

Clifford A. Hofwolt

Social Religious 163
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 Vanderbilt University
 Nashville, Tennessee 37203
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 Clifford.Hofwolt@Vanderbilt.Edu

Faculty Rank: Associate Professor of Science Education

Area of Specialization: Science Education

EDUCATIONAL BACKGROUND

| <i>Institution</i> | <i>Year</i> | <i>Major</i> | <i>Minor</i> | <i>Degree</i> |
|---------------------------------|-------------|----------------------|------------------|---------------|
| University of Northern Colorado | 69-71 | Science Education | Earth Science | Ed. D. |
| Colorado State College | 67-68 | Science Education | Chemistry | M.A. |
| Colorado State College | 60-64 | Chemistry | Mathematics | B.A. |

PROFESSIONAL EXPERIENCE

Peabody College
 Vanderbilt University
 2002-Present Director of Graduate Studies, Department of Teaching and Learning
 1979-Present Associate Professor of Science Education
 1972-1979 Assistant Professor of Science Education

Minot State University
 Minot, North Dakota

1970-72 Assistant Professor of Science Education
 1971-72 Director, Cooperative College School Science Program in Earth Science NSF

University of Northern Colorado
Greeley, Colorado

1968-70 Part-time Instructor of Science Education

Garden Grove Unified S.D.
Garden Grove, California

1965-67 Teacher of Chemistry and Physics
Department Chairman
1966-67 Chairman, District Science Curriculum Committee

Colorado State College
Greeley, Colorado

1964-65 Assistant Registrar

FELLOWSHIPS AND AWARDS

National Defense Education Act Doctoral Fellowship in Science Education,
University of Northern Colorado, 1967-70.

Certificate of Merit, North Dakota Association of Classroom Teachers, 1971.

Outstanding Educator, Peabody Roundtable, November 1998

Benefactor of the Commons, Peabody, 2002

Harry Bowman Service Award, Mid-South Educational Research Association, 2002

PUBLICATIONS

Book Chapters

Hofwolt, Clifford A. "A New View of the Science Classroom: A Synthesis of Research on Methods and Instructional Strategies." in Research Within Reach: Science Education, Charleston, WV: Appalachian Educational Laboratory, 1984. p. 43-57.

Articles

Hofwolt, Clifford A. "Cognitive Development in Science-Kindergarten" Preschool Leadership. January 1980.

Hofwolt, Clifford A. "The Blind Can Have Earth Science Too!" The Journal, Ohio Council for Elementary Science. October, 1979.

Kumar, David D. and Hofwolt, Clifford A. "Implications of a Comparative Assessment of Exemplary and Novice Elementary Teachers" Journal of Science Teacher Education Vol 3(4), p. 123-127, 1992

Conference Proceedings

E. Jean Marsh, Hofwolt, Clifford A. and Sherwood, Robert D. "Instructional Contrasts in Elementary Science Teaching". Technology and Teacher Education Annual - 1991. Society for Technology and Teacher Education. p. 93-94

Hofwolt, Clifford A. and Kumar, David D. "A Comparative Analysis of the Instructional Strategies of Exemplar and Novice Elementary Science Teachers." Proceedings of the Twentieth Annual Meeting of the Mid-South Educational Research Association, Lexington, KY, November 14, 1991. p. 76-77.

Hofwolt, Clifford A. "A View of the Effective Science Classroom: A Synthesis of Research on Methods and Instructional Strategies" Proceedings of the Twenty Second Annual Meeting of the Mid-South Educational Research Association, New Orleans, LA, November 10, 1993. p. 30-31

Hofwolt, Clifford A., Johnston, James D. And Kumar, David D. "Single Verses Multiple Observation: A Comparative Analysis of the Instructional Strategies of Exemplary and Novice Elementary Science Teachers". Proceedings of the Twenty Fourth Annual Meeting of the Mid-South Educational Research Association, Biloxi, MS, November 8, 1995. p. 42

Hofwolt, Clifford A. "A Comparison of Changes in Attitudes Toward Science in Chemistry and Elementary Science Methods Courses" Proceedings of the Twenty Sixth Annual Meeting of the Mid-South Educational Research Association, Memphis, TN, November 15, 1997. p.42

Hofwolt, Clifford A. "A Study on the Use of Self-Evaluation Inventories as a Means of Alternative Assessment in Elementary Science Methods Courses" Proceedings of the Twenty Seventh Annual Meeting of the Mid-South Educational Research Association, New Orleans, LA, November 6, 1998. p.93

Hofwolt, Clifford A. "The Development and Implementation of an Observational System for Hands-on Discovery Learning in Science" Proceedings of the Twenty Eight Annual Meeting of the Mid-South Educational Research Association, Point Clear, AL, November 18, 1999. p.115

Hofwolt, Clifford A. "Implementation of an Observational System for Hands-On Discovery Learning in Science" Proceedings of the Thirtyth Annual Meeting of the Mid-South Educational Research Association, Little Rock AR, November 16, 2001.

