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ABSTRACT

To examine the skills and knowledge children use when they develop and tell stories, this study sought to provide an experiential demonstration of how schemata guides comprehension. Subjects were preschool, third-, and fifth-grade children described by their teachers as having average reading comprehension. Each child met with a researcher in an empty classroom. Child and researcher played games to get acquainted with each other, and then the researchers told the child a story. The child was then asked to retell the same story, remembering every possible detail. Story reconstructions were taped, the tapes transcribed, and the story coded for recall. Results showed that: (1) older children's storytelling skills had a qualitative advantage over those of younger children; (2) preschool and third-grade children told less elaborate stories and remembered fewer emotional details than fifth graders; (3) children's storytelling abilities became more elaborate with age; and (4) children were able to recall only to the extent that their schemata, determined by their knowledge of the world, enabled them to do so. Appended are text suprastructures for three stories. Contains 14 references. (JW)

THE DEVELOPMENT OF CHILDREN'S STORY TELLING SKILLS

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Abstract

This paper presents a framework for studing the structure of children's narrative from three groups of children (mean age: 5,7; 7,0; 10,3). Our purpose was to describe the knowledge and skills that are used when children make up and tell stories (What young children remember and why"). We took an interest in the types of information most memorable and how this is affected by age or experience. The levels of the dependent variables were the narrative schemata for the text category of the story and for the type of proposition recalled (Thorndyke, 1977). Results showed that the older children appeared to have some qualitative advantage for story telling skill. The younger children's stories (5- and 7-year old children) were less elaborated than older children's narratives (they did not did not include the Theme Category in their retellings). Besides, these children did not recall the protagonist's internal states. Contrary, 10-year-old children were more apt to include explicit references to internal states of characters, their story representation from 10-year old children was distintly separate from children's ability from 5- and 7-year old to recall elaborated stories, to explore protagonist's internal states, motivations and thinkings. There is a clear progression of elaboration that occurs in the conceptual representation of a story as a form of discourse. In this way and, as educational suggestion, we can assume that children recall in accordance with their organizing schemata which it is determinated by their knowledge world level.

A central issue in the study of how children understand narratives is the nature of the mental representation of story understanding: In what form does a skilled reader store the story information in memory?. Most models of story understanding propose that readers construct mental representations which are composed of causally connected networks of events and states (Schank, 1975; Graesser, 1981; Olson & Gee, 1988; Graves & Montague, 1991; Badzinski, 1992), hierarchical goals and event graphs (Black & Bower, 1980) and scripted event sequences plus deviations (Schank & Abelson, 1977).

In this context, several works on children's comprehension of stories (Brown & Murphy, 1975; Mandler & Johnson, 1977; Stein & Glenn, 1979) has called into question the claims made by Piaget (1926) that preschool children have internalized the story schemata and attend to narratives with the expectation that the story will contain all the essential elements. This studies maintained that several young children have not enough

knowledge to understand many of the features associated with the adult conceptum of a good story because they have not acquired substantial amounts of knowledge about social contexts and the structure of personal and physical causality. The fact that young children are proficient at understanding many concepts associated with story structure does not guarantee an elaborated understanding of personal and physical causality aspects of story.

This paper provides an experimental demostration of how the schemata guides comprehension to the different ages and how the nature and relation of the concepts influence in the story comprehension. Our purpose is to describe the knowledge and skill that are used when children make up and tell stories: "What young children remember?" and "why?. More precisely, we assume that children remember in accordance with their organizing schemata and that the content and nature of the information reflect these schemes; besides we are interesting in how the story telling skills are affected by age or experience.

METHOD

Participants

Three groups of children from preschool, 3rd Grade and 5th Grade (mean age: 5,7; 8,4; 10,3) were used as subjects. All were classifed by teachers as having of average reading comprehension.

