middle School – Fall 1992

Teaching Strategies for Middle and Secondary School Science Teachers – Summer 1999

### **Doctoral Students**

Marion Reeves, Science Education, 2012, Chair

Seri Chapman, Science Education, 2012

Patricia Doney, Science Education, 2011, Chair

Aris Cajigal, Science Education, 2011

Robert Willis, Science Education, 2010, Chair

Cindy Loar, Workforce Education, 2009

Cynthia Minchew Deaton, Science Education, 2007, Co-Chair

Jodie Wheeler-Toppin, Science Education, 2006

Rachel Foster, Science Education, 2005

Leslie Upson, Science Education, 2004, Chair

Walter Snow, Science Education, 2004

Rachel Williamson, Science Education, 2004

Grace Lyon, Science Education, 2003

Jeanna Weldon, Science Education, 2002

Andrew Kemp, Science Education, 2001, Chair



Melody Brown, Science Education, 2000  
 Miriam Jordan, Science Education, 2000  
 Cathy May, Educational Psychology, 2000  
 Nita Paris, Educational Psychology, 2000  
 Tim Carter, Educational Psychology, 1998  
 Katherine Wieseman, Science Education, 1997  
 Eric Pyle, Science Education, 1995, Chair  
 Marion French, Science Education, 1994, Chair  
 Lon Richardson, Science Education, 1994  
 Lee Meadows, Science Education, 1993, Chair  
 Sandra Eidson, Science Education, 1992  
 Karen Kalivoda, Higher Education, 1991  
 Teresa Kokowski, Science Education, 1991

### **Specialist Students** [with research project]

Steve Kuninsky, Science Education, 2009, Chair  
 Kenneth Camp, Science Education, 2007, Chair  
 Ken Leach, Science Education, 2007, Chair  
 Jonathan Strich, Science Education, 2002  
 Brenda Hunt, Science Education, 1999  
 William Harrington, Science Education, 1998, Chair  
 Paul Baldwin, Science Education, 1995, Chair  
 Clyde Wylie, Science Education, 1995, Chair

### **Master's Students** [with thesis]

Lydia Cunnington, 2007, Chair  
 Jessie Draper, 2005, Chair

## **University of Texas at Austin**

Analysis of Research in Science Education – Fall 1989, 1988, 1987, 1986, 1985

Doctoral Seminar in Science Education – Spring 1988, 1987, 1986, 1985, 1984

Elementary Science Teaching Methods – Spring 1990, 1989, 1988, 1987, 1986, 1985, 1984, 1983, 1982; Spring, 1985, 1984

Inquiry Strategies in Science Education – Fall 1982

Life Science for Teachers – Fall 1989, 1988, 1987; Summer 1990, 1989, 1988, 1987

Secondary Curriculum Analysis in Science – Fall 1989, 1988, 1984

Secondary Curriculum in Science – Summer 1993, 1992

Science Education Forum – Spring 1985; Fall 1984

Supervision of Secondary Student Teachers – Fall 1985, 1984; Spring 1988, 1987, 1986, 1985, 1984, 1983

