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Teaching Grade One Story Composition:
A Comparison of Developmental and Process Approaches

by

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ABSTRACT

The aim of the current study was to achieve an integration of narrative and developmental knowledge to produce a comprehensive and effective narrative instructional program that serves to enhance children's production of narrative components. The present study involved the design and implementation of a developmentally-based narrative instructional program for a Grade one classroom. Given that narrative is an integral part of life and allows for an interpretation or "meaning making" of experience, the instruction of narrative was viewed as an important subject for study. Two instructional programs were compared: a developmental narrative program and the current language arts curriculum. Twenty-six students in the experimental group and twenty-four students in the comparison group participated in the study over a three month period during a daily 40-minute session. Both methods were similar in that they were individualized programs that emphasized the use of age appropriate materials. The difference in the two instructional programs was in terms of instructional approach. The language arts curriculum program was a process-oriented approach, whereas, the developmental narrative program was a structurally oriented approach. Pre- and post-instruction measures for both groups included production of an oral narrative and three measures of conceptual language ability and cognitive processing capacity. Significant differences were found between the comparison and experimental groups in the structural level of students' narrative plots and the use of cohesive words (conjunctives). Generally, students in the experimental group produced oral narratives that were developmentally-advanced, in terms of plot structure and cohesive words, subsequent to instruction and independent of the use of conceptual mnemonics. Descriptive data were also

gathered at five sample times throughout the experimental instruction with the aim of tracking the development of seven students. Sample narratives were examined for progress in the use of plot structure and cohesive words. Additionally, the hierarchical structure of the narratives and the relations among the propositions that make up the hierarchy were defined and tracked. The descriptive analysis also indicated that instruction, that is developmentally-based, facilitated the production of more complex narrative components. As well, interactions were demonstrated in terms of the development of plot structure, conjunctive use, and propositional relations. Results of this study have implications for classroom instruction and, in general, support the use of a developmentally-based narrative instructional program.

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DEDICATIONS

In Memory, To my loving husband Peter,

So much feeling, so many emotions, and so few inadequate words with which to express the “everythingness” you have meant and been to me. I loved you then, I love you now, and I will love you always. This is for you in loving memory of your support, love, and encouragement which I will carry with me in everything I do.

Thank you honey. I love you and I miss you.

To my children, Brittany and Braden, whom I love dearly,

I cherish each day with you and wonderously watch you play and learn and grow.

You are so full of curiosity, intelligence, perserverence, sensitivity, and love.

Qualities that will serve you well in life. I am proud of you both and love you!

If I Had Only Known
(To Peter in Loving Memory)

If I had only known it was our last walk in the rain
I'd keep you out for hours in the storm
I would hold your hand, like a lifeline to my heart
And underneath the thunder we'd be warm
If I had only known it was our last walk in the rain

If I had only known I'd never hear your voice again
I'd memorize each thing you ever said
And on these lonely nights, I could think of them once more
And keep your words alive inside my head
If I had only known I'd never hear your voice again

You were the treasure in my heart
You were the one who always stood beside me
So unaware, I foolishly believed that you would always be there
But then there came a day when I closed my eyes
And you slipped away

If I had only known it was my last night be your side
I'd pray a miracle would stop the dawn
And when you smiled at me, I would look into your eyes
And make sure you know my love for you goes on and on
If I had only known, If I had only known

Reba McEntire

TABLE OF CONTENTS

APPROVAL PAGE	ii
ABSTRACT	iii
ACKNOWLEDGEMENTS	iv
DEDICATION	vii
TABLE OF CONTENTS	ix
LIST OF TABLES	xii
LIST OF FIGURES	xiv
CHAPTER I. INTRODUCTION	1
Story Instruction	1
The Nature of Narrative	4
Narrative Components and Their Development	5
Summary	9
Organization of Dissertation	9
CHAPTER II. LITERATURE REVIEW	11
The Development of Narrative Components	11
Narrative Defined	11
<i>How</i> Narrative Develops	12
Cognitive Development	12
The Development of Working Memory	13
Macrostructure	16
Models of Macrostructure	16
Development of Story Structure Elements	17
Microstructure	22
Narrative Cohesion	25
Conjunction	26
Development of Conjunctives	27
Narrative Coherence	31
Propositional Relations	32
Narrative Instruction	34
Mnemonics as an Instructional Tool	37
Imagery as an Instructional Tool	37
Narrative Picture Mnemonic	38
Narrative Icon Mnemonic	40

