Comparative study of adolescents’ argumentation across settings and purposes

Philip Bell, Leah A. Bricker, Heather Toomey Zimmerman
Cognitive Studies in Education
University of Washington

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LIFE’s Purpose: To transform the sciences of learning by identifying & investigating key research questions that draw on neurobiological, cognitive, developmental and socio-cultural theories & their related methodologies to collectively guide the design of effective learning environments.

Before: Three Separate Partial Conversations
- Implicit Learning and the Brain
- Informal Learning
- Formal Learning

After: One Integrated, Coherent Conversation
- Implicit Learning and the Brain
- Informal Learning
- Formal Learning

LIFE Leadership
Brigid Barron
Philip Bell
John Bransford
Pat Kuhl
Andy Meltzoff
Roy Pea
Byron Reeves
Jeremy Roschelle
Nora Sabelli
Dan Schwartz
Reed Stevens
Nancy Vye
Jim Banks
Diversity Advisor
Ed Lazarski
Technology Advisor
LIFE research strands have own language, theory, and methods—need sustained conversation

**Implicit**: social cognition, neural commitment, imitation, early learning, representation

**Informal**: context, distributed participation, interaction, appropriation of tools, culture, improvisation

**Formal**: transfer, preparation for future learning, adaptability, efficiency, design of tools

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**Strand 2: Informal Learning**

Learning in K-12 schools…. only 21% of awake time annually.

What is learned in the other 79% of the time? (with peers, family, community)
Everyday science and technology learning within a multicultural, urban, high poverty community

- How do activities inside and outside of school influence children’s learning of science and technology?
  - Multi-year ethnography, across the everyday contexts of children
  - Explore influences of everyday peer and family culture
  - Explore issues of access, equity, and implications for science and math related social futures

Conceptual themes

- Folk Biology: How do children learn about the living world across social settings and apply that understanding to their own lives?
  - Focus is on personal health, nutrition, and local environmental conditions.

- Technological Fluencies: How do children learn about and with digital technologies?

- Everyday Argumentation: What are the range of argument forms that children engage with and construct across settings?

- Images of Science: Based on the images they encounter, what do children count as ‘science’ and why?
Study argumentation communities comparatively

Focus on argumentation associated with central cultural products...

- as valued by the community
- that involve specific argumentative practices
  - In two ways...
    - Embedded arguments within the cultural products (e.g., tricks in skateboarding)
    - Enabling arguments that make cultural products possible
      - Argument ➔ Cultural Processes ➔ Cultural Products
  - That implicate range of everyday cognition phenomena
    (e.g., embodiment, social and material distribution / contribution, rhetorical strategies, linguistic competencies)
- looking for connections across communities in terms of...
  - the employed cognitive phenomena & resources that support argumentation
  - how arguments fulfill goals / motives of participants
Argumentation across everyday contexts and purposes—with an eye toward science

Thank you!

For more information on this work…

Everyday & Science Technology Research Group
http://everydaycognition.org/

The LIFE Center
http://life-slc.org/

Email Contacts
pbell@u.washington.edu
lbricker@u.washington.edu
htoomey@u.washington.edu