



Chris Andrews, Grant Chartrand, and Dan Hickey | CSCL 2019, Lyon, France

# **Expansively Framing Social Annotations for Generative Collaborative Learning in Online Courses**

INDIANA UNIVERSITY

[http://bit.ly/CSCL2019\\_Presentation](http://bit.ly/CSCL2019_Presentation)

[http://bit.ly/CSCL2019\\_Paper](http://bit.ly/CSCL2019_Paper)

# Expansive Framing

Framework for encouraging generative learning (transfer) developed by the late Randi Engle and colleagues:

- Engle, R. A. (2006). Framing interactions to foster generative learning: A situative explanation of transfer in a community of learners classroom. *The Journal of the Learning Sciences*, 15(4), 451–498. <https://doi.org/10.1207/s15327809jls1504>
- Engle, R. A., Lam, D. P., Meyer, X. S., & Nix, S. E. (2012). How does expansive framing promote transfer? Several proposed explanations and a research agenda for investigating them. *Educational Psychologist*, 47(3), 215–231. <https://doi.org/10.1080/00461520.2012.695678>

Connect immediate learning context to other contexts and promote student authorship.

Code	Description	Example
<b>Time Past</b>	Refers to a past time that what was learned then can, should be, or has been used.	<p>“I had an English teacher senior year...”</p> <p>“This reminded me of last semester...”</p>
<b>Time Future</b>	Refers to a future time in which what is learned can, should be, or would be used.	<p>“In my future classroom I’d like to...”</p> <p>“Teachers need to...”</p>
<b>Place</b>	Refers to another place outside of the course in which what is learned can, should be, or has been used.	<p>“In my field experience...”</p> <p>“At the high school...”</p> <p>“At home...”</p>
<b>Topic</b>	Refers to a non-course topic in which what is learned can, should be, or has been used.	<p>“In my content area of visual arts...”</p> <p>“My Pluralism in Education course talked about this...”</p>
<b>Participants</b>	Refers to person(s) other than the teacher that one can, should be, or has communicated what one has learned.	<p>“Pre-service teachers could use this to...”</p> <p>“This really applies to students...”</p>
<b>Accountability</b>	Holds others accountable for sharing knowledge by directly engaging others with questions to encourage threaded discussion and/or responding directly to a peer's statement by answering and/or referring to a specific question/comment.	<p>“How would you...?”</p> <p>“Leslie’s comment helped me think about...”</p> <p>“I agree with your claim that...”</p>
<b>Authorship</b>	Presents themselves as authoring knowledge.	<p>“I think this is important...”</p> <p>“We also should consider...”</p>

# Extending Expansive Framing

- Reconceptualizing expansive framing as a *learning* tool rather than solely a pedagogical tool.
- Using expansive framing in asynchronous online settings.
- Supporting expansive framing through the social annotation web tool Hypothesis ([web.hypothes.is](http://web.hypothes.is)).



web.hypothes.is

- 1 Original PDF Document
- 2 Annotations on original text
- 3 Responses to annotations

1 of 5
Automatic Zoom

1 what it means to make teaching and learning relevant and responsive to the languages, literacies, and cultural practices of students across categories of difference and (in)equality. Recently, however, I have begun to question if the terms “relevant” and “responsive” are really descriptive of much of the teaching and research founded upon them and, more importantly, if they go far enough in their orientation to the languages and literacies and other cultural practices of communities marginalized by systemic inequalities to ensure the valuing and maintenance of our multiethnic and multilingual society. In this essay, I offer the term and stance of *culturally sustaining pedagogy* as an alternative that, I believe, embodies some of the best research and practice in the resource pedagogy tradition and as a term that supports the value of our multiethnic and multilingual present and future. Culturally sustaining pedagogy seeks to perpetuate and foster—to sustain—linguistic, literate, and cultural pluralism as part of the democratic project of schooling. *In the face of current policies and practices that have the explicit goal of creating a monocultural and monolingual society, research and practice need equally explicit resistances that embrace cultural pluralism and cultural equality.*