Summary	42
Overview of the Present Study	44
Hypotheses	45
CHAPTER III. RESEARCH DESIGN AND METHODOLOGY	47
Site Selection	48
Subject Selection	49
Participants	50
Pre-Test Tasks: Language Ability	50
Cognitive Processing Capacity, and Oral Stories	
The Similarities Task	51
The Opposites Task	51
The Digit Span Task	52
Oral Stories	52
Pre-Test and Post-Test of Developmental Instructional Components	53
Plot Level Scoring	53
Cohesion Scoring	53
Procedure	55
General Instructional Method	55
Experimental Instructional Method	56
Plot Structure Instruction	57
Plot Structure Materials	59
Story Frames	59
Thought Clouds	59
Story Lines	60
Icons	60
Story Starter Cards	60
Story Books	65
Story Frame Sheets	65
Plot Structure Instructional Activities	65
Graphics	65
Story Frames	65
Mental State Icons	66
Problem-Resolution Icons	66
Failed-Attempt Icon	67
Thought and Feeling Icons	67

Story Starter Cards	68
Verbal	68
Story Retelling	69
Oral Story Telling	69
Identification of Failed Attempts	70
Written	70
Descriptive Detail Instructional Activities	70
Cohesion Instructional Activities	72
Coherence Instructional Activities	74
Task Administration and Data Gathering Procedures	87
Comparison of Pre-Post Performance on Plot Structure and Cohesion	87
Field Notes	87
Time Series Sampling	90
Comparison Instructional Method	91
Language Arts Curriculum	91
Instructional Materials	93
Story Text/Picture, Sheet/Booklet	93
Story Books	93
Songs/Poems	93
Personal Dictionaries	93
Journals	93
Fact/Information Sheets	96
Content Worksheet Activities	96
Story Writing Notebook	96
Instructional Activities	96
Graphic	96
Story Text/ Picture Activities	96
Coherence Activities	97
Webs	98
Verbal	98
Reading	98
Character and Setting Description Activities	101
Author's Chair	102
Written	103
Spelling	103

Key Words	104
Journal Writing	104
Story Content Activity	105
Story Writing	105
Conference/Edit/Extend Activities	108
Comparison of the Two Instructional Methodologies	116
Plan of Analysis	117
Summary	118
CHAPTER IV. RESULTS	120
Introduction	120
Plot Structure Scoring Criteria	120
Cohesive Structure Scoring System	122
Quantitative Results	122
Plot Structure	123
Group Effects	123
Time Effects	124
Interaction Effects	124
Conjunctive Use	125
Group Effects	125
Time Effects	125
Interaction Effects	126
Summary	127
Propositional Structure Coherence Scoring System	128
Independent Propositions	131
Dependent Propositions	131
Elaborative Information	132
Subtopic Information	132
“Breadth” and “Depth” Analysis	134
Conjunctivity	135
Notational system	137
Coherence Analysis Decision Making Process	139
Time Series Descriptive Results	153
Structural Analysis	153

Plot Structure Analysis of Session Blocks	153
Block 1 (Sessions 1-15)	153
Block 2 (Sessions 16-30)	155
Block 3 (Sessions 31-43)	157
Block 4 (Sessions 44-51)	159
Cohesion Analysis	161
Conjunctive Analysis of Session Blocks	161
Block 1 (Sessions 1-15)	161
Block 2 (Sessions 16-30)	162
Block 3 (Sessions 31-43)	163
Block 4 (Sessions 44-51)	164
Coherence Analysis of Session Blocks	165
Propositional Relations	172
Block 1 (Sessions 1-15)	172
Block 2 (Sessions 16-30)	176
Block 3 (Sessions 31-43)	180
Block 4 (Sessions 44-51)	182
Summary of Descriptive Analysis	194
Summary	196
CHAPTER V. DISCUSSION	
Introduction	198
Goals	198
Developmental Trends in Childrens's Narrative Development	199
Interpretation of Results	200
Variation in Development of Oral Story Production	202
Plot Instruction and its Impact on StoryComposition	203
Conjunctive Instruction and its Impact on Story Composition	203
Propositional Relations Instruction and its Impact on Story Composition	207
Why are these Graphic Mnemonics Thought to Work?	209

