

[Excerpt from: Tapping Online Dialogue for Learning: A Grounded Theory Approach to Identifying Key Heuristics that Promote Collaborative Dialogue Among Secondary Online Learners (Haavind in press).]

Unit of Analysis

Analysis of online discourse is a new and evolving area for research, and there is still a dearth of attention given to factors that promote collaborative, content-focused student dialogue online. In order to analyze discourse for both quantity and quality of collaborative dialogue, it was necessary to establish some basic definitions and standards. Interactivity in this collaborative sense was best identified within course discussions through the construct of collaborative events. I defined a *collaborative event* (CE) as any set of postings in a content-based discussion forum that exhibited a thread depth of four or higher. The level of thread depth, or postings linked as replies-to-replies, ensured that the dialogue was both sustained and interactive. For example, a thread depth of one meant that responses were direct replies to the instructor’s seed post. Alternatively, a thread depth of two meant that a response replied to the initial post of a peer. Threads with depths of greater than two had additional responses linked directly to the second, replying post, then the third and so on.

A visual comparison of what various thread depths look like appears in Figure 2 below. I sought conversations characterized by Column C. In these conversations students were most likely to be responding to and building on each others thinking through their online dialogue.

A. Singular responses to Discussion Starter posted by Instructor	B. Non-collaborative peer responses to initial posts to Discussion Starter posted by Instructor	C. Nested replies-to-replies representing student-to-student interactivity
Thread depth of 1	Thread depth of 2	Thread depths of 4
----- -----1 -----1 -----1 ----- -----	----- -----1 -----2 -----2 -----2 -----1	----- -----1 -----2 -----3 -----4 -----a

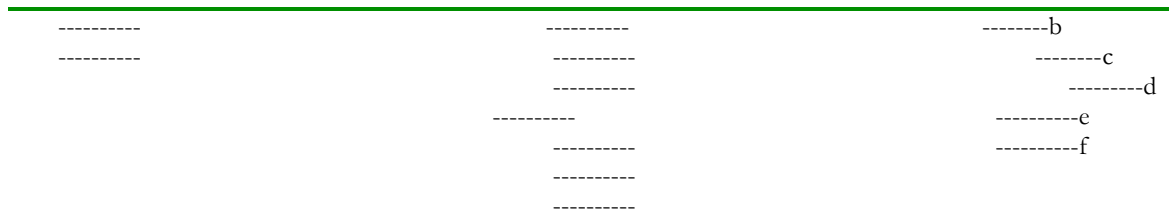


Figure 2: Anatomy of Thread Depth

In **Column A**, the top line represents the Discussion Seed posted by the instructor followed by eight response postings that do not interact with one another. Such discussion fora appear similar to the face-to-face classroom equivalent of having all students pass their homework assignment to the front for collection for instructor grading. The interactive potential of the discussion board is not utilized. The thread depth is one.

For example, an instructor poses a set of questions about Jack London's short story *To Build a Fire* such as "How is the character constructed in the story?" Students respond to this question. However, each responds to the original prompt, not to another student's post. This creates a thread depth of one in spite of the fact that there are many responses to the original prompt.

In **Column B**, the top line represents the Discussion Seed post. It is followed by three initial student postings. Each of the three has a total of three replies by other students linked beneath it. In this case, there is an initiation of collaboration, but no follow-up responses occurred. These interactions amount to a thread depth of two. A predominance of spring 2003 VHS courses (57%) typically exhibited this depth of interactivity.

Below is an example of a sequence of two responses beneath an initial peer comment responding to the question posed above. Replies are indented, as they would be in a threaded discussion forum online utilizing an outline format. Neither of the replies to the

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initial post receives a response. The thread depth is two though thread length is three.

Grammar and spelling are not edited:

Student A: Hey guys, sorry this is a later entry
I remember reading this story before and hating it. But anyway. The man in the story is rather oblivious. He just doesn't see the many faults layed out before him. He takes thinks as they are and tries to face them, but in reality there are some things like the freezing cold weather that are harder to face.

Student B: Freezing Weather
Well it's too bad you didn't like the story but anyway I do believe that it's true that the character does seem to have trouble facing natures harsh reality.

Student C: Mine was even later...Oops!!
Mine was later, so don't feel bad.
So...I wanted to say that I agree with you (Student A). The character did seem very oblivious to the harsh and terribly cold weather around him. Like I say in my comment...I would be a tad bit more emotional if it was that cold and if I couldn't feel my cheeks or toes. Know what I mean?? In reality...there are very few people who could endure what the character in this story has to endure.

In this exchange, student C is not responding to student B or building on student B's thinking. Student A never responds, thereby ending the exchange at a thread depth and length of two.

Column C represents a “nested” discussion, where student collaborative dialogue is indicated by the pattern of replies-to-replies and knowledge-building is extended beyond initial stages. In the example here, the first student posting initiates an exchange (2, 3, and 4) with a total thread depth of four, including the initial student post since each post builds on the last post. The length of this thread is also four.

