

Coding of children's story-telling task

Children's story narrations are scored for length, elaboration, complexity, cohesion, and coherence, adapted from previous research.

The citation for the coding:

Wang, Q., Bui, V., & Song, Q. (2015). Narrative organization at encoding facilitated children's long-term episodic memory. *Memory*, 23, 602-611. doi: 10.1080/09658211.2014.914229

1) **Narrative length** is measured by recording the number of words and the number of propositions used (i.e., a subject-verb construction);

- Total number of words (#)
 - Code "incomprehensible" as one word
 - Only code parts of transcript that directly relate to the narrative. Do not code children's comments or personal thoughts ("I think" or "What is this?", "um")
 - Code "The end"
- Number of propositions (defined as subject-verb constructions) (#)
 - Do not code "It looks like..." as a proposition
 - Do not code incomplete propositions (She wants...she shows- "she wants" is not coded because it is not complete)
- Words per proposition (to gain a sense of length and complexity of each unit of thought that children expressed) (ratio- calculated later)

2) **Narrative complexity** is measured by the number of subordinate clauses included in each narration. A subordinate clause is defined as any grammatical unit that contains a subject and a verb and depends on a main clause within the same utterance to complete its meaning (e.g., "because his house is close to the school", and "so that he can get stronger").

3) **Narrative cohesion** is measured by the number of interclausal connectives used to link propositions. The types of interclausal connectives include such as additive (e.g., "and"), continuative (e.g., "now"), temporal, (e.g., "then," "later," and "first"), adversative (e.g., "but"), and causal connectives (e.g., "because").

- Different types of connectives (conjunctions used to link propositions) are identified and coded separately:
 - Simple temporal markers (indicates chronological time) (#)
 - Additive (and)
 - Continuative (now)
 - Temporal (then, later, first, second, next, last, before, and after)
 - Complex temporal markers (indicates complex temporal relations) (#)
 - Adversative (but)
 - Conditional states (if-then, when, until)
 - Causal relations (because, so, in order to)
 - Optional states (sometimes, usually, always, probably, maybe)

4) *Narrative elaboration* is measured by the number of descriptives used that provide descriptive texture to the narration, including the following;

- The instance of the type of talk was used as the coding unit.
 - Orientations: propositions which placed the event in spatial-temporal context or provided background information to help the listener understand the event (#)
 - Time: placed the event in historical or narrative time (it was 2:00 in the afternoon, it was winter, it was at Easter)
 - Character introduction: introducing characters present during the event (my grandmother was there)
 - Background information: provide descriptions or explanations for placing the event in context (it was really cold, Billy is my cousin, my mom was wearing a bathing suit)
 - Place: specifying where an event occurred (I went to Grandma's house)
 - Elaborations: elaborate on a previously mentioned orienting information (e.g., Grandma's house is on a lake and is very big. Grandma's house is far away)
 - Referentials: propositions which specify actions that occurred during the event (#)
 - Simple actions: state actions that occurred (we went swimming, I rode on the big train)
 - Complex actions: specify conditions for other actions to occur (When we went on the roller coaster, I got sick; we sat high up so we wouldn't get wet)
 - Elaborations: elaborate on previously mentioned actions
 - Only code actions that are a part of propositions- not infinitives (to go, to play, to ride, etc)
 - Evaluations: information that provides affective or evaluative commentary on the event; may or may not be independent propositions (#)
 - Intensifiers: add intensity or emphasis to actions or descriptions (it was soooo hot; my brother ran around and he ran and ran and ran)
 - Suspense: create tension or evoke interest (and then you know what?; you'll never guess who came)
 - Qualifiers: conveys the narrators attitude (it was a bad movie; he said a funny thing)
 - Code words that have emotional valence, can be negative or positive (pretty, fancy, beautiful, heavy)
 - Internal responses: reflect upon the mental states of the participants
 - Cognition (he forgot where it was, he wants, he thinks/decides/knows)
 - Affect (Bear cried); can include any emotion words (happy, sad, mad, etc) or emotion actions (cry, yell, scream, smile, etc)
 - Dialogue: reference quoted speech in the narrative (Bear mother said:" direct quotes") Not indirect quotes

- Some transcripts may not have actual “ “ around quotes, so be careful to read the story to see if there are quotations.
 - Each proposition in a dialogue is counted separately. (Bear said, “I have to buy an apple and make a cake”- 2 evaluations)
- Descriptions: Requesting or providing objective details about conditions, persons, or objects at the event (#)
 - There was a basket.
 - That is a book.

5) *Narrative coherence* is measured according to the type of event structure depicted in the child's description of the story. A story narration is classified as a non-story (i.e., either completely incoherent or lack of an event sequence), an intermediate story (i.e., containing a sequence of events but lacking causality between them), and a complete story (i.e., comprising a causally related sequence of events where the ending is dependent upon a previous action in the narrative).

- Non-story: complete incoherent or lacked an event sequence (no points)
- Intermediate story: contained a sequence of events but lacked causality between them (1point)
- Complete stories: comprising a causally related sequence of events in which the ending was dependent upon a previous action in the narrative (2 points)