Materials

For our study, we developed a summarization task consisting of stories. The materials used were stories because for younger children the most familiar discourse form is the narrative. Children read and hear more narratives than all others types of extended discourse during their preschool and elementary school years (Meyer, 1977; Bereiter & Scardamalia, 1981) and appear to be more proficient in processing narratives.

The stories consisted of a sequence of episodes, each episode having the same internal structure, denoted by the terms Frame, Theme, Plot and Resolution. Each of the plots consisted of two episodes in preschool text, four episodies in 3rd grade texts and of ten episodies in 5th grade texts (see appendix I, II, III).

From each of children a spoken summary was obtained under conditions that were as near as possible identical for all subjects. After these recordings had been transcribed, as accurately as possible.

Procedure

Subjects were seen individually in an empty classroom. After introductions, children were invited to play some games with the experimenter.

When the child seemed to feel comfortable. Subjects were told, "I'd like us to listen to a story; and after you hear the story, you can make your own tape of the same story. Then we can listen to your tape together. Are you ready to listen to the story?".

The child listened the story and next, he/she was asked to record their stories. Most children were eager to do so, though a few needed prompting (e.g., What was the story about?"). Further prompting was given (e.g., "Go on") when children paused. When the child appeared to have finished, he or she was asked the final probe, "Can you remember anything else that happened?".

Scoring

The story reconstructions were scored for the recall of the different categories and propositions. Thus, the text was divided into propositions as defined by a story grammar; and Thorndyke grammar was used to represent the set of expectations readers might have for story structures. The grammar consists of a set of definitions of the major story components and phrase-structure rules which delineate ways that components may be

combined. Briefly, the major story components described by Thorndyke (1977) are: Frame, Theme, Plot and Resolution. The structure of these episodes makes up the schemata of the text. Thus, we coded the different propositions in the retelling as: Categories (Frame, Theme, Plot and Resolution) and Types of propositions recalled (Action, Event, Real State, Wanted State, Goal and Subgoal).

RESULTS

All protocols were scored independently by two graders. The correlations between graders' scores were high (about .96)

The percentage indices of the different measures of the dependent variabes are given in Figure 1. The results are clear: older children appeared to have some qualitative advantage for story telling skill; the older children's stories were formed to be more elaborated than younger children's narratives. In particular, older children told more goal-based stories, included more internal states, and included more endings evaluating the protagonist's actions the story.

a) Categories Data:

An ANOVA of the total accuracy score in category type recalled was carried out. The results showed significant differences in the four Categories recall: Frame ($F_{(2,60)}$= 90,65; $p<.01$); Theme ($F_{(2,60)}$= 143,54; $p<.01$); Plot ($F_{(2,60)}$= 99,76; $p<.01$) and Resolution ($F_{(2,60)}$= 112,32; $p<.01$). Scheffè tests showed significant differences between 3rd and 5th Grade in the recall of the four Categories and showed significant differences between preschool group and 3rd Grade group in the Frame and Theme recall.

b) Type of proposition Data

An ANOVA of the total accuracy score in type of proposition recalled was performed. The results showed significant differences in the recall of the six types of

propositions: Actions ($F_{(2,60)}$= 88,09; p<.01); Events ($F_{(2,60)}$= 99,98; p<.01); Real State ($F_{(2,60)}$= 88,05; p<.01); Desired State ($F_{(2,60)}$= 97,76; p<.01); Goals ($F_{(2,60)}$= 76,69; p<.01); Subgoals ($F_{(2,60)}$= 89,65; p<.01). The next Scheffè tests showed significant differences between 3rd and 5th Grade in the recall of the six types of propositions, but they only showed significant differences between preschool group and 3rd Grade group group in the Events recall.

CONCLUSIONS

The findings of the present study, focused on several important developments in children's story telling skills, support the following major conclusions:

First, when stories were examined for features that corresponded to Thorndyke's story definitions, older children's stories were formed to be more elaborated than younger children's narratives. In particular, older children told more goal-based stories (Goal and Subgoal measures), included more obstacles, and included more endings evaluating the protagonist's actions of the story. Because older children included more obstacles, the episodes in their stories were more lightly connected.