Limitations and Delimitations	211
Educational Implications	213
Suggestions for Future Research	215
Conclusions	216
REFERENCES	221
APPENDICES	
Appendix A Davis's Structural Scoring Scheme	236
Appendix B The Opposites Task (Case and Kurland, 1977)	242
Appendix C "Goldilocks and the Three Bears" Booklet	243

LIST OF TABLES

	<u>page</u>
TABLE 1. Four-year-old, six-year-old and 8-year-old story Samples	25
TABLE 2. Examples of Conjunctive Devices	29
TABLE 3. Descriptive Statistics for Language and Working Memory	55
TABLE 4. Descriptive Statistics for Plot Structure	55
TABLE 5. Descriptive Statistics for Conjunctive Use	56
TABLE 6. Experimental Group Instructional Progression of Activities	88
TABLE 7. Comparison Group Instructional Progression of Activities	109
TABLE 8. Post Test Results by Group and Narrative Plot and Cohesion Structures	122
TABLE 10. Instruction and Plot Structure Level	160
TABLE 11. Frequency of Use of the Conjunctive “And” in Each Instruction Block	166
TABLE 12. Frequency of Use of the Conjunctive “Then” in Each Instruction Block	167
TABLE 13. Frequency of Use of the Conjunctive “So” in Each Instruction Block	168
TABLE 14. Frequency of Use of the Conjunctive “Because” in Each Instruction Block	169
TABLE 15. Frequency of Use of the Conjunctive “But” in Each Instruction Block	170
TABLE 16. Cohesion: Frquency of Word Use per Story	171
TABLE 17. Pre-Block 1 Instruction and Propositional Relations	187
TABLE 18. Block 1 Instruction and Propositional Relations	188
TABLE 19. Block 2 Instruction and Propositional Relations	189
TABLE 20. Block 3 Instruction and Propositional Relations	190
TABLE 21. Block 4 Instruction and Propositional Relations	191
TABLE 20. Numbers of Units of “breadth” in Oral Narratives (pre- post)	192
TABLE 21. Plot Structure Level of Oral Narratives (pre-post)	193

LIST OF FIGURES

	<u>page</u>
FIGURE 1. McKeough's Structural Scoring Scheme.	23
FIGURE 2. Story Frames	61
FIGURE 3. Thought Clouds	62
FIGURE 4. Icons	63
FIGURE 5. Story Starter Cards	64
FIGURE 6. Conjunctive Instruction using Story Frames	77
to identify appropriate conjunctives	
FIGURE 7. Story Writing with the Aid of Story Frames and	78
Conjunctive Words	
FIGURE 8. Conjunctive Instruction in which children place appropriate	79
Conjunctive Word Cards Between Story Frames	
FIGURE 9. Conjunctive Relocation	80
FIGURE 10. Conjunctive Recombination	81
FIGURE 11. Coherence Relocation	83
FIGURE 12. Coherence Recombination	85
FIGURE 13. Penguin Songs	94
FIGURE 14. Baby Chick Poem	95
FIGURE 15. Story Text/ Picture Sheet Butterfly Activity	99
FIGURE 16 Web (Food Categories)	100
FIGURE 17. Playful Penguin Fact Sheet	106
FIGURE 18. Jack and the Beanstalk Fact Sheet	107
FIGURE 19. Self Editing Sheet	109

CHAPTER I

INTRODUCTION

A Grade One Developmental Narrative Instruction Program

Education has witnessed a fairly recent increase in attention to story composition. These changes stem from research on children's cognition and linguistic development and have altered the views of children's story composition and subsequently the place of story composition in schools.

Story Instruction

Two of the most popular and influential theories of story instruction within the constructivist approach are the whole language and process approaches (Graham & Harris, 1994). Central to these current theories of learning is the concept of individual construction of knowledge and meaning. The whole language and process approaches foster the construction of story knowledge with the aim of enhancing the level or quality of story produced.

