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## **EDUCATION**

- 1985 Harvard Graduate School of Education, Ed.D. in Human Development  
1979 Harvard Graduate School of Education, Ed.M. in Human Development.  
1977 Swarthmore College, B.A. in Psychology and Linguistics.

## **RESEARCH AND EVALUATION**

- 1985-present Principal, Char Associates, Montpelier, VT  
Provide evaluation services for organizations developing and implementing educational programs, products and training. Clients include schools, colleges, museums, non-profit organizations, software/media companies, and publishers. Evaluations include: educational programs developed for schools, after schools, libraries and museums; integration of educational technology with school curriculum reform; teachers' professional development; collaborative partnerships between community-based groups, schools and universities, and mentoring.  
Grants reviewer, National Science Foundation, US Department of Education (Race to the Top State and District Competitions, I3 (Investing in Innovation)), Massachusetts Cultural Council, Vermont Community Foundation, Vermont Women's Fund, Vermont Arts Council.  
Research Advisor, Change the Story. State-wide initiative in Vermont to address women's equity and economic well-being.
- 1987-1996 Senior Associate, Center for Learning, Teaching, and Technology, Education Development Center, Newton, MA.  
Direct and develop field test evaluations of educational programs and curriculum reform efforts. Studies include evaluating curricula and teaching tools for elementary and middle schools in mathematics, science, and technology, and assessing a literacy TV series in school and after-school settings.
- 1981- 1987 Research Scientist/Media Designer, Center for Children and Technology, Bank Street College of Education, New York, NY.  
Directed research and development efforts for multimedia and software products for children. Products include a digital video story composition tool; videodiscs in science and art; and the *Voyage of the Mimi* (elementary science PBS television series, print and software.)
- 1979-1981 Researcher, Harvard Project Zero, Cambridge, MA.  
Conducted research on children's understanding of stories in various media.
- Summer 1979 Research Intern, Abt Associates, Cambridge, MA.

Performed data analysis and prepared book manuscript of longitudinal study of students' attitudes towards mathematics.

1977-1978

Research Assistant, Center for Research on Children & Television, Harvard Graduate School of Education, Cambridge, MA.

Conducted research on children's critical evaluation of television content.

Summer 1978

Researcher, Children's Television Workshop, New York, NY.

Conducted research for "Sesame Street."

## **SELECTED CLIENT LIST**

- *Educational and Professional Organizations:* Education Development Center, TERC, Work Family Directions, Consortium for Mathematics and Its Applications, Vermont State Department of Education, Snelling Center for Government, Governor's Institutes of Vermont, Vermont Student Assistance Corporation, Changing Perspectives, Society for Automotive Engineers.
- *Youth, Community Development and Social Change Organizations:* Change the Story, Creative Discourse, DREAM, Everybody Wins Vermont,
- *Schools and Universities:* Boston Public Schools, Burlington School District (VT), Phillips Academy, Harvard University, Dartmouth College, Swarthmore College, University of Washington, Oregon State University, University of Vermont, Antioch New England Institute
- *Foundations:* Vermont Community Foundation, Vermont Women's Fund, Permanent Fund for Vermont's Children.
- *Museums, Arts and Humanities Organizations:* Montshire Museum of Science, ECHO Lake Aquarium and Science Center, Shelburne Museum, Indianapolis Children's Museum, Tsongas History Center, Vermont Historical Society, Flynn Center for the Performing Arts, Hood Museum of Art, Very Special Arts.
- *Computer, Software, Multimedia Companies:* IBM, Apple, RCA, Muzzy Lane Software, Josten's Learning, Compass Learning, American Interactive Media, Interlight Productions, Vipah Interactive.
- *Media Production Groups:* Children's Television Workshop, Living on Earth, Center for New American Media, Scholastic, WGBH-Boston, MCET/Mass Interaction, Lancit Media.
- *Publishers and Production Groups:* Scott Foresman, Silver Burdett and Ginn, Harcourt, Brace, Jovanovitch, Steck-Vaughn, Mad Science Group, Ablenet.