2

**Keywords:** bilingual/bicultural; cultural analysis; diversity; equity; instructional practices; multiculturalism; social justice

It was now 17 years ago that Gloria Ladson-Billings (1995) published the landmark article *Toward a Theory of Culturally Relevant Pedagogy*. In that article, Ladson-Billings (1994) was working from her own seminal research with successful teachers of African American students. She was also giving a coherent theoretical statement for research and teaching that had been building throughout the 1970s and 1980s in the work of social language and literacy scholars like Labov (1972), Cazden and Leggett (1976), Smitherman (1977), Heath (1983), Moll (1992),

Garcia, 1993; Lee, 1995; McCarty & Zepeda, 1995; Ivona Gonzales, 1994; Valdés, 1996). This windfall moment of mid-1990s amassed evidence for *resource pedagogies* in work with students of color marginalized by systemic inequality based on race, ethnicity, and language.<sup>1</sup> Ball and I (Paris & Ball, 2009) have called this moment the *golden age* of resource pedagogy research. This research sought to provide pedagogical and curricular interventions and innovations that would move teaching and learning ever further from the *deficit approaches* echoed across the decades.

Deficit approaches to teaching and learning, firmly in place prior to and during the 1960s and 1970s, viewed the language literacies, and cultural ways of being of many students and communities of color as deficiencies to be overcome in learning. It demanded and legitimized dominant language, literacy, and cultural ways of schooling (see Lee, 2007; Paris & Ball, 2009; Smitherman, 1977, and Valdés, 1996, for further discussion the deficit to resource paradigm trajectory in research and practice). The dominant language, literacy, and cultural practices demanded by school fell in line with White, middle-class norms and positioned languages and literacies that fell outside the norms as less-than and unworthy of a place in U.S. schools and society. Simply put, the goal of deficit approaches was to eradicate the linguistic, literate, and cultural practices many students of color brought from their homes and communities and replace them with what were viewed as superior practices. Examples of deficit approaches abound throughout the 20th century. From federal “Indian schools” with their goal of forcibly stripping Native languages and cultures from Indigenous American students and communities (reviewed and critiqued Lomawaima & McCarty, 2006), to the “culture of poverty” research of the 1960s and 1970s (Jensen, 1969, is an infamous example of such research) with the view that the home cultures and communities of poor students of color were bankrupt of a language and cultural practices of value in schools and society (see Labov, 1972, for an early critique of culture of poverty

3

Simply put, the goal of deficit approaches was to eradicate the linguistic, literate, and cultural practices many students of color brought from their homes and communities and replace them with what were viewed as superior practices. Examples of deficit approaches abound throughout the 20th century. From federal “Indian schools” with their goal of forcibly stripping Native languages and cultures from Indigenous American students and communities (reviewed and critiqued Lomawaima & McCarty, 2006), to the “culture of poverty” research of the 1960s and 1970s (Jensen, 1969, is an infamous example of such research) with the view that the home cultures and communities of poor students of color were bankrupt of a language and cultural practices of value in schools and society (see Labov, 1972, for an early critique of culture of poverty

In one of my other classes, we are learning about Native American education. One thing that I have learned is that by eradicating student's culture, can make them feel unimportant and undervalued. I think this is a really important idea to keep in mind in a future classroom because students will not feel motivated or engaged if they feel like their voice is not important.

Hide replies (5)

I agree with you and in my own experiences, I have seen school trying to do special holidays related to China such as the (Chinese New Year), but after talking about it with my friends from China, they all say that the school got some of the major information incorrectly. For example, there is no such thing as fortune cookie and lion dance in mainland China on Chinese New Year. Although it is great to see that American schools are embracing different cultures from other countries, it is also important to keep in mind as future teachers that we get the facts correct before presenting to the students to avoid conflicts between teacher and student.