Manuals

"Guidebook for the PreService Use of ChemSource" American Chemical Society, 1994 was part of an eight member writing team

Videodiscs And Associated Hypercard Software

“Approaches to Teaching Science” videodisc and associated HyperCard stack, 1991

“HyperScience” videodiscs and associated HyperCard stack, 1992

“Effective Teaching Practices in Science” videodisc and associated HyperCard stack, 1992

“ChemWorld-Analysis of Teaching” CD and associated HyperCard stack, 1996

INVITED SPEECHES

“Science and the Gender Gap” Speech given to the Nashville chapter of American Association of University Women, Nashville, TN, February 8, 1992

“Hypermedia for HyperScience Educators” Keynote speech to Association for Education of Teachers in Science Annual Convention, El Paso, TX, January 8, 1994

“Role of Case Studies in Preparing Teachers” Invited speech delivered to the Southern Education Foundation’s Pathways to Teaching Project Meeting in Montgomery, AL March 25, 1994

“Role of Case Studies in Preparing Effective Science and Mathematics Teachers” Invited speech delivered to the Tennessee Higher Education Statewide Systemic Initiative Meeting at Henry Horton Park, TN on April 18, 1994.

CONFERENCE PRESENTATIONSPapers

Hofwolt, Clifford A. "Self-Evaluation in Science Education," National Science Teachers Association Area Convention, AETS Meeting, Vancouver, British Columbia, November 12, 1971.

Hofwolt, Clifford A. "Developing Decision Making Skills in Elementary Science Teachers Through Video Technology." National Science Teachers Association National Convention, AETS Meeting, St. Louis, MO, April 9, 1988.

Marsh, E. Jean, Hofwolt, Clifford. A., and Sherwood, Robert D. "Instructional Contrasts in Elementary Science Teaching". Second Annual Technology and Teacher Education Conference. Greenville, NC, April 25, 1991.

Hofwolt, Clifford A. and Kumar, David D. "A Comparative Analysis of the Instructional Strategies of Exemplar and Novice Elementary Science Teachers." Mid-South Educational Research Association Annual Meeting, Lexington, KY, November 14, 1991.

Goldman, Barron, Bassler, Hofwolt, Johnston, Kinach, Whitenack. "Developing Integrated Media Cases from Pre-Service Field-Placement Lessons" American Educational Research Association Annual Meeting, Atlanta, GA, April 1993.

Hofwolt, Clifford A. "A View of the Effective Science Classroom: A Synthesis of Research on Methods and Instructional Strategies" Mid-South Educational Research Association Annual Meeting, New Orleans, LA, November 10, 1993.

Hofwolt, Clifford A. "Defining the Effective Elementary Science Teacher" Association for the Education of Teachers in Science National Convention, El Paso, TX, January 9, 1994.

Hofwolt, Clifford A., Johnston, James D. And Kumar, David D. "Single Verses Multiple Observation: A Comparative Analysis of the Instructional Strategies of Exemplary and Novice Elementary Science Teachers". Mid-South Educational Research Association Annual Meeting, Biloxi, MS, November 8, 1995.

Hofwolt, Clifford A. "A Comparison of Changes in Attitudes Toward Science in Chemistry and Elementary Science Methods Courses" Mid-South Educational Research Association Annual Meeting, Memphis, TN, November 15, 1997.

Hofwolt, Clifford A. "A Study on the Use of Self-Evaluation Inventories as a Means of Alternative Assessment in Elementary Science Methods Courses" Mid-South Educational Research Association Annual Meeting, New Orleans, November 6, 1998.

Hofwolt, Clifford A. "The Development and Implementation of an Observational System for Hands-on Discovery Learning in Science" Mid-South Educational Research Association, Point Clear, AL, November 18, 1999.

