AERA SIG: Chaos and Complexity Theories
2007 Annual Meeting
Program Sessions

COMPLEX CRITICALITY IN EDUCATIONAL RESEARCH

Time: Mon, Apr 9 - 12:00pm - 2:00pm
Place: Marriott Chicago Downtown, Chicago Ballroom, Section C - Fifth Floor

Abstract:
In the last decade the potential of complexity-based analyses for social research has gained visibility as conferences and journal editions are organized around the theme. The increased visibility of complexity in the social sciences has raised questions about the ability of complexity theories to address political concerns. Increasingly it would seem that if social research that draws its inspiration from complexity theories is to be relevant to political challenges, it's critical potential has to be highlighted. This symposium presents seven papers which explore, in different ways, the critical potential of complexity for educational research. This is partly in response to concerns that that complexity is largely uncritical and partly in response to calls for a new critical language for education.

Beyond Simple Order: Curriculum Politically Corrected
Donna Trueit
Emergence: A Complexity-Based Critical Logic for Education?
Deborah Osberg, University of Exeter
The Power Behind the Claim That We "Understand"
Sarah Pratt, University of North Carolina-Greensboro
Moral Dimensions of Postmodern Criticality in Complexity Research
M. Jayne Fleener, Louisiana State University
Dialogic and the Emergence of Criticality in Complex Group Processes
Donald Gilstrap, The University of Oklahoma
Literary Design, Complexity and Critical Consciousness
Brent Davis, University of British Columbia; Dennis Sumara, University of British Columbia
Studenting and Curriculum at a Good Elementary School: A Recipe for Success
Walter Gershon, Kent State University
Gert Biesta, *Discussant*
William Doll, *Chair*

CHAOS AND COMPLEXITY THEORIES IN CONVERSATIONS

Time: Tue, Apr 10 - 2:15pm - 2:55pm
Place: Hyatt Regency Chicago, Grand Ballroom, Sections C-D South, East Tower - Gold Level

Roundtables:
A New Generative Complexity Science of Learning for a Complex Pedagogy
Ton Jörg, IVLOS Institute of Education, Utrecht University
Complex Systems and Classroom Learning: Research and Modeling
Andy Hurford, University of Texas at Austin; Walter Stroup, The University of Texas at Austin
Creating Complex Curriculum: Applying Complexity Theory to Curriculum Development Processes
Larry Burton, Andrews University

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Education for Life: The Emergence of Biocentric Educational Theory
Jeff Baker, University of Alberta

Educational Policy as Part of a Dynamic Nonlinear System: Contextualizing the Reform Pendulum
John Shoup, California Baptist University; Susan Studer, California Baptist University

Healthy Educational Qualities: An Argument for Democratic Schools as Models of Healthy Learning Organizations
Darren Stanley, University of Windsor

Is personalized learning the answer to the challenges to teaching in a complex, knowledge society?
Jens Rasmussen, Danish University of Education; Helle Mathiasen, University of Aarhus; Pernille Fryd, The Danish University of Education

CHAOS AND COMPLEXITY THEORIES SIG BUSINESS MEETING

Time: Tue, Apr 10 - 6:15pm - 7:45pm
Place: Marriott Chicago Downtown, Great America, Sixth Floor

Abstract:
During our business meeting, members will discuss questions that have been raised with respect to the mission and purpose of our SIG. We invite all members to attend so we might have a lively conversation!

Jens Rasmussen, *President*
M. Fran Huckaby, *Secretary/Treasurer*
Sherrie Reynolds, *Newsletter Editor*
Helle Mathiasen, *Assistant Newsletter Editor*
Sarah Pratt, *Program Chair*

COMPLEXITY IN THE CURRICULUM

Time: Wed, Apr 11 - 8:15am - 10:15am
Place: Marriott Chicago Downtown, McHenry, Third Floor

Abstract:
In this session, the participants will engage in a conversation about how complexity and chaos theories influence their curriculum perspectives in various disciplines, from learning theories to the subject of mathematics, science and English.

A Theoretical Model of Learning for Complexity: Depth, Extent, Abstraction, and Transfer of Learning
Jeffrey Bloom, Northern Arizona University

Bifurcations in the Chaotic Dynamics of Student Attitudes toward Mathematics
Zaur Berkaliev, Illinois Institute of Technology

Recursive Readings: Michael Cunningham's Specimen Days and Walt Whitman's Leaves of Grass
Karin deGravelles, Louisiana State University

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Science Education for a Complex World
Sherrie Reynolds, Texas Christian University; Molly Weinburgh, Texas Christian University; Megan Adams, Texas Christian University; Suzanne Reid, Texas Christian University
William Doll, *Discussant*
Shawn Bullock, *Chair*

NONLINEAR PERSPECTIVES FOR SCHOOL REFORM
Time: Fri, Apr 13 - 8:15am - 10:15am
Place: Marriott Chicago Downtown, Denver, Fifth Floor

Abstract:
In this session participants will present their perspectives of nonlinear approaches to school reform. The New Orleans school system, post-Katrina, will be one focus; small school change will be another. All participants will explore how nonlinear dynamics allows for different interpretations of what it means to re-form.

The perceptions of New Orleans educators on the process of rebuilding the New Orleans school system after Katrina
Brian Beabout, Pennsylvania State University; Luis Almeida, Penn State University; Husra Gursoy, Penn State University; ali carr-chellman, penn state university; Ziyan Ma, Penn State University; Rucha Modak, Penn State University; Raymond Pastore, Penn State University
Understanding Small School Reform Through the Lens of Complexity Theory
Patrick McQuillan, Boston College; Kevin Welner, University of Colorado
Lavada Brandon, *Discussant*
A. Cendel Karaman, *Chair*