***Evaluator and Research advisor*** on variety of current and recent projects in education, including:

- ***Change the Story.*** An initiative to align policy, program and philanthropy to fast track women's economic status and well-being in Vermont. The work is fueled by the three core partners: The Vermont Women's Fund, The Vermont Commission on Women, and Vermont Works for Women. (Vermont Women's Fund)
- ***Risk and Uncertainty Quantification in Marine Science*** Oregon State University. Research traineeship for promoting interdisciplinary, collaborative research in graduate students' training in the sciences, mathematics and engineering. (NSF-NRT)
- ***Interpreters and Scientists Working On-site at Our Parks (I-SWOOP)***, TERC, National Park Service, Winston-Salem State University. Program evaluation on the professional development of national park interpreters, and how best to convey on-going scientific research conducted at the park through programming for park visitors. (NSF-AISL)
- ***Coastal Observation and Seabird Survey Team (COASST)***, University of Washington. Citizen science project that engages trained, non-scientist community members in collecting data on beached birds and marine debris on more than 400 beaches from northern California to Alaska. (NSF-AISL)

- ***Changing Perspectives***. Curriculum, training and consultation services for K-12 to promote socio-emotional learning to cultivate inclusive and equitable communities for all students.
- ***Literacies in Engineering for Access and Participation Conference (LEAP)***, TERC. Evaluation of a conference to bring together education scholars for the purpose of creating a research agenda at the intersection of equity, engineering and literacy. (NSF-ITEST).
- ***Massachusetts Linking Experiences and Pathways (M-LEAP)***, Goodman Research Group. Research study investigating gender differences in early science experiences leading to 8th Grade science achievement-related choices. (NSF-REESE)
- ***Kid Citizen***, Muzzy Lane Software. Digital learning products for K-5 featuring primary source materials to explore civics and government concepts through historical sources and connect what they learn with daily life. (Library of Congress)

### RESEARCH COLLABORATORS

- Rockman Et Al (San Francisco, CA), Education Development Center (EDC) (New York City and Waltham, MA), Empirical Education Inc. (Palo Alto, CA), Goodman Research Group (Cambridge, MA), Flint Springs Associates (Hinesburg, VT).

### RESEARCH AND PROGRAM INTERESTS

- Educational programs for youth and families for use in school and community-based learning settings
- Student learning and assessment as core components of educational program design and implementation
- Developing institutional capabilities for educational program design and evaluation
- Collaborative partnerships between schools, colleges, museums, libraries, and community organizations.

### COMMUNITY-BASED WORK

Research Advisor (Change the Story) and council member, Vermont Women’s Fund (2003 – 2009; 2015-present)  
 Board Member, CTAC (Community Training and Assistance Center), Boston, MA (2019 – present)  
 Member, Vermont Community Foundation (2020 – present)  
 Associate, Snelling Center Vermont Leadership Institute (2006)  
 Founder, Thetford READS (1998-2000)  
 School board member, Thetford, Vermont (1999-2000)  
 Board member, Maple Leaf Daycare, Thetford, Vermont (1998-2000)

### SELECTED PAPERS AND PUBLICATIONS

#### Science and Mathematics Education

- Char, C., Parrish, J., Burgess, H., and Lindsey, J. (2020). *Summative Evaluation of COASST Marine Debris and Beached Birds Modules: Learning Impact and Participant Retention in Citizen Science*. Char Associates and University of Washington.
- Char, C. (2020) *Formative Evaluation of COASST Marine Debris Module*. Report for COASST (Coastal Observation and Seabird Survey Team), University of Washington, Seattle, WA.
- Char, C. Merson, M., Allen, L., and Hristov, N. (2020) *iSWOOP Implementation in National Parks: Perspectives from Park Leaders, Interpreters, Visitors and Scientists*. Char Associates and TERC.
- Ciannelli, L., Conway, F., Spalding, A., Char, C., Jones, J., Banks, M., Gitelman, A. (February 2020) *Collaborative and transdisciplinary training in marine coastal science: data informed analysis*. Ocean Sciences Meeting, San Diego, CA.
- Char, C. (2019) *Transdisciplinary and Collaborative Scientific Research in Graduate School Education*. Series of evaluation studies for Oregon State University, Corvallis, OR.
- Char, C. and Kirtman, N. (2018) *Evaluating the Literacies in Engineering for Access and Participation (LEAP) Conference*. In *Intersections of Equity, Engineering, and Literacy: Exploring Possible Presents, Building Possible Futures* (Structured Poster Session). AERA Annual Mtg, New York, NY.