Second, only older children used the narrative to explore internal state, motivations and thinking of their story characters. They were more apt to include explicit references to internal states of characters, even these children did not use internal states and beliefs to explain the nature of individual differences in social behavior or to explore the nature of conflicts between two characters. In this way, Piaget (1926) theory of egocentrism depicts the young child between 2 and 6 years of age as incapable of taking another person's point of view, either visually or socially ("*...the child beging ignorant of his own ego takes his own point of view as absolute and fails to establish between himself and the external world of things that reciprocity which alone would ensure objectivity (...).*

Whenever relationships depend upon the ego are concerned, and they are the crux of the matter, the child fails to grasp the logic of relations for lack of having established reciprocity first between himself and other people, and between himself and things." (p.197). However, we also find that children from 3er Grade have difficulties to recall information about other person's internal states.

In sum, we found that the story is an excellent vehicle to understand the development of children's story skills, because story retelling can facilitate the development of explanatory skills, specially in regard to the nature of social action and human motivation.

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TABLES

	FRAME	THEME	PLOT	RESOLUTION
Prs-3rd Gr.	$p<.01$	$p>.05$	$p<.01$	$p>.05$
Prs-5th Gr.	$p<.01$	$p<.01$	$p<.05$	$p<.01$
3rd-5th Gr.	$p<.01$	$p<.01$	$p<.05$	$p<.01$

Table I. Levels of significance from Scheffé tests in Categories recall

	ACTION	EVENT	R. S.	D. S.	GOAL	SUBG
P-3rd	$p>.05$	$p<.01$	$p>.05$	$p>.05$	$p>.05$	$p>.05$
P-5th	$p<.01$	$p<.01$	$p<.01$	$p<.01$	$p<.01$	$p<.01$
3rd-5th	$p<.01$	$p<.01$	$p<.01$	$p<.01$	$p<.01$	$p<.01$

Table II. Levels of significance from Scheffé tests in type of proposition recall
R.S.: Real States; D.S.: Desired States; SUBG: Subgoals.

APPENDIX I

TEXT FOR PRESCHOOL GRADE GROUP: "PRINCESS LIWAIWAI"

SUPRASTRUCTURE

Rule Number

1. Story ———— > Frame + Theme + Plot (Episode 1 + Episode 2) + Resolution

2. Frame ———— > Characters + Place + Time

Characters ——— > Real State (3) (4)
Place ———————> Real State (2)
Time ———————— > Real State (1)

3. Theme ———— > Goal (7) + Real State (5) (6)

4. Plot ———— > Episode 1 + Episode 2

Episode 1 ——— > Subgoal + Purpose + Result
Subgoal ———— > (11)
Purpose ———— > Events (9) + Actions (8) (10)
Result ———— > Actions (12) (13)

Episode 2 ——— > Subgoal + Purpose + Result
Subgoal ———— > (14) + Desired State (15)
Purpose ———— > Actions (16) (17) (18)
Result ———— > Actions (19)

5. Resolution —— > Events (20) + Real State (21) (22)

(*) Parenthetical numbers represent the proposition number

APPENDIX II

TEXT FOR THIRD GRADE GROUP: "THE LION AND THE MOSQUITO"

SUPRASTRUCTURE

Rule Number

1. Story ——————— > Frame + Theme + Plot (Episode 1 + Episode 2) + Resolution

2. Frame ——————— > Characters + Place + Time

Characters ——— > Real State (1)
Time ——————— > Real State (2)

3. Theme ——————— > Goal (4) (5) + Real State (3)

4. Plot ——————— > Episode 1 + Episode 2

Episode 1 ——— > Subgoal + Purpose + Result
Subgoal ——————— > (11)
Purpose ——————— > Events (9) (10) + Actions (7) (8) + Desired State (6)
Result ——————— > Event (12)