The whole language system (Holdaway, 1979) is a comprehensive philosophy of language. The philosophy holds that reading and writing are language systems that are best left whole during instruction and learned through use in meaningful contexts. The focus of whole language instruction progresses from an understanding of the meaning of text to the acquisition of print-specific skills (Moorman, Blanton, & McLaughlin, 1992).

The process approach to story writing instruction is similar, in principle, and is often integrated into the whole language approach. It can also be used to instruct story writing in more traditional classrooms. The process approach stresses the value of providing tangible reasons for learning to write and emphasizes the communicative

purpose of writing. The emphasis on communication is achieved by creating a social context in which writers write for real purposes (Atwell, 1987; Graves, 1983). Within this model, children select topics and take responsibility for their writing. Writing is facilitated through writing conferences, mini-lessons, peer collaboration, sharing, modeling, and discussions (Graham & Harris, 1994).

Whole language and process writing approaches both emphasize guided discovery and the construction of knowledge. According to Berger (1995), current literacy instruction emphasizes and integrates the concepts of whole language, writing in an integrated and meaningful language program, assessment, developing life-long readers, and the integration of technology with literacy instruction. Various instructional approaches to writing are combined in order to meet the needs of each child.

Changes in classroom practices in teaching writing have had a major impact on language arts instruction (Sherwood, 1993). Writing instruction was traditionally integrated within specific content areas (e.g., social studies) focusing on expository text, whereas the narrative genre predominated in English and Language Arts classes. Currently, however, specific instruction in story writing is provided and the most common form of writing practice in elementary schools is writing stories (Alberta Education, 1991).

The current focus on writing narratives stemmed from the realization that the acquisition of story knowledge is a developmental process and is not a discrete skill. Pappas and Brown (1987) stated that teaching story rules directly is inappropriate, since children will construct the rules much as they have developed other concepts. Therefore,

according to Cochrane-Smith (1984) and Teale (1984), children acquire story discourse by engaging in environmental experiences that provide them with many opportunities to hear, read, and produce stories of their own. Hence, classroom instruction in writing currently provides children with opportunities to practice existing skills with the aim of improvement through practice (Fitzgerald, Spiegel, & Teasley, 1987).

According to Gordon, Sheridan, and Paul (1998), language development and literacy development are related language processes. Writing and oral language are both meaning-making processes that are defined by the cultural and social situations in which they exist. Children construct understanding of oral and written language through interactions with others. Hence, from an early age, children understand that there is a relationship between written and oral language. Although there are differences in written and oral language (e. g., the sound-symbol relationship), there are also similarities such as voice and rhythm. Therefore, knowledge of oral language can be used to process written language and to support written activities. Oral language used as a medium for instruction enables students to learn, to accept and understand new ideas and feelings, and to remember what they have created (Gordon et al., 1998). Thus, it is important that instruction target oral language knowledge in addition to written language knowledge.

Since oral story knowledge focuses on the narrative genre and is viewed as a developmental process, a thorough examination of narrative, from a developmental point of view, is warranted. Knowledge of the nature of narrative and the development of the components of narrative will facilitate the design and implementation of an effective developmental instructional program.

The Nature of Narrative

Narrative can be either a personal factual narrative or a fictional story. It may be used in many activities such as fictional storytelling, sharing events, commentaries, and explanations. It is an integral and natural part of life and society, facilitating communication of personal experiences and serving to transmit culture. According to Bruner (1986) narrative is composed of events that are comprehensible and memorable. Bruner also stated, however, that narrative is not solely a recounting of events, but additionally, involves the representation of events which facilitate reflection and analysis. In this manner, narrative allows for an interpretation or "meaning making" of experience and of action.

The importance of narrative in terms of "meaning making" led to Bruner's (1986, 1990) acclamation that narrative is, in fact, one of two basic modes of cognitive processing. The two modes of thought that Bruner ascribes equal prominence to are: the paradigmatic mode and the narrative mode. The paradigmatic mode, or logico-mathematical thought, is typified by objective explanations and predictions of the cause-and-effect laws of science, whereas, the narrative mode addresses individual acts and events and their associated meanings and significance. Typically, the narrative mode is represented by folk tales, biographies, short stories, and novels. The prominence attributed to this mode of thought and its "meaning making" function reinforces the need for an in-depth examination of the nature of narrative.