- Char, C., Parrish, J., and Dolliver, J. (February 2015) *Promoting Rigorous Citizen Science: Evaluating the Learning Impact of the Coastal Observation and Seabird Survey Team (COASST)*. Citizen Science 2015 Conference, San Jose, CA.
- Char, C. (2014) *Zoo and Aquarium Research Collaborative (ZAARC), Final Year 3 Participant Survey Study*. Report for TERC, Cambridge, MA.
- Char, C. (2014) *Dynamic Earth Exhibit Visitor Study*. Report for the Montshire Museum of Science, Norwich, VT.
- Char, C. and Clark, L. (2011) *Math Off the Shelf: Encouraging Children's Mathematics Learning through Public Libraries, Evaluation Report, Year 4*. A report for TERC, Cambridge, MA.
- Char, C. (2011) *Peer-Facilitated Study Groups in Mathematics and Science Undergraduate Education*. Two reports for Swarthmore College, Swarthmore, PA.
- May, V., Luxon, T., Weaver, K., Esselstein, R., and Char, C. (2008) *Development of Case Stories by Interviewing Students about their Critical Moments Experienced in Science, Math and Engineering Classes*. The Electronic Journal of the National Numeracy Network, Vol. 1, Issue 1. Berkeley, CA: Berkeley Electronic Press.
- Char, C. & Miller, C. (2006) *Evaluation of Mad Science: Educational Science Enrichment for Children*. Report for Mad Science Group, Montreal, Canada.
- Char, C. & Newman, D. (2005) *Classroom Field Test of Scott Foresman's Elementary Science Curriculum*. Report for Scott Foresman, Glenview, IL.
- Char, C. (2004) *Environmental Detectives: An Environmental Science Curriculum for Middle Schools, Years Three Evaluation*. Report for the Montshire Museum of Science, Norwich, VT.
- Char, C. (2002) *Evaluation of "Science in the Stacks": A Museum-Library Collaboration to Create Traveling Science Exhibits for Libraries*. Report for the Montshire Museum of Science, Norwich VT.
- Char, C. (1999) *Looking Back: A Retrospective Study of Dartmouth Science Alumnae (1973-1996)*. Report for the Women in Science Project at Dartmouth College, Hanover, NH.
- Char, C. (1996) *Evaluating A World in Motion, a design engineering curriculum for middle school students*. Report for Society for Automotive Engineers.
- Char, C. (1996) *Animal Inquiries: Inter-disciplinary Unit for Elementary and Middle School Students: Teacher Case Studies of Student Learning*. Report for Montshire Museum of Science, Norwich VT.
- Char, C. (1991) *Computer graphic feltboards: New software approaches to children's mathematical exploration*. Tech. Report 91-1, Center for Learning, Teaching & Technology, EDC, Newton, MA.
- Char, C. & Hawkins, J. (1987). Helping Chart the Course: Involving Teachers in Formative Research and Design of the "Voyage of the Mimi." In R.D. Pea & K. Sheingold, *Mirrors of Minds: Patterns of Experience in Educational Computing*. Norwood, NJ: Ablex.
- Brush, L., with C. Char and G. Takata. (1980) *Encouraging Girls in Mathematics: The Problem and the Solution*. Cambridge, MA: Abt Books.

### **Educational Technology**

- Tally, W., Diamond, J., Carpenter, P and Char, C. (2012) *Middle School History Goes Digital: Final evaluation of 3 American History and Civics Initiative (AHCI) Products*. A report for the Corporation for Public Broadcasting.
- Char, C. (2010) *Clear Lab Project Formative Evaluation: Computer-Based Learning Science Environments for Middle School Classrooms*. Muzzy Lane Software, Newburyport, MA.
- Char, C. & Foote, M. (2008) *"Being in the Middle of History:" Evaluation of American Dynasties, a 3-D Interactive History Game*. A report for the Center for New American Media, New York, NY. (Corporation for Public Broadcasting)
- Char, C. & Rockman, S. (2002) *Living on Earth Ecological Literacy Project: Year Two Evaluation*. A report for Living on Earth, Cambridge, MA.
- Char, C. & Rockman, S. (2000; 1999) *Initial Transitions: MetroLINC Year 3 Evaluation and Getting Past Getting Started: MetroLINC Year 2 Evaluation*. Two reports for the Boston Public Schools.
- Char, C. (1997) *Evaluation of the Electronic Mentoring Program: A Telecommunications-based Program for Women in Science, Mathematics and Engineering*. A report for Dartmouth College.
- Char, C. & Forman, G. (1994) Interactive technology and the young child: A look to the future. In Wright, Shade, and Hohman (Eds.), *Young Children: Active Learners in a Technological Age*. Washington, DC.: National Association for the Education of Young Children.