As I mentioned in the mini-lecture, this is very similar to the difference approaches to education where we try to incorporate other cultures but in a way that “fits into” the dominant culture (which is why there are so many inaccuracies as you mentioned). So how do we value our students ways of doing and knowing and being in our classrooms in more culturally sustaining ways?

In one of my other courses (pluralism in education), we discussed this and similar questions. One of the best solutions we thought of was to bring in people, that held a certain view point or background, to talk to students. Bringing in people who have first hand experience, in a culture for example, allows the students to feel valued if they are from that culture and the others to learn about them in an authentic way.

Educational Researcher, Vol. 41, No. 3, pp. 93-97  
DOI: 10.3102/0013189X12441244  
© 2012 AERA. http://eraera.net

APRIL 2012

# Research Context

- Educational Psychology undergraduate course
- Online (asynchronous)
- 16-weeks
- 23 course readings (1-2/week)
- 459 total student annotations
- 17 students
  - visual arts education (10), world language education (4), physical education (2), dietetics (1)

# Annotation Activity

Students were asked to:

1. Identify their most relevant context (e.g., Elementary/Secondary, content area, content standards).
2. Consider how the reading/content related to their chosen context.
3. Make connections to other content and contexts (e.g., other articles, other courses, prior experiences, potential future experiences).

**\*Note:** Students were not required to post a specific number of annotations and their annotations were not directly graded.

# Research Questions and Methods

1. To what extent were students' interactions expansively framed?
  - coded interactions using expansive framing aspects
2. How was students' use of expansive framing related to productive learning outcomes?
  - correlation with written final exam
  - discourse analysis: what were they *doing* with their talk.



## Students use of expansive framing in their annotations (n = 459)

Code	#	%
Time Past	179	39%
Time Future	227	50%
Place	129	28%
Topic	279	61%
Participants	349	76%
Accountability	179	39%
Authorship	324	71%

## Degree of expansiveness

Code	#	%
U (Unframed)	9	2%
0 (Bounded)	12	3%
1 (Slightly expansive)	152	33%
2 (Moderately expansive)	203	44%
3 (Very expansive)	83	18%
Total	459	100%

## Degree of expansiveness

Code	#	%
U (Unframed)	9	2%
0 (Bounded)	12	3%
1 (Slightly expansive)	152	33%
2 (Moderately expansive)	203	44%
3 (Very expansive)	83	18%
Total	459	100%

# Written Final Exam

- Pearson  $r = .56$  ( $p < .05$ ) with degrees of expansiveness
- Students who were more expansive in their annotations also, on average, performed better on the final written exam.

# Patterns in the discourse likely to be generative

Connections to their own disciplinary content area (20% of all annotations)

Connections to their general pedagogical practices (34%)

Asking questions (10%)

*Anchor text from Ito et al. (2013):*

Further, when individual competence is assessed based on grades, test scores, and other standardized and summative metrics, one student's success highlights another student's failure. Environments like the HPA, Quest to Learn, or Clarissa's online writing group have a different dynamic (p. 48)

#	Name/Date	Reply to	Line	Text
439	Anna	A	1	How can we create this in a classroom?
	4/12/18		2	What can we as teachers do to create an environment where one student's success does not highlight another's failure, because standardized tests and evaluative exams will be inevitable.
	5:38p		3	How can we create a group of students that genuinely enjoys collaborating and wants to do well for the good of the class, and not themselves, when we will undeniably have tension between individual students because of personality difference and difference in interest?
			4	<b>Please respond w ideas: I'm genuinely interested in how we can do this!</b> (emphasis in original)

#	Name/Date	Reply to	Line	Text
447	Abby 4/13/18 1:57p	Anna ...	7	...during many classes I took during high school (and even in college) the teacher/prof would state "the highest grade was a 98 and the lowest was a 32" or something like that.
			...	
			9	...announcing the scores out loud kind of pits the students against one another, and highlights failures.
			10	Instead of the teacher announcing the scores, they should talk to the struggling students privately and see what needs to be done to bring their grades up.
449	Brittney 4/14/18 1:00a	Anna	11	Personally I have found goal setting to be a great way to motivate students without creating a competitive environment
			...	
			14	...I think there are always ways to apply goal setting to our individual content areas.