The second initiating student posting (labeled “a”) is replied to directly three times (b, e, and f). The total thread depth is still four (including c and d), since posts b, e, and f are all responses to a. The thread length, however, is six because all postings indented beneath posting a, along with the initial post itself are included in the overall length of a thread.

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Below is an actual example of a nested sequence of comments beneath an initial peer comment responding to the same question posed above. This is a collaborative event containing a thread depth of five. There are seven postings within the sequence; the thread length is seven. The posts are labeled with depth and length. They are indented to show when they are nested replies to replies. Again, grammar and spelling are not edited:

[Initiating Post; Thread Depth and Length: 1] Student A: A few “did you notice...” questions:

Did anyone notice that the dog was never given a gender? and that the man was never given a name? Do you think that this added to the story at all? I do!

[Thread Depth and Length: 2] Student B: Impersonal

I definatly agree. it seems like the dog, and to an extent the man, were left vague to make them seem more like objects then a person and an animal. I think that was meant to tie in with the general feeling of the cold being Impersonal and unrelenting. like he didn't want to vilinize the cold, so he avoid making the man a hero. wow... that sounds weird...

[Thread Depth and Length: 3] Student A: good thought

I agree! good thought...i definitely didn't feel much connection as a reader to either the man or the dog (more to the dog then the man tho). You know how sometimes you read stories and you totally feel like you know the characters and sympathize with them? I didn't feel that way with these characters, I knew them, but I didn't FEEL them (i guess that would be the way to put it).

[Thread Depth: 2; Length: 4] Student C: response to “did you notice”

Yeah, I noticed that there was little information given on the dog or the man. I think it wasn't given because it would have gotten in the way of the story. Have you ever read a story that gave too much unimportant information? I usually find them boring and long.

[Thread Depth: 3; Length: 5] Student A: Student A and Student B:
Re: noticed

I agree with what both of you said about extra information and stuff. I kind of think that maybe the man having no name made him seem a little more like an average person out there, and maybe a bit more of a "nobody" when he died. I think since he didn't have a name I had a little less sympathy for him. As far as the dog goes... I think it just made the dog a bit more of an object instead of an animal. I think the dog not having a recognized gender made the man and the dog seem less "connected." Some people in the situation the man

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was in would have bonded lots with their dog and loved the dog and stuff, but this guy definitely did not do that, and I think every time the dog was referred to as and "it," it sounded so un-loving and stuff. Hmmm maybe that didn't make any sense, but that's what I thought!

[Thread Depth: 4; Length 6] Student B: Noticed wow, that's true... I leave names off my characters a lot, especially short, joking stuff with friends... so I never really noticed that. I want to say that at some point I remember the dog being called he, but I probably imagined that.

Jack London's exclusion of those things did add to the story somehow. I suppose partly because adding more details would have distracted the reader from the story.

[Thread Depth: 5; Length 7] Instructor: Blue Team: Omission

You folks are smart to be asking why something is **not** in the story. It's not to save space, or b/c it's not important. It **is** important that the dog and man don't have names. How? Why?

In this example of a collaborative event where a minimum thread depth of four is achieved, participants build on one another's ideas, making new discoveries about London's writing craft as they respond to one another's observations and ideas. The instructor intervenes at the end to move the group toward an insightful conclusion. Unfortunately, no further comments were added.

Based on my initial review of discussion areas in VHS courses, I consistently found that a thread depth of four served as the critical point at which the exchange between discussants became interactive. Generally, I found that the greater the thread depth, the more interactivity and extension of ideas occurred. However, my survey revealed a predominance of both single responses to discussion-opening entries posted by instructors and single responses to initial comments posted by peers. These postings have a thread depth of one or two, respectively.

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The survey also revealed that the most common interaction with a thread depth of three was an A-B-A exchange where the first student returned a comment to a peer's response with a simple acknowledgement ("thanks!") or note of approval ("nice idea"), without building on the peer's initiative. This type of interaction did not add anything to the initial comment. Thus, I sought conversations that had a thread depth of four or more to focus on only the most extended conversations in any course I selected for further study. In these constructive conversations students were responding to and building on one another's thinking through their online dialogue. I called these extended dialogues "collaborative events" to distinguish them from other, less interactive postings to discussion assignments.

Thus I defined a collaborative event as a thread of four or more postings nested together as replies-to-replies, such as those seen in the Column C exchange represented by postings labeled a, b, c and d above. Following this rule, posts like e and f in Column C above were not included. They appeared nearby a collaborative exchange, but they were not part of it. They represented the typical thread depth of two that predominated in VHS that semester. The collaborative event was the core unit of analysis for this study (Strauss and Corbin 1998).

Haavind, S. (in press). Tapping Online Dialogue for Learning: A Grounded Theory Approach to Identifying Key Heuristics that Promote Collaborative Dialogue Among Secondary Online Learners. Graduate School of Education. Cambridge, MA, Harvard University. **Ed. D.**

Strauss, A. and J. Corbin (1998). Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory. Thousand Oaks, SAGE Publications.

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