Hofwolt, Clifford A. "Implementation of an Observational System for Hands-On Discovery Learning in Science" Mid-South Educational Research Association, Little Rock AR, November 16, 2001.

Hofwolt, Clifford A. "The Development and Implementation of an Observational System for Hands-on Discovery Learning in Science" Association for the Education of Teachers of Science International Convention, Charlotte, NC, January 11, 2002.

Libidinsky, Lisa J., Kumar, David D., Hofwolt, Clifford A., and Bingham, Amy. "Science and Language Integration Using Technology" Association for the Education of Teachers of Science International Convention, Charlotte, NC, January 10, 2002.

Presentations

Hofwolt, Clifford A. "Writing Behavioral Objectives and Test Questions." National Science Teachers Association Silver Symposium. Greeley, Colorado, April 19, 1969.

Hofwolt, Clifford A. "Implications of Piaget's Theory of Intellectual Development for Education." Colorado-Wyoming Academy of Science, Greeley, CO, May 24, 1970.

Hofwolt, Clifford A. "Interrelationships of Piagetian Research, Humanistic Psychology, Discovery Learning, and Creativity in Developing a Theory of Instruction in Science Education" - Symposium, National Association for Research in Science Teaching Annual Meeting, Silver Springs, Maryland, March 24, 1971.

Hofwolt, Clifford A. "Environmental Education in the Elementary Classroom." North Dakota Association of Classroom Teachers Meeting, Minot, ND, Oct. 2, 1971.

Hofwolt, Clifford A. "Science for the Pre-school Child," 19th Annual TACUS Conference, Nashville, TN, October 25 and 26, 1973.

Hofwolt, Clifford A. "Piaget's Work: A Consideration for Science Education," Tennessee Science Teachers Association State Convention, Nashville, TN, October 25, 1975.

Hofwolt, Clifford A. "Exciting Hands-on Science Activities" Association for Childhood Education International - Ideas Exchange Workshop, Nashville, TN, December 2, 1976.

Hofwolt, Clifford A. "The Blind Can Have Earth Science Too!" National Science Teachers Association Area Convention, New Orleans, LA, December 2, 1978.

Hofwolt, Clifford A. "Constructing Science Learning Centers--Ideas for Teachers." National Science Teachers Association Area Convention, Nashville, TN, November 19, 1981.

Hofwolt, Clifford A. "Resources and Opportunities for Teachers" Conference on Emerging Trends in Mathematics, Science and Foreign Language, Tennessee State Department of Education, Nashville, TN, June 23, 1987.

Hofwolt, Clifford A., Altman, J.E., and Harwood, John. "Developing Effective Teaching Competencies for Elementary Science Teachers Through Contrasts in Teaching Elementary School Science: A Video Presentation." Mid-South Educational Research Association Annual Meeting, New Orleans, LA, November 14, 1990.

Hofwolt, Clifford A. "Developing Effective Teaching Competencies for Elementary Science Teachers Through Hypermedia." National Science Teachers Association National Convention, AETS Meeting, Houston, TX, March 29, 1991.

Hofwolt, Clifford A., David D. Kumar, and Altman, Jan E. "HyperScience" National Science Teachers Association National Convention, Houston, TX, March 29, 1991.

Hofwolt, Clifford A. "HyperScience for Middle Schools". Tennessee Science Teachers Association State Convention, Nashville, TN, November 8, 1991.

Hofwolt, Clifford A. "HyperScience for Middle School Teachers" National Science Teachers Association National Convention, Boston, Mass, March 28, 1992.

Hofwolt, Clifford A. "Using Hypermedia to Develop Effective Elementary Science Teachers" National Science Teachers Association National Convention, Boston, Mass, March 28, 1992.

Sherwood, Robert D. and Hofwolt, Clifford A. "Videodisc-Based Problem-Solving Programs" National Science Teachers Association National Convention, NARST Meeting, Boston, Mass, March 29, 1992.

Hofwolt, Clifford A. and Joesten, Melvin D. "Using Technology to Improve Mathematics and Science Education Preservice Teacher Preparation" Precollege-University Partnerships for Science and Mathematics Education Conference, Atlanta, GA, April 24, 1992.

Joesten, Melvin D. and Hofwolt, Clifford A. "Teaching Science in the Elementary School: Videodisc Materials for Pre-Service Teachers" 12th Biennial Conference on Chemical Education, University of California at Davis, Davis, CA, August 1992.

