This study examined the presence of specific story elements and story cohesiveness in child narratives. A sample of 35 Hawaiian children who attended a preschool that emphasized early literacy activities was compared with a control sample. Children first constructed a story from a set of five pictures with adult support, and then retold the story without the aid of pictures and with minimal adult support. Children in the preschool sample were tested twice over a 5-month period; control children were tested at the later time. Children's story retelling was rated for number of elements, amount of adult support, and story cohesiveness. Over the 5-month period, the early literacy preschool children improved in the level of cohesiveness and the number of elements included in their stories. Preschool children performed better than control children on both variables. Four references are cited. Samples of stories constructed by two children at each of the two times are included.

(Author/BC)
DEVELOPMENT OF PRESCHOOLERS' PICTURE-ELICITED NARRATIVES

Jayanthi Mistry
Eliot-Pearson Department of Child Study
Tufts University
Medford, MA 02155

Hannah Herman
Kamehameha Schools
Early Education Division
Kapalama Heights
Honolulu, HI 96817

DEVELOPMENT OF PRESCHOOLERS' PICTURE-ELICITED NARRATIVE

ABSTRACT

The development of two aspects of children's narratives, 1) presence of specific story elements and 2) story cohesiveness were investigated. Hawaiian children who attended a preschool emphasizing early literacy activities were compared with children of similar age and sociocultural background on their construction and retelling of picture-elicited narratives. Children first constructed a story from a set of five pictures with adult support and then retold the story without the aid of pictures and with minimal adult support.

Over a five-month period, children improved significantly in the level of cohesiveness of their retold stories and in the number of elements included, and performed significantly better on both variables than the control group. Findings on the influence of adult support suggest that after attending the Early Literacy Program children were able to maintain or increase their inclusion of story elements even when adult assistance was reduced, while children in the Control sample were more dependent on adult support and were less able to produce more story elements once adult assistance was reduced during Story Retell.
INTRODUCTION

Young children’s preschool experiences with stories and books have long been considered an important influence on language development, and relatedly, on their reading and writing performance in school (Feagans, 1982; Snow, 1989). Further, the nature of young children’s processing of stories, especially the influence of story "schemas" on encoding and recall has been well documented. However, questions regarding the origins of children’s narrative skills have been harder to address (Cochran-Smith, 1983). This paper addresses the question by examining changes in children’s stories on a two-step narrative task: 1) Story Construction with adult support, followed by 2) Story Retell with minimal adult support. Changes in the stories produced by children, as well as in the pattern of links between adult scaffolding and independent story retell, as a function of time and relatedly of experience in a preschool program that emphasized early literacy and narrative activities are explored.

Narrative skills have been defined (Feagans, 1982) as those abilities that allow for the exchange of event-structured material, including information such as introductions, setting, characters, event sequences, and conclusions (Stein & Glenn, 1979), as well as knowledge of how to sequence information to form a coherent narrative. Thus, the presence of specific story elements and their arrangement in a coherent and cohesive narrative were the particular aspects of narrative skills we focused on in our analysis.
METHOD

DESIGN

The sample consisted of two groups of Hawaiian children:
35 children from a preschool program emphasizing early literacy activities (including story reading and story dictations);

A control sample of 13 children of similar age and socio-cultural and economic background, but without experience in the above preschool program.

Children in the Early Literacy Preschool sample were administered a narrative task at two points in time (Dec. 1989, & April, 1990), five months apart. Children in the control sample were administered the task at the later point in time (Mar. 1990).

TASK

The narrative task consisted of constructing a story from a set of 5 pictures. The five pictures were selected from a wordless story book titled "The Bear and the Fly" by P. Winter (Craion Publishers). The pictures depict the events that occur when a fly enters the home of a bear family as they sit down to eat dinner. In his efforts to get rid of the fly, the father bear knocks out every member of the family, but is unable to get the fly. The task consisted of two steps:

**Story Construction:** Children first constructed a story from a set of five pictures, with scaffolding from the adult as necessary.

**Story Retell:** In the next step children dictated the story to the adult without the pictures and with minimal adult scaffolding.
CODES AND MEASURES

Stories produced during Story Construction and Story Retell were audio-taped and transcribed. Protocols were then coded. Element Scores and Adult Scaffolding Scores were derived for both phases of the task, while Story Cohesiveness scores were derived only for the Story Retell phase. The procedure for coding the Elements and Adult Scaffolding involved reading the sections of the transcripts dealing with each element, and then assigning a code for the level of the child's reference to that element (Element score), and another code for the level of the adult's assistance (Scaffolding Score). The scores are described below:

1) Element Score: represents the number and quality of specific story elements included in the story. The codes were designed to represent the absence or presence of specific story elements (0 or 1 respectively), along with a general differentiation of the quality of the reference made to each element (explicitly stated details or elaborations were scored a 2). The following story elements were coded:
   - Story Introduction (character & setting),
   - Initiating Event,
   - Actions,
   - Goal
   - Consequences

Each element was given a score of 0-2, and the total across the 5 elements constituted the Element Score (total score range: 0-10).