Episode 2 ——————— > Purpose + Result
Purpose ——————— > Actions (13) (14)
Result ——————— > Actions (15) (16) (17) (20) + Real State (18)

Episode 3 ——————— > Purpose + Result
Purpose ——————— > Actions (22) (23) (24) + Events (21) + Desired State (25)
Result ——————— > Actions (27) (28) (29) (30) + Events (26) + Desired State (31)

Episode 4 ——————— > Subgoal + Purpose + Result
Subgoal ——————— > (33) + Desired State (32)
Purpose ——————— > Actions (34) + Real State (31)
Result ——————— > Actions (35) (37) + Events (36)

5. Resolution —— > Actions (39) (40) (43) + Events (38) (41) + Real State (42)

(*) Parenthetical numbers represent the proposition number

APPENDIX III

TEXT FOR FIFTH GRADE GROUP: "JOHN IS A HAPPY BOY"

SUPRASTRUCTURE

Rule Number

1. Story ——————— > Frame + Theme + Plot (Episode 1 + Episode 2) + Resolution

2. Frame ——————— > Characters + Place + Time

Characters ——— > Real State (2)
Time ——————— > Real State (1)

3. Theme ——————— > Events (5) (6) (7) + Real Sate (2) (8) + Goal (3) (4)

4. Plot ——————— > Episode 1 + Episode 2

Episode 1 ——— > Subgoal + Purpose + Result
Subgoals ——————— > (11)
Purpose ——————— > Events (10) (12) + Real State (13)
Result ——————— > Events (14) (15)

Episode 2 ——————— > Purpose + Result
Purpose ——————— > Events (16) (17)
Result ——————— > Real State (18) (19) (20)

Episode 3 ——————— > Purpose + Result
Purpose ——————— > Events (21) (22) (33)
Result ——————— > Actions (26) + Events (27) + Real State (24) (25) (28) (29)

Episode 4 ——————— > Purpose + Result
Purpose ——————— > Events (30) (35) + Actions (31) (32) + Real State (33) (34) (36)
Result ——————— > Events (38) (40) + Real State (37) (39)

Episode 5 ——— > Purpose + Result
Purpose ——————— > Events (41) (42) (43) (44) (46) + Real State (45)
Result ——————— > Events (47) (49) (51) (52) (53) (54) (55) (56) (57) (58) (60) (61) (62) (63) (64) + Actions (60) + Real State (48) (50) + Desired State (59)

Episode 6 ——————— > Purpose + Result
Purpose ——————— > Actions (65) (70) (71) + Events (66) (69) + Real State (67) (68)
Result ——————— > Real State (74) (75) (76) (77) (78) + Actions (80) + Events (72) (73) (79)

Episode 7 ——————— > Subgoal + Purpose + Result

Subgoals ———— > (86)
Purpose ———— > Events (85) + Real State (81) (82) (83) (84)
Result ———— > Events (87) (88) (89)

Episode 8 ———— > Subgoal + Purpose + Result
Subgoal ————> (96)
Purpose ———— > Events (89) (91) (92) (94) (96) + Real State (93) (95)
Result ———— > Events (97) (99) (100)+ Real State (98)

Episode 9 ———— > Purpose + Result
Purpose ———— > Events (101) (102) (103) (104) (107) (108) (109) (110) (111) + Real State (105) (106)
Result ———— > Real State (112)

Episode 10 ———— > Purpose + Result
Purpose ———— > Events (113) (114) + Real State (115)
Result ———— > Events (117)+ Actions (116)+ Real State (118) (119)

5. Resolution—— > Events (120) (122) (123) (124) (126) (127) (130) (131) + Real State (121) (125) (128) (129)

(*) Parenthetical numbers represent the proposition number

Figure 1. Percentages of recalled propositions according to story grammar