Hofwolt, Clifford A. and Johnston, James D. "HyperScience II for Middle Schools". Tennessee Science Teachers Association State Convention, Nashville, TN, November 7, 1992.

Hofwolt, Clifford A. and Johnston, James D. "Approaches to Teaching Science: An Integrated Media Presentation." Mid-South Educational Research Association Annual Meeting, Knoxville, TN, November 14, 1992

Hofwolt, Clifford A. "Using Hypermedia to Develop Effective Elementary Science Teachers" Association for the Education of Teachers in Science National Convention, Charleston, SC, January 30, 1993.

Hofwolt, Clifford A. "Enhancing Learning Through Pictorial Riddles". Tennessee Science Teachers Association State Convention, Nashville, TN, November 5, 1993.

Hofwolt, Clifford A. "Using SourceBook Modules from ChemSource". Tennessee Science Teachers Association State Convention, Nashville, TN, November 6, 1993.

Hofwolt, Clifford A. "Using Hypermedia in Preparing Effective Science Teachers" Tennessee Educational Technology Conference Annual Meeting, Nashville, TN, March 24, 1994

Hofwolt, Clifford A. "Enhancing Learning Through Pictorial Riddles". National Science Teachers Association Annual Meeting, Anaheim, CA, April 2, 1994.

Jay, Michael, Bronnsetter, Ron, and Hofwolt, Clifford A. "Teaching Teachers Teaching Technologies in our Methods Courses". Association for the Education of Teachers in Science National Convention, Charleston, WV, January 5, 1995.

Gabel, Dorothy, and Hofwolt, Clifford A. "Using SourceView Videotapes for Improving Secondary Science Instruction". Association for the Education of Teachers in Science National Convention, Charleston, WV, January 6, 1995.

Hofwolt, Clifford A. "Scientist in Action: Video Adventures". National Science Teachers Association Annual Meeting, St. Louis, MO, March 29, 1996.

Hofwolt, Clifford A. "GuideBook: A Resource for Teacher Educators" 14th Biennial Conference on Chemical Education, Clemson University, Clemson, SC, August 5, 1996.

Hofwolt, Dawn A. and Hofwolt, Clifford A. "ChemWorld: The Development of CD-ROM Teaching Tools for Elementary Science Methods Courses" Mid-South Educational Research Association Annual Meeting, Memphis, TN, November 12, 1997.

Hofwolt, Clifford A. and Barron, Linda. "Using Video Case Studies in Teacher Education" Mid-South Educational Research Association Annual Meeting, Memphis, TN, November 13, 1997.

Hofwolt, Clifford A. "Using Pictorial Riddles for Alternative Assessment" National Science Teachers Association Area Convention, Nashville, TN, December 5, 1997.

Sherwood, Robert D. and Hofwolt, Clifford A. "The Scientists in Action Project: Technology-Enhanced Middle School Science" National Science Teachers Association Area Convention, Nashville, TN, December 5, 1997.

Hofwolt, Clifford A. "ChemWorld: The Development of CD-ROM Teaching Tools for Elementary Science Methods Courses" Mid-Atlantic Association for the Education of Teachers in Science Conference, Kingsport, TN, September 25, 1999.

Hofwolt, Clifford A. and Kumar, David D. "Using Technology to Improve Science Education" Association for the Education of Teachers of Science International Convention, Charlotte, NC, January 11, 2002.

Research Grants or Other External Funding

| | | |
|---------------------------|---|---|
| Author | 1970 Cooperative College School Science Program in Earth Science-NSF Project Director | |
| Co-Author | 1977 Peace Corps Training Project - Kenya | Technical Coordinator |
| Co-Author | 1978 Peace Corps Training Project - Kenya Formulated Zaire/Rwanda add-on | Associate Director Acting Project Director |
| Co-Author | 1978 Peace Corps Training Project - Fiji | Project Director |
| Co-Author | 1978 Peace Corps Training Project - Liberia | Science Team Coordinator |
| Author | 1979 Peace Corps Training Project - Nepal | Project Director |
| Co-Author Investigator | 1995 "Use of Multimedia in an Introductory Chemistry Course for Student Analysis of 'Real-Life' Situations" | |