2) Adult Scaffolding Score: represents the level of scaffolding provided by the adult. The scores represented:
   0 - No Adult Support (other than general prompts such as "And then?")
   1 - Little Support (asking one or two questions or recapping once or twice),
2 - Lot of Support (asking three or more questions to elicit response, recapping three or more times, or providing essential information regarding the element).

The final score represents the total across the five elements (Total scores range from 0 - 10).

3) Story Cohesiveness: The stories produced by children during Story Retell were also rated for overall quality including criteria of cohesiveness as well as story coherence (though we use the term 'cohesiveness' in this paper to refer to overall quality of the stories). The stories were rated on a scale of 0-5 representing increasing levels of overall quality in terms of how the story was put together. The rating scale included criteria of cohesiveness, as well as story coherence, (e.g. including inclusion of, and appropriate sequencing of major story elements, explicitness of descriptions and connections between elements).

RESULTS

Changes in Story Retell over time in the Early Literacy Preschools

The first set of analyses were performed on scores from the Story Retell phase to determine if there were changes over time in the Early Literacy Preschool sample's story productions. For this analyses the N is 26 as only children who were present at both times could be included. The mean age for this sample at Time 1 (Dec. '89) was 54.5 months, and at Time 2 (April '90) was 59.2 months.

Repeated measures analyses of variance (with time as the within-subject factor) revealed significant effects on story elements in children’s independent story productions (f = 12.9, p < .001), and on the cohesiveness of their stories (f = 49.6, p < .000). Children produced more story elements and more
cohesive stories at the end of the school year than they did earlier in the school year (See Figure 1A). Further, examination of mean scores for each story element revealed that children's scores on all 5 story elements improved significantly over the 5 month period (See Figure 1B).

**Comparison between Early Literacy Preschool Sample and Control Sample**

To determine if the above differences were in fact a function of children's participation in the Early Literacy program rather than merely a function of age, a comparison was done between the Early Literacy sample (N=35) and the Control sample (N=14) at Time 2. The mean ages for the two samples were 58.8 and 57.1 months respectively.

Analysis of variance (controlling for age) revealed significant differences in story element scores ($f = 5.4, \ p < .05$) and in cohesiveness of stories ($f = 5.99, \ p < .05$). Story retells of children in the early literacy programs included more story elements and were more cohesive than those of the control group (See Figure 2A). However, examination of mean scores on each element revealed that children in the Early Literacy Preschool Sample did better than the Control Sample only on some elements. They made clearer references to introduction and setting information, to the initiating event and to the characters' goals, while differences between the samples on action elements and story consequences were not significant (See Figure 2B).

**Adult Scaffolding and Children's Story Productions during Story Construction and Story Retell**

The second set of analyses focused on the more complicated question of changes in the pattern of links between adult scaffolding and children's story retells on both tasks, as a function of time, and relatedly experience in the early literacy programs. During the Story Construction task adults
assisted the child as necessary, using questions, prompts, or comments to ensure that the essential story was constructed. During the Story Retell task, the focus was on eliciting the child's independent story production, thus, adult assistance was kept to a minimum.

To reflect the degree of joint story construction, Adult Scaffolding scores and Child Story Element scores were first recoded into in to High and Low categories, with scores of 0-5 in the Low category and scores of 6-10 in the High category. Then, each child in the sample was categorized into one of the 4 following combinations reflecting degree of Adult-Child contribution to joint story construction:

1) High Adult Scaffolding with Low Child Element Scores
2) High Adult Scaffolding with High Child Element Scores
3) Low Adult Scaffolding with Low Child Element Scores
4) Low Adult Scaffolding with High Child Element Scores

Early Literacy Sample:

Figure 3A represents the percentage of the sample that fell in each of the 4 combination groups (Adult Scaffolding in conjunction with Child Element scores), during each task (Story Construction and Story Retell) at Time 1 and Time 2. The most noticeable shift from high adult assistance during Story Construction to low or no adult assistance during Story Retell at both Time 1 and Time 2, merely confirms that task instructions were followed by adults during the Retell task.

However, Figure 3A reveals other interesting patterns. During Story Construction at Time 1 there were an appreciable number of children who got high Story Element scores (for 28% these high scores occurred in conjunction with high adult assistance). However, these children shifted to a lower level of performance when adult assistance was reduced during Story Retell - most of the sample (81%) produced low Story Element scores. On the other hand, while the Story Construction pattern at Time 2 was similar to that at Time 1, during Story
Retell at Time 2 most of the children (85%) were able to produce high Story Element scores even though they received only minimal adult assistance. The findings suggest that at the end of the preschool year, children were able to either maintain or shift to high Story Element scores even when adult assistance was reduced.

Children's mean Story Element Scores during Story Construction and Story Retell at Time 1 and Time 2 support the above pattern (See Figure 3B). There is a drop in mean scores from Story Construction to Story Retell at Time 1, but an increase at Time 2, suggesting that adult assistance at Time 1 elicited high child responses during Story Construction, but when the assistance was reduced, children’s level of performance reduced as well. Presumably through experience in the Early Literacy Program, children had learned to utilize adult scaffolding, hence, at Time 2, they maintained or increased their level of performance even when adult assistance was reduced.