# Significance

### **For learning sciences research:**

- Designing with expansive framing resulted in generative learning
- Students connected disciplinary knowledge to their developing disciplinary practices (both the broader discipline of education and their content area)
- Social annotation supported robust discussion and facilitated productive connections between the content and relevant contexts

### **For teachers/instructional designers:**

- Reframing students' participation of online course discussions is relatively easy (see earlier prompt) - support for instructors

### **Future work**

- *How and when* we frame - expert framing and expansive framing



# Chris Andrews

PhD Candidate

Learning Sciences

Indiana University

email: [andrewch@indiana.edu](mailto:andrewch@indiana.edu)

web: [chrisdandrews.com](http://chrisdandrews.com)



## Social context-based approaches

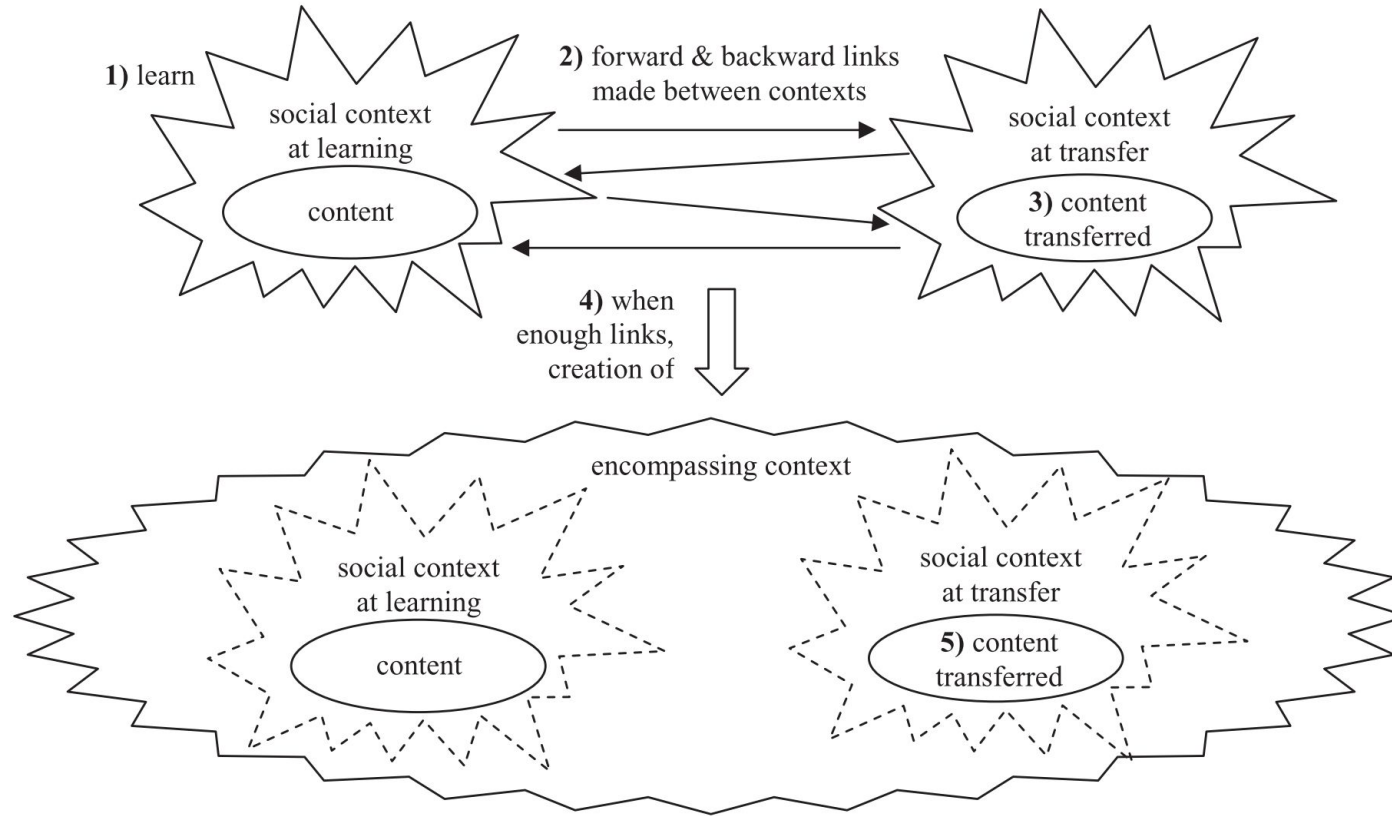


FIGURE 1 Diagrammatic comparisons of three approaches to explaining and fostering transfer.

---

*Anchor text from Shepard (2000):*

Students also reported that they had to be more honest about their own work as well as being fair with other students, and they had to be prepared to defend their opinions in terms of the evidence. (p. 12)

---

#	Name/Date	Reply to	Line	Text
498	Leslie 4/20/18 11:04p	A	1	This is directly applicable to art critiques where students must analyze and evaluate the work of their classmates, and give them feedback.
			2	They must also receive feedback on their own work and be prepared to respond to this feedback (which requires self-assessment).
524	Bethany 4/23/18 2:00a		3	I feel like this can also apply to students studying a foreign language, if they are speaking to another student that is more skilled at the language than they are, then they can learn more and get assistance if they are struggling on vocabulary.

Code	Description	Example
<b>U</b> <b>Unframed</b>	The annotation makes no reference to any aspect of expansive framing.	"I'm not sure I fully understand the difference between the two."