- Char, C. (1991) *Computer graphic feltboards: New software approaches to children's mathematical exploration*. Technical Report 91-1, Center for Learning, Teaching and Technology, Education Development Center, Newton, MA.
- Char, C. (1990, April) *Computer animation and interactive video: New forums for children's collaborative story composition*. Sixth Conference on Computers and Writing, Austin, TX.
- Char, C., Newman, D., & Tally, W. (1987). *Interactive Videodiscs for Children's Learning*. In R.D. Pea & K. Sheingold, *Mirrors of Minds: Patterns of Experience in Educational Computing*. Norwood, NJ: Ablex.
- Sheingold, K., Hawkins, J. & Char, C. (1984) "I'm the thinkist, you're the typist": The interaction of technology and the social life of classrooms. *Journal of Social Issues*, Vol. 40, 3, pp. 49-61.
- Meringoff, L., Vibbert, M., Char, C., Fernie, D., Banker, G., & Gardner, H. (1983) How is children's learning from television distinctive? Exploiting the medium methodologically. In J. Bryant and D.R. Anderson (Eds.), *Children's understanding of television: Research on attention and comprehension*. New York: Academic Press.

### **Literacy, Humanities and the Arts**

- Char, C. (2015) *The Art of Bringing Life to History: An Evaluation of the Shelburne Museum's Passport to Learning Program*. A report for the Shelburne Museum, Shelburne, VT.
- Char, C., Clark, L., and Friesner, J. (2014) *Turning Points in American History: Knowledge, Understanding and Perspectives: A Teaching American History Grant for Vermont Schools. Final Evaluation Report*. A report for the South Burlington Vermont School District.
- Char, C. and Berube, S. (2011) *Literacy Mentoring and Everybody Wins Vermont: 10<sup>th</sup> Year Anniversary Evaluation*. A report for Everybody Wins Vermont, Montpelier, VT.
- Char, C. (2006, 2005). *Evaluation of the Vermont Strategic Reading Initiative*. Two reports for the Vermont Department of Education, and University of Vermont, Montpelier, VT.
- Char, C. (2004) *Making Books Come Alive: Evaluation of the Flynn Center/Flynn School Collaborative Arts Education Program*. A report for the Flynn Center for the Performing Arts, Burlington, VT.
- Char, C., Miller, B., Isaacson, S., & Briscoe, K. (1993) *A Naturalistic Study of GHOSTWRITER Use in After-school and School Settings*. A report for the Children's Television Workshop, New York, NY.

### **Youth and Community Development**

- Char, C. and Drazin, S. (2017) *Evaluation of the K-8 Changing Perspectives Disability Awareness Curriculum*. A report to Changing Perspectives, Bradford, VT.
- Brydolf-Horwitz, R., Taylor Mitchell, K., Kocherlakota, K., and Char, C. (2014) *GIV@30: A Long-term Look at How the Governor's Institutes of Vermont, a Little Known Vermont Educational Program, is Changing Young Lives*. A report of the Governor's Institutes of Vermont, South Burlington, VT.
- Char, C., Lazar, J. & Foote, M. (2006) *The DREAM Mentoring Program: An Evaluation of DREAM's Impact on Youth Participants in Vermont*. A report prepared for DREAM, Winooski, VT.

### **Professional Development and School Reform**

- Allen, L., Merson, M., Char, C., Wright, T., & Hristov, N. (July 2018). *Beyond the Brown Bag: Designing Effective Professional Development for Informal Educators*. Integrative and Comparative Biology, Vol. 58, No. 1. Part of *Science in the Public Eye: Leveraging Partnerships* Symposium.
- Char, C. & Foote, M. (2007, 2006) *Giving Students Choice and Making All Public Schools, Schools of Choice: Monadnock Regional School District Public School Choice*. Two reports for Antioch NE Institute and Monadnock Public Schools, Keene, NH. (*U.S. Dept. of Ed, Public School Choice Grant*)
- Char, C. (2004) *Engaging Schools in Mathematics Reform: Evaluation of the Building Capacity for Change Project*. A report for Consortium for Mathematics and Its Applications, Lexington, MA
- Char, C. & Rockman, S. (2002, 2001, 2000) *Boston-Harvard Leadership Development Initiative (LDI): Evaluation (Years 2, 3 and 4)* Three reports for the Office of School Partnerships, Harvard Graduate School of Education, Cambridge, MA.
- Char, C., Miller, C. & Rockman, S. (2001) *Solidifying the Gains: MetroLINC Year 4 Evaluation*. A report for the Boston Public Schools. (*U.S. Dept. of Education Technology Innovation Challenge Grant.*)
- Char, C., Ellis, J., & Nelson, M. (1996) *Learning to See: Children's Inquiry in Science: Video Case Studies for Teachers' Professional Development*. Newton: Education Development Center.