According to Bruner (1986, 1991), narrative is a composite of the following characteristics: sequentiality, particularity, intentional states, and canonicity and breach.

Specifically, sequentiality entails the recounting of the narrative events in a temporal order. Particularity is concerned with the specifics of occurrences and of individuals in a narrative. Intentional states (i.e., internal thoughts, feelings, and goals) account for explanations. A dual pattern of action-motivation has been identified in narrative that includes a landscape of action and a landscape of consciousness. The landscape of action involves states, actions, and events that occur in the physical world, while the landscape of consciousness involves an interpretation of states and events that are perceived, or felt, by the characters. This process of interpretation aids in the understanding of intentionality and provides explanations. The final narrative characteristic, canonicity and breach, addresses the exploration and comprehension of deviation from ordinary expected sequences of human acts and events. In narrative composed by experts, the two landscapes (action and consciousness) are often put into ambiguous relation with each other and the reader must interpret both sides. Social knowledge of such conflicts and imbalances underlies narrative competence. It is the understanding of life events that enables the understanding of imbalance and facilitates the ability to function narratively in both landscapes.

Narrative Components and Their Development

The “meaning making” function is one component of narrative. Also of importance, however, is the structural aspect of narrative. Narrative structure is composed of both macrostructures (e.g., plot structure) and microstructures (e.g., cohesion and coherence). The structural organization of these narrative components undergoes rapid development during childhood.

The first narrative structure that will be addressed is the macrostructure, in specific, the plot structure. In general, stories include a setting, a plot (i.e., problem, goal, attempts), and a resolution (Mandler & Johnson, 1977; Rumelhart, 1975; Stein & Glenn, 1979; Thorndyke, 1977). Narrative develops in terms of inclusion and complexity of use of these structures. Peterson and McCabe (1991) supported an age related developmental change in narrative structure. By six years of age, children are able to produce narratives that include plot, as well as a complicating action, a climactic event, an evaluation, a resolution, and sometimes, a coda. Applebee (1978) discussed developmental change in narrative competency in terms of complexity. Narrative development is based on the use of progressively more complex structures of centering and chaining. Centering involves links through complementarity to the center of the story, while chaining involves the use of links through similarity between incidents. The structural components of narrative increase with age and with verbal competency.

In a further analysis of structural components, narrative was found to progress in format from the provision of scripts to that of plots (McKeough, 1992). Children move from the production of script-like narratives to those that contain a problem and a resolution, and are a rudimentary form of plot. Stein (1988) also found that by six years of age, most children told narratives that provided a complicating action, a climactic event, an evaluation, and a resolution.

In addition to macrostructure, microstructures (e.g., cohesion) are also important to the understanding of narrative. Cohesion in narrative is provided by the use of connecting words (e.g., conjunctives). Very little developmental research has been done

in the area of cohesion and the use of conjunctive words. Research, to date, has generally indicated a developmental progression in the use of conjunctives, from simpler forms to more complex forms (e.g., Peterson & McCabe, 1985b, 1991; Sutton-Smith, 1986) and from an inaccurate use of conjunctives to an accurate use of conjunctives (Liles, 1987).

Bloom et. al. (1980) and Bennett-Kastor (1986) found that the conjunctive connective “and” is the first to be used and that it is used with the most general range of meaning. They found that the use of conjunctives progressed developmentally from the sole expression of additive relations (i.e., “and”), to the inclusion of temporal (i.e., “then”), followed by causal (i.e., “so”), and then adversative relations (i.e., “but”). Fox (1993) also found that children use additive connectives (e.g., “and”) more than temporal conjunctives (e.g., “then”, “next”). In turn, temporal conjunctives are used more than both causal (e.g., “so”) and adversative conjunctives (e. g., “but”).

In summary, research has generally indicated a developmental progression in conjunctive use, from purely additive forms, to those relating concurrent concepts, to causal relationships, and finally to the consideration of alternatives as well as a progressively more accurate use. However, this work has not elaborated upon the relation of cohesive conjunctive to plot structure and coherence structure and the contribution of these conjunctives to the overall development of narrative.