<b>0</b> <b>Bounded</b>	The annotation references at least one aspect of expansive framing, but the annotation is confined to the course and content from the current reading.	"Further analysis and application of what is learned can occur when knowledge of subject matter exists. How the subject matter is organized and connects to itself matters."
<b>1</b> <b>Slightly</b> <b>Expansive</b>	Uses <i>at least 1 aspect</i> of expansive framing; Uses <i>vague descriptions or connections</i> to aspects of expansive framing; AND/OR <i>Does not go beyond</i> the framing established by the original document or annotation it responded to.	"I think the things that they learn in school will have an effect on their lives outside of school, it just depends on the student and how much of the information they retain. I do agree though that the teachers should try to have an understanding of the students' lives outside of school."
<b>2</b> <b>Moderately</b> <b>Expansive</b>	Uses <i>more than 1 aspect</i> of expansive framing; Uses <i>specific examples</i> when connecting to aspects of expansive framing; OR <i>Explicitly orients towards others</i> in a future setting.	"In high school, I had a Spanish teacher that taught English in Spain for about 7 years. She was fluent in Spanish so I thought I would learn a lot during my time in her class. It was the complete opposite, which is interesting to me because of this highlighted portion. Just because she was an expert on the topic, she could not teach it well."
<b>3</b> <b>Very</b> <b>Expansive</b>	Uses <i>more than 2 aspects</i> of expansive framing; Uses <i>specific examples</i> when connecting to aspects of expansive framing; AND <i>Explicitly orients towards others</i> in a future setting.	"This is a great way to engage students in their learning and understanding of art history. When analyzing a painting, students must first understand how to use contextual clues to describe and explain what the painter might have been communicating through his/her work. Taking a step further, to help students improve their flexibility in transferring knowledge, a teacher might ask, 'What if the figure on the right was looking toward the viewer, rather than away. What might we say about the painting then?'"