### **Doctoral Students**

Melissa Warden, Science Education, 1990, Chair

Dale Shaffer, Science Education, 1990, Chair

Leslie Goddard, Science Education, 1990, Chair

Delena Tull, Science Education, 1990

Carolyn Black, Science Education, 1990

Mary Lynn Klevans, Science Education, 1990

Jeonok Kwon, Science Education, 1990

Cathleen Loving, Science Education, 1990

Jeon-Ok Myeong, Science Education, 1990

Chan-Jong Kim, Science Education, 1989

Yvonne Estes, Science Education, 1989

Charles Fiedler, Special Education, 1989

Bor-Nian Chang, Science Education, 1988

Chyong-Sun Chen, Science Education, 1988, Chair

Keith Mitchell, Science Education, 1988

Lawrence Meissner, Science Education, 1987

Samera Baird, Special Education, 1987

Lori Haertel, Curriculum & Instruction, 1987

Kamil Jbeily, Science Education, 1987

Pedro Quintana, Science Education, 1987

Ngozi Mawande, Science Education, 1986

William E. Baird, Science Education, 1985, Chair

### **Master's Students [with thesis]**

Patricia Mokry, Science Education, 1990, Chair

Laura Doley, Science Education, 1990

Lee Meadows, Science Education, 1990

Ruth Radomski, Science Education, 1988, Chair

Cecile Saunders, Science Education, 1988

Annette Coe, Science Education, 1988

Willia Bailey, Science Education, 1987, Chair

**Pikeville College**

Elementary Mathematics Methods – Fall 1981

Elementary Science Methods – Fall 1981

Secondary Mathematics Methods – Spring 1982

Secondary Student Teacher Supervision – Fall 1981; Spring 1982

**Morehead State University**

Educational Evaluation – Spring 1982

**SERVICE TO THE PROFESSION**

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**Association for Science Teacher Education**

Awards Committee, 2006-2008

Program Committee, 1987 – 1988, 2001

Publications Committee Chair, 1986 - 1987

Director-at-Large, 1984 - 1987 (**elected office**)

Publications Committee, 1984 - 1986

**Council of Scientific Society Presidents**

Education Committee, 1996 – 1998

**Georgia Association of Colleges of Teacher Education**

Research Coordinator, 2012 – present

**Georgia Department of Education**

Professional Learning Taskforce, 2012 – present

**Georgia Professional Standards Commission**

Preparation Program Effectiveness Measures Taskforce, 2012 – present

Science Education Taskforce, 2009

**Georgia Science Teachers Association**

Executive Board, 1993 – 1999

**National Association for Research in Science Teaching**

Policy Advisory, 2001 – 2002

President, 1996 - 1997 (**elected office**)

Distinguished Contributions to Research Award Committee, 1991 – 1992

Awards Committee Chair, 1990 – 1993

Board of Directors, 1990 - 1993 (**elected office**)  
 Research Committee, 1986 - 1988  
 Program Committee, 1985 – 1987, 2000, 2002  
 Journal of Research in Science Teaching Awards Committee, 1983 – 1986

### **National Science Teachers Association**

*Journal of College Science Teaching* Advisory Board Chair, 1989 - 1991  
 NSTA Publications Committee, 1989 – 1990  
*Journal of College Science Teaching* Advisory Board, 1987 - 1988  
 National Science Teachers Association NCATE Folio Review Committee, 1987 – 1990

### **Phi Delta Kappa**

Faculty Research Representative, University of Texas Chapter, 1984 - 1985

### **Science Teachers Association of Texas**

Publications Advisory Committee, 1989 – 1990  
 Vice President, 1986 - 1987 (**elected office**)

### **Southeast Association for Science Teacher Education**

President, 2005 (**elected office**)  
 Vice President and Conference Coordinator, 2004

### **Texas Academy of Science**

Chairperson, Section XIII: Science Education, 1985 - 1986 (**elected office**)  
 Vice Chair, Section XIII: Science Education, 1984 - 1985 (**elected office**)

### **Texas Association of Biology Teachers**

Publications Advisory Committee, 1989 – 1990

### **Reviewer for Journals**

*Biology Teacher*  
*International Journal of Science Education*  
*Journal of College Science Teaching*  
*Journal for Research in Science Teaching*  
*Journal for Science Teacher Education*  
*School Science and Mathematics*  
*Science Education*  
*The Science Teacher*

## **DEPARTMENT AND UNIVERSITY SERVICE**

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### **Georgia Southern University**

#### **University Community**

Graduate Curriculum Committee, Prior Learning Assessment Sub-Committee, 2015  
 University System of Georgia, New Learning Models Consortium, 2014

Institute for Interdisciplinary STEM Education Advisory Board, 2012 – present  
College of Engineering Dean Search Committee Chair, 2011 – 2012  
Educational Leave Policy Document Development Committee Co-Chair, 2011