Comparison with Control Sample

To determine if this pattern was a function of experience in the Early Literacy Program, or merely a function of age, Figure 4A compares the pattern in the two samples (Early Literacy sample and Control sample) at Time 2. While most children in both samples received high adult assistance during Story Construction, the numbers were relatively higher in the Control sample than in the Early Literacy sample (100% vs. 69% respectively). Further, even with high adult assistance, most of the children in the Control sample (71%) produced low element scores, while only 42% of the children in the Early Literacy sample produced low scores even with high adult assistance (note the shaded sections in Fig. 4A).

The shifts between Story Construction and Story Retell in both samples reflect the expected shift from high to low adult assistance, as a function of task procedure. However, the
pattern of shifts also reflects the fact that the Early Literacy Sample was able to maintain or even increase their level of story elements scores when adult assistance was reduced (during Story Retell), though this was not the case in the Control sample. When adult assistance was low only 36% of children in the Control sample produced high Story Element scores, whereas 85% of the Early Literacy Sample did so.

Again, children’s mean Story Element scores reveal the same pattern. While the Early Literacy sample was able to maintain and increase the level of performance even when adult assistance was reduced, the Control sample’s performance remained at similar levels with and without adult assistance.

Conclusion

Children in the Early Literacy Sample improved significantly in the level of cohesiveness and inclusion of story elements in their retold stories, and performed significantly better on both measures than the Control Sample. Findings on the influence of adult support suggest that after attending the Early Literacy Program children were able to maintain or increase their inclusion of story elements even when adult assistance was reduced, while children in the Control sample were more dependent on adult support and were less able to produce more story elements once adult assistance was reduced during Story Retell.
the Control sample. When adult assistance was low only 36% of children in the Control sample produced high Story Element scores, whereas 85% of the Early Literacy Sample did so.

Again, children’s mean Story Element scores reveal the same pattern. While the Early Literacy sample was able to maintain and increase the level of performance even when adult assistance was reduced, the Control samples performance remained at similar levels with and without adult assistance.

Conclusion

Children in the Early Literacy Sample improved significantly in the level of cohesiveness and inclusion of story elements in their retold stories, and performed significantly better on both measures than the Control Sample. Findings on the influence of adult support suggest that after attending the Early Literacy Program children were able to maintain or increase their inclusion of story elements even when adult assistance was reduced, while children in the Control sample were more dependent on adult support and were less able to produce more story elements once adult assistance was reduced during Story Retell.
References


Fig. 1A: Story Elements & Cohesiveness During Story Retell at Time 1 & 2

Fig. 1B: Story Elements during Story Retell at Time 1 and Time 2

Mean Scores

Types of Story Elements

N=26

N=26
Fig. 2A: Comparison Between Samples During Story Retell at Time 2

Fig. 2B: Comparison between Sample Story Elements produced during Retell

Mean Scores

Types of Story Elements

Control Sample  Early Lit. Sample

N=14  N=35

N=14  N=35
Figure 3A: Early Literacy Sample
Pattern of Adult Support & Child Scores

Fig. 3B: Mean Story Element
Scores at Time 1 & 2

N=26
Figure 4A: Comparison between Samples Pattern of Adult Support & Child Scores

Control Sample | Early Literacy Sample
---|---
Hi-Adult & Lo-Child | Hi-Adult & Hi-Child
Lo-Adult & Lo-Child | Lo-Adult & Hi-Child

Fig. 4B: Mean Story Element Scores in the two Samples
Time 1
ID #11

(Adult Prompt)

The daddy and the, and the baby, and the dog, and the baby, and the daddy went fall, fall down.

(Adult Prompt)

What, what the other one.

(Adult Prompt)

-no response-

(Adult Prompt)

-no response-

Elements = 1  Cohesiveness = 1

Time 2

The three bears was eating dinner and the bug came in. And he smack, the papa bear went smack the bug. the mama bear’s head and the, and the, and the, and the baby bear’s head. And, they, hit and the papa bear break the chair.

(Adult Prompt)

To catch the fly.

(Adult Prompt)

Then, he, then the again, fell, fell down.
The bug went through the window.

Elements = 7  Cohesiveness = 3
Time 1
ID #23

(Adult Prompt)

The parents were eating.

(Adult Prompt)

Fly comes in the house.  
Daddy tries to catch it.  
He hits the girl's head.  
And then, he hit Mama's head.  
They got knocked out.

(Adult Prompt)

The fly was still flying around.

(Adult Prompt)

The fly went out the window.

Elements = 7  
Cohesiveness = 4

Time 2

The bears are eating dinner.  
And then, one fly, come into the bear's house.  
And then, daddy bear tries to catch it but hit momma bear by mistake and then he hit baby bear by mistake.  
And then, he hit, then he tried to catch the fly.  And climb on the chair and he fell down.  
And then everybody was knocked out, and, and then the fly was still flying around then it went out the window.

Elements = 9  
Cohesiveness = 5