

1 Discourse comprehension and memory

- Comprehension of discourse
- Memory for discourse
- Schemata and discourse processing
- Educational implications

2 Comprehension of discourse

- Local structure (microstructure)—the relationship between individual sentences in the discourse
- Global structure (macrostructure)—the global coherence structure in the discourse, e.g., knowledge about the birthday
- Coherence—the degree to which different parts of a text are connected to one another

3 Cohesion

- Categories of cohesion (Table 7-1, p155)
- Scrambled sentences
- Anaphoric reference—relating current expression to one encountered earlier
- Cataphoric reference—relating current expression to point forward (6, p156)

4 Strategies used to establish coherence

- Given/new strategy
 1. identify the given and new information in the current sentence
 2. Find an antecedent in memory for the given information
 3. Attach the new information to this spot in memory
- Direct matching (9-12, p.158)
- Bridging (13-16, p.158-9)
- Reinstating old information (p. 159)
- Identifying new topics of discourse

5 Role of working memory

- Individual differences in working memory might influence how we comprehend discourse.
- The limited resources of working memory are allocated to processing certain tasks as well as temporarily storing the results of these tasks.
- Reading span task (p.164)

6 Memory for discourse

- Surface representation—stored till its meaning is understood
 - Propositional representation
 - Situational models
- We construct a mental or situational model of the world as described by the text

7 Simultaneous investigations of all three levels

- Surface memory is strong only in the immediate test, and falls to change level shortly after that.
- Propositional recognition starts stronger, also falls off over time, but remain above 0 at all points.
- Memory for situations is initially very strong and show little loss over the retention intervals studied.

8 Schemata and discourse processing

- A schema is a structure in semantic memory that specifies the general or expected arrangement of a body of information.
 - Activation of appropriate schemata
 - Reconstruction of schema-specific details
- Comprehenders who read a passage with one or two appropriate titles tended to emphasize different details in their recall.

9 Genres

- Genre is a type of discourse that has a characteristic structure.
- Genres are important because they provide us with general expectations about they way information will be arranged.
- News articles, journal articles
- Narrative discourse
- Expository discourse

10 Narrative discourse processing

- Story grammars—schemata in semantic memory that identifies the typical or expected arrangement of events in as story (e.g., Table 7-2, p174)
 - Psychological validity of story grammars
- Episodes are processed as chunks
- Reading times were longer at the beginning and the ends of episodes
- Beginnings, attempts, and out comes are recalled better and goals and endings.
- Participants prefer to emphasize the objective aspects
- Cross-cultural investigations
- Certain schemata are culturally in variant

11 Inaccessibility of knowledge

- obscurely written
- Anomalous suspense– when a reader participates in a narrative world in such a fashion that the knowledge critical to sustaining suspense is not immediately accessible.
- Expectation of uniqueness

12 Educational implications

- Actively processing discourse
- Connecting propositions in discourse
- Identifying main points
- Building global structures

- Tailoring comprehension activities to tests

13 Actively processing discourse

- Active processing: relating new information to information we have in permanent memory, asking questions of the material, and writing summaries or outlines of the material.
- Palinscar and Brown (1984)
asked students to formulate questions that would be answered by the most important point in a passage. Students receiving training rose from 30% to 80% on a comprehension posttest. A control group shows no gain.

14 Connecting propositions in discourse

- Sentences overlap in content and given information is used to introduce new information.
- We would benefit from a strategy of explicitly looking for relationship between concepts in discourse. This includes such actions as paying close attention to anaphoric reference and noting where inferences have to be drawn.

15 Identifying main points

- Several studies indicate that the difficulty in determining main points may be traced to the presence of distracting and often confusing details.
- Meyer, Brandt, and Bluth (1980) found that when the key points of a passage are signaled explicitly, performance improves.
- A problem of vital concern is the prevention of oil spills from supertankers.
- Prevention is needed of oil spills from supertankers.
- Signals improved the immediate retention performance of readers whose comprehension was otherwise poor but did not affect the retention of good comprehenders.

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- Reder and Anderson (1980) eliminated many of the details from the passage and found that retention was better when the material was presented in a condensed version.
- Giora (1993) found that analogies in text did not facilitate comprehension and may actually impair recall.

17 Building global structures

- One good test of whether we have successfully done this is to write a summary for a portion of the text.
- This requires us to select specific propositions as the most important ones and to generalize some of the individual proposition into broader thematic statement,

18 Tailoring comprehension activities to tests

- Memory researchers have established that retention is best when we study material in a manner similar to the way we must encode it at the time of a test.
- Most strategies for improving discourse performance work some but not

all the time.

- Their success often depends on whether they are appropriate for a particular test.

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- Mannes and Kinsch (1987)'s study. Students studied an outline of relevant background information before reading a text. For some students the organization of the outline was consistent with the organization of the text. For others, the outline was inconsistent with the text.
- Consistent-outline students performed better on memory for the information in the text.
- Inconsistent-outline group showed superior performance on an inference verification task and on a difficult problem-solving task that required a deep understanding of the passage.

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- It is not appropriate to say that the presence of a consistent outline improved discourse performance.
- We need to consider what aspect of performance is being measured.
- We need to know what we will be asked to do with information before we can decide on a comprehension strategy that makes sense.