A second narrative microstructure, imperative in the production of expert narratives, is coherence of text. Coherence was defined by van Dijk (1977) as a “semantic property of discourses, based on the interpretation of each individual sentence relative to the interpretation of other sentences (p. 93).” It is the relationship between propositions

that provides text coherence. Hence, narrative coherence is based on the semantic organization and relation of the propositional content.

One approach that focuses on propositional relations is a discourse structure approach, also known as a theory of coherence relations. This approach targets the relations that exist between two or more discourse segments (Martin, 1983, 1992; Grosz & Sidner, 1986; Mann & Thompson, 1987; and Sanders, Spooren & Noordman, 1992).

Research in the area of coherence relations has traditionally addressed adult discourse. However, the limited research available on children's discourse briefly identifies the type of propositional relations that young children tend to use. According to Mann and Thompson (1983) the most frequently used types of relations identified in 4- and 6-year-olds' narratives are: solutionhood, elaboration, cause, and background. Solutionhood occurs when the second part of the text provides a solution to a problem stated in the first part of the text. Secondly, elaboration is when one part of the text elaborates or adds to the concepts provided in the first part of the text. Third, cause relations occur when one portion of a text presents a cause for a condition conveyed by the other. Finally, background relations exist between two propositions where one part provides background information without which the other part would not be properly understood.

The above stated propositional relations, evidenced in young children's narrative, contribute to the production of a coherent "whole" narrative. The research, however, is limited in that it does not address the use of relations in older children or the manner in

which children's use of relational propositions develops and contributes to the production of a more advanced narrative.

Summary

Instruction in the production of stories necessitates providing opportunities to construct and internalize an awareness and an understanding of narrative components. However, children often get little instruction in *how* to construct stories. The present study involved a comparison of two instructional programs: the current language arts curriculum, based on a process approach to learning, and a developmental program, that provided instruction in story structure and story conventions with the aim of facilitating successful oral story production.

Knowledge of narrative and development, applied within the educational sphere, provides a foundation upon which a narrative instructional model may be designed. An instructional program based upon an understanding of narrative and its development has the potential to benefit classroom practices. The aim of the current study was to achieve an integration of narrative and developmental knowledge to produce a comprehensive and effective narrative instructional program that would serve to enhance children's production of oral narrative components.

Organization of Dissertation

The present study, based on the work of McKeough (1991, 1992) and Davis (1994), was designed in order to examine the impact of a narrative instructional program on the development of a class of grade one children's oral narratives. The research on narrative development was extended to include an examination of multiple structural

components in the narratives generated by grade one children. This was accomplished through theory triangulation, the use of two or more theories, incorporating: plot structure, cohesion (conjunctives), and the coherence producing element of propositional relations. The general question that was addressed in the study was as follows: “Does developmentally-based instruction, which targets the three structural components of narrative (i.e., plot structure, cohesion, and coherence), effect an increase in the level of oral narrative produced by young children to a greater degree than the currently mandated instructional program based on whole language and process writing approaches?”

Chapter Two provides a review of the literature on narrative development, the macrostructure of story grammars, and the microstructure of the discourse elements of cohesion and coherence . A discussion of *how* narrative develops will also be presented, focusing on cognitive development, working memory, visual mnemonics and their application to instruction, and previous work in the instruction of narrative. Chapter Three addresses the specifics of the research design and methodology of the study, subjects, tasks, and procedures. The instructional programs for both experimental and comparison groups will be outlined. Chapter Four provides results of the quantitative analysis of the plot structure scoring criteria and the cohesion scoring system. As well, a descriptive analysis of a subset of children will be presented that includes: plot structure, cohesion, and a coherence scoring system. The final chapter integrates the information gathered throughout the study and provides a summary of the results.

CHAPTER II

LITERATURE REVIEW

The Development of Narrative Components

In order to provide effective instruction in narrative, it is necessary to fully understand the nature of narrative. Specifically, insight into the components of narrative and their development will facilitate the design and implementation of a narrative instructional program.

