


# Reframing Science for Students from Non-Dominant Communities



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# Roots of Informal Learning

Š Model for informal kinds of learning emerged from work that examined practices in communities where schooling has not been prevalent (Greenfield & Lave, 1982; Rogoff, 2003; Scribner & Cole, 1973).

# What did we learn?

- Š Informal learning is organized in communities in ways that have worked for many generations
- Š The social organization of informal learning is continuous with experiences encountered in everyday life
- Š In contrast to solo or discovery learning, the social organization of learning is often through intent community participation, with children and youth integrated into the communities activities (Rogoff, Paradise, Mejia-Arauz, Correa-Chavez, & Angelillo, 2003).
- Š Learning is a shared endeavor, with assistance readily available

# Informal Learning

- Š Knowledge and skills have a highly positive social value
- Š Learning is highly relational and is bound up with the persons in the teaching roles
- Š Learning is tied to person- and community-oriented values
- Š Learning is tied to practices that are historically and locally situated

# Thus: Features of robust learning environments

- Š The division of labor is collective and distributed
- Š Learning is emergent, contingent, and indeterminate
- Š Shared practice is the object of activity
- Š The focus is on learning and not teaching
- Š The participation structures are flexible and fluid
- Š Hybrid language practices allow students to use their full linguistic toolkit
- Š The social organization of learning does not replicate school-based structures

# A Conundrum: What to do about Culture?

- Š It is important to understand what is cultural about a student's learning.
- Š Move beyond cultural learning styles
- Š Challenge is to avoid treating cultural differences as traits of individuals or cultural groups
- Š Focus should be on understanding the relation of individual learning and the practices of cultural communities



**100% Piñata  
rule**

# Understanding both regularity and variance in cultural communities

QuickTime™ and a  
TIFF (Uncompressed) decompressor  
are needed to see this picture.

# Repertoires of Practice

- Š Ways of engaging in activities stemming from participation in a range of cultural practices
- Š Requires a focus on people's history of engagement in practices of the cultural community
- Š Cultural differences, from this perspective, are attributed to variation in people's involvement in common practices of particular cultural communities.

# Reframing Science Learning

- Š Expand our understanding of learning to include vertical and horizontal forms of learning
- Š Focus on what takes hold as youth move across everyday settings and practices
- Š Move beyond dichotomizing home/school, formal/non-formal
- Š Focus on movement and flow of learners across practices

# Informal as a Starting Point

§ UCLA Migrant Student Institute

§ Teacher preparation

§ New transnational research

# Moving from everyday to Scientific Concepts

- Š Moving everyday life to school/embedding scientific inquiry in community life
- Š Reframing of what counts as science
- Š Students encouraged to learn about science and to participate in scientific inquiry
- Š Students also asked to question science and scientific research
  - | issues of exclusion
  - | issues of misrepresentation
  - | issues related to history of ethics in scientific research

# Productive Directions in Research

- Š Understand more about horizontal forms of learning
- Š Examine the language and embodied practices around joint activity
- Š Attend to the ways hybrid practices support learning
- Š Support research that provides better understanding of cultural regularity and variance in non-dominant communities