## **University of Georgia**

### **University Community**

University Council, 2005 – 2008  
University Symposium Planning Committee, 2001  
Graduate Council, 2000-2002

### **College of Education**

Promotion and Tenure Committee, 2004, 2007, 2008  
Department of Educational Leadership Program Review Committee, 2001  
School of Teacher Education Advisory Council, 1997 – 2003  
Department Representative to Faculty Senate, 1994 – 1997, 2006 – 2007  
Special Representative to the College's Project 30 Committee, 1991

### **Department of Elementary Education**

Early Childhood Level 1 Committee, 1991 – 1992

### **Department of Mathematics and Science Education**

Executive Committee, 2007 – 2008  
Secondary Science Education Program Committee, 2005; Chair 2007 – 2009  
Five-Year Plan Committee, 2005  
Ad-Hoc Raise Committee, 2005

### **Department of Science Education**

Ad-Hoc Raise Committee, 2005  
Recruiting Committee, 2001 – 2003  
Secondary Program Committee, 1997 – 2001  
Master's Program Committee, 1997 – 2002  
Doctoral Program Committee, 1997 – 2002  
Hospitality Committee, Chair, 1992 – 1993, 1997 – 2001  
Doctoral Program Review Committee, 1991 – 2010; Chair, 1991 – 1992  
Doctoral Screening Committee, 1991 – 1992  
Science Education Colloquium Committee, Chair, 1990 – 1991  
Elementary Program Committee, 1990 – 1994

## **University of Texas at Austin**

### **College of Education**

Undergraduate Curriculum and Guidance Committee, 1989 – 1990  
Centennial Planning Committee, 1989 – 1990  
Elementary Program Planning Committee, 1987 – 1988

Undergraduate Curriculum Committee, 1984 – 1985

**Department of Curriculum & Instruction**

Ad Hoc Committee to Evaluate Procedures for Part A Examinations, 1989 – 1990  
 Graduate Studies Committee on Admission to Candidacy, 1987 – 1988  
 Graduate Studies Part A Examination Committee, 1986 – 1989; Chair, 1989 – 1990  
 Ad Hoc Committee for Administration of the Qualifying Examination, 1985; 1988 – 1990  
 Executive Committee, 1984 – 1986; 1988 – 1989  
 Ad Hoc Teller Committee for Executive Committee Elections, 1984 – 1988  
 Ad Hoc Committee to Rank Applications for Graduate Student Fellowships and Graduate Research and Professional Development Awards, 1984 – 1986  
 Special M Ed Program Selection Committee, 1982 – 1983  
 Undergraduate Course Committee, 1982 – 1984; 1987 – 1988

**Science Education Center**

Review Committee for Research Involving Human Subjects, 1984 – 1990; Chair, 1985 – 1989  
 Science and Mathematics Graduate Studies Committee, 1982 – 1990  
 Training and Retention of Science and Mathematics Teachers Committee, 1982 – 1983

**PUBLIC SERVICE**

Statesboro-Bulloch County Chamber of Commerce, Education Committee, 2010 – 2015; Chair 2012- present

Standards-based science education professional development for Georgia's Regional Education Service Agencies' science consultants, 2005-2009

Program evaluation activities for 7 Texas school districts, 1984 – 1990

Science education support to Texas Regional Education Service Centers in Austin, Midland, San Angelo, and Waco, 1983 – 1987

Professional development for science teachers in 15 Texas independent school districts, 1983 – 1986

Southern Association of Schools and Colleges Visitation Team, 1983

**PROFESSIONAL MEMBERSHIP**

American Association of Colleges of Teacher Education  
 American Educational Research Association  
 Council of Academic Deans from Research Education Institutions  
 National Association for Research in Science Teaching  
 National Science Teachers Association  
 Georgia Association of College of Teacher Education  
 Georgia Science Teachers Association