The following chapter will define narrative and provide the specifics of how these structures develop. Subsequently, the macrostructures and microstructures of narrative will be addressed followed by a discussion of instruction as it applies to narrative.

Narrative Defined

Narrative is an integral and natural part of life and society, facilitating communication of personal experiences and serving to transmit culture. It is a primary mode of thought since it allows us to organize and make sense of the world (Bruner, 1990).

According to Bennett-Kastor (1983), narrative is one of the many discourse genres recognized by rhetoricians and linguists. It is generally agreed that narrative is the making or telling of a story. In rhetorical terms, narrative answers the question “What happened?”, and contrasts with the genres of analysis, persuasion, and exposition. In linguistic terms, narrative is a verbal representation of one or more events that occur in time and space, actual or imaginary. Narrative discourse can minimally be defined as a sequence of two clauses which are temporally ordered. Longacre (1976) stated that

discourse genres are based on grammatical and organizational principles. Specifically, discourse is based on the grammatical and organizational principles of first/third person, agent orientation, and chronological time and linkage.

Multisentence texts, such as narrative, depend upon organization at both the macrolevel and the microlevel of production. Macrostructure and microstructure based models are concerned with the observable text of the story. Macrolevel based models involve approaches related to thematic coherence, such as, Labovian narrative analysis (Labov, 1972), and story grammars or story structure elements (Stein & Glenn, 1979). Microlevel based models are less well studied and involve intersentential connectedness or cohesion (Halliday, 1978; Halliday & Hasan, 1976) and propositional relations (Kintsch, 1977). Together, aspects of the microlevels and macrolevels of text provide for a complete narrative.

How Narrative Develops

The general development of narrative macro- and microstructures interacts with cognitive development and available working memory or processing capacity (Case, Marini, McKeough, Denis, & Goldberg, 1986). The following will address cognitive development and the development of working memory as it applies to narrative.

Cognitive Development

The term cognitive development is a broad term that encompasses the changes occurring in both mental representations and the processes that organize, store, recall, and modify these representations (Kreindler & Lumsden, 1994). Cognition develops in a progressive manner. It does not develop in isolation, but rather, in coordination with other interactive factors.

According to Piaget (1970), a child acquires cognitive prerequisites through the interaction of physical maturation, experience, social interaction, and self-regulation. Together these four factors provide an explanation for children's cognitive development.

Piaget (1952) held that development results from disequilibrium between the structure of the intellect and the child's perception of the environment. Children must modify their structures if the environment prevents them from continuing as in the past. Cognitive advances derive from the child's efforts to resolve conceptual conflicts as well as through imitation or modeling. Cognitive capabilities, as a result of the processes of assimilation and accommodation, become more sophisticated as the child develops.

Piaget's concept that cognitive capabilities become more sophisticated as the child develops has been more recently interpreted in terms of available processing capacity. According to neo-Piagetian theories (e.g., Case, 1985; Halford, 1980) the process of cognitive development ultimately relies upon processing capacity. Cognitive processing capacity has also been termed "working memory". The term "working memory" implies a limited capacity and an active involvement in the processing of information. It is thought to differ from long term memory in two ways. First, it is generally considered limitless, and secondly, it involves cognitive operations, in addition to storage.

The Development of Working Memory

Studies of children and cognition have generally focused on working memory as a limited, one-system resource. Different terms have been applied to this concept of processing resources, including limited processing resources, limited mental effort, the span of awareness, and memory span. The common essential component is that each task requires a certain amount of mental resources and that the amount available is limited (Bjorklund & Hamishfeger, 1989).

As children develop, they are able to perform tasks that are more cognitively demanding. With practice, a skill may be developed to a level of automaticity, thereby requiring fewer cognitive resources and leaving a larger amount of available processing resources. Case (1985) proposed that the total amount of processing space does not change, after approximately 2 years of age, but that with age processes are executed more efficiently, requiring less operating space.