Teaching

Fall 2003

SCED 2200 Science for Elementary Teachers

SCED 2250 Teaching Science in Elementary Schools

SCED 3250 Advance Teaching of Science in Elementary Schools

Spring 2004

SCED 2250 Teaching Science in Elementary Schools

SCED 2200 Science for Elementary Teachers

Summer 2004

EDUC 3500 Seminar in Teaching and Schools

Fall 2004

SCED 2200 Science for Elementary Teachers

SCED 2250 Teaching Science in Elementary Schools

SCED 3250 Advance Teaching of Science in Elementary Schools

Advising

9 Undergraduates

7 Masters

3 Doctoral Student

Bruce Cohn

Nancy Kiel

Bonnie Karrigan

Service

Professional Associations

Tennessee Science Teachers Association (TSTA)

Association for the Education of Teachers of Science (AETS)

Committee on Instructional Technology for Teacher Educators Chairman 1994

Program Chair, AETS International Conference, 2002

Convention Chair, AETS International Conference, 2004

Mid-Atlantic Association for the Education of Teachers in Science

National Association for Research in Science Teaching (NARST)

National Science Teachers Association (NSTA)

Teacher Education Committee member 78-79, 79-80

Conventions Committee member 78-79

Conventions Committee Chairman 79-80

Convention Chairman, NSTA Area Convention, Nashville, Fall 1981

Mid-South Educational Research Association (MSERA)

Program Committee 91, 92, 93, 94, 95, 96, 97

Program Chair 97

Future Site Selection Committee 92,93,94, 95,96

Chairman, Future Site Selection Committee 96
Distinguished Awards Selection Committee Chairman 99
Local Arrangements Committee Chairman - Nashville Convention 94
Board Member, Mid-South Educational Research Foundation 1997-2002
Secretary/Treasurer 1998
Vice President/President Elect 1999
President 2000
Past President 2001

Reviewer

Teachers College Press
Prentice Hall Publishing Company
Charles E. Merrill Publishers
State of Tennessee - Technology Proposals
Department of Energy - Education Proposals

Editorships

Assistant Editor, *Science Education*

Science Fair

| | | | |
|-------|------|---|----------------|
| Judge | 1988 | International Science Fair - Earth Science Division | Knoxville, TN |
| Judge | 1992 | International Science Fair - Earth Science Division | Nashville, TN |
| Judge | 1994 | International Science Fair - Earth Science Division | Birmingham, AL |

Community

Over the past 30 years, I have conducted numerous workshops for teachers and have consulted in a variety of settings to enhance science educations at the college, high schools and elementary levels.

University

| | |
|--|-------------|
| Member University Community Affairs Board | 1986 - 1988 |
| | 1997 - 1998 |
| Member University Traffic Committee | 1980 -1990 |
| Chair University Traffic Committee | 1987 -1990 |
| Member University Security Committee | 1998 - 2001 |
| Member Middle Tennessee Science Fair Committee | 1980 - 2002 |

College

| | |
|-------------------|-------------|
| NCATE Coordinator | 1995 - 1997 |
|-------------------|-------------|

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|--|--------------------------|
| Member Peabody Faculty Council | 1985 - 1987, 1999 - 2002 |
| Member Academic Standards & Procedures Committee | 1985 - 1988 |
| Chair Academic Standards & Procedures Committee | 1986 - 1988 |
| Member Cognitive Studies Planning Committee | 1987 - 1988 |
| Member Faculty Affairs Committee | 1990 - 1993 |
| Member Curriculum and Program Evaluation Committee | 1994 - 1999 |
| Chair Curriculum and Program Evaluation Committee | 1999 - 2002 |

Department

| | |
|---------------------------------|-------------|
| Chair, Faculty Review Committee | 1983 - 1985 |
| Member Elementary Committee | |
| Director of Graduate Studies | |

Clifford A. Hofwolt

| | #4 | #7 | #9 |
|---|-----------|-----------|-----------|
| Fall 2003 | | | |
| SCED 2200 Science for Elementary Teachers | 3.07 | 2.86 | 2.71 |
| SCED 2250 Teaching Science in Elementary Schools | 4.50 | 3.92 | 3.75 |
| SCED 3250 Advanced Teaching of Science in Elementary Schools | 4.64 | 4.27 | 4.55 |
| Spring 2004 | | | |
| SCED 2250 Teaching Science in Elementary Schools | 3.85 | 3.46 | 3.54 |
| SCED 2200 Science for Elementary Teachers | 3.71 | 3.07 | 3.00 |
| Summer 2004 | | | |
| EDUC 3500 Seminar in Teaching and Schools | 4.29 | 4.05 | 4.05 |