According to Case's (1985) theory, cognitive development progresses through a series of four major stages from infancy to adolescence. Within each stage, working memory is thought to increase, from 1 to 4 units, as a function of maturation and operational efficiency (which is gained through practice), allowing the child to consider additional chunks of information. By way of illustration, in the narrative domain, average functioning 4-year-olds typically generate a single scripted episode. It is hypothesized that this requires one working memory unit. By six years of age, most average functioning children can generate two episodes (one focusing on the problem and the second providing a resolution). The generation of two episodes requires two working memory units. Thus, 6-year-olds coordinate two episodic chunks (requiring two working memory units), whereas 4-year-olds generate only one episode (requiring one working memory unit). By eight years of age, a third episode is added which includes complications or failed attempts. The generation of three episodes is hypothesized to require three working memory units. By ten years of age, 4 units of working memory are required to produce story components that are elaborated and tied together in the resolution.

McKeough (1992b) provided children with the explicit narrative structures at the upper developmentally adjacent level and found that children were still unable to complete the task due to working memory limitations. However, when children were given either the first or second parts of a story at a higher developmental level (i.e., one substage above their spontaneous level of narrative production), they were able to generate the other half of the story. Thus, when the task demands were kept within the child's working memory capacity, children performed successfully. Therefore, it was concluded that the inability to coordinate the story elements, limited by working memory, inhibits the production of more complex narrative. The cognitive advantage that older children have may be the combined effect of having more processing resources available and using these resources more efficiently (Chi, 1977).

The above addressed the *how* of narrative development in terms of cognitive development, specifically focusing on working memory. This naturally leads to a discussion of the intricacies of the *what* of narrative development. Therefore, the following discussion will provide a description of the development of plot structure, cohesion, and coherence components of narrative.

The first level of text structure that will be addressed is the macrostructure of text (i.e., plot structure). The second level is that of microstructure (i.e., cohesion) and coherence (i.e., propositional relations see Van Dongen & Westby, 1986).

Macrostructure

Models of Macrostructure

There are many examples of analyses of narrative discourse (Labov, 1972; Reinhart, 1984; van Dijk & Kintsch, 1983). Recurrent macrostructure elements found in these narrative analyses are: event structure, temporal structure, and thematic structure. The first element, *event structure*, involves the expression of a series of events that together comprise a “plot line”. The events explain what happened, why it happened, and what consequences resulted. The second element, *temporal structure*, refers to the temporal sequencing of events, including actions, physical states, and mental states (Kemper & Edwards, 1975). In other words, a plot line involves a linear organization of events. These events are temporally ordered in such a way that each of them moves time forward. The third element, thematic structure, refers to information concerning the theme or a character who does something or to whom something happens (Stromqvist & Day, 1993). Such information about themes and characters provides details and explanations that allow us to understand the “who” in narrative.

There are essentially two main models of narrative macrostructure analysis that target event, temporal, and thematic structures: the event chain model and the story grammar model. The *event chain model* was originally developed by Schank (1975) as a model of prose comprehension. He suggested that readers make use of a basic taxonomy of event constituents, and of the causal connections between them, in order to understand stories. Essentially, the event chain approach examines event structure elements, and

therefore, describes the linear organization of story events. This linear organization of events explains what happens, why it occurred, and what consequences resulted.

The second model of macrostructure analysis is that of *story grammars*. Story grammar analysis emphasizes the structure of stories in terms of categories, such as, settings, goals, problem-solving attempts, outcomes, and resolutions. This is different from the event chain model which purely addresses the linear organization of a story. Story grammar analysis addresses the hierarchical structure of stories in terms of how these categories are organized in addition to linear organization.

Development of Story Structure Elements

A more in-depth analysis of the development of the structural components of narrative involves an examination of both linear structure and hierarchical organization. Therefore, the story grammar model of narrative macrostructure analysis will be the focus of this discussion. Initially, the development of a script, based on social knowledge, will be addressed. This will be followed by a discussion of story elements and structural organization.

Development in script representation leads to development in the domain of narrative comprehension and production. The cognitive representation of social scripts and the ability to regard these scripts in a flexible manner, allows for their use in the comprehension and production of narrative. Children's social knowledge is initially represented in terms of event schemas of specific episodes that are subsequently available as a resource for analyzing or constructing novel situations in narrative form (Hudson and Shapiro, 1991).

The concept of a script and its application within narrative has been found to develop with age. A script is a general representation of social understanding that may be used in social interactions. Sugarman (1982) found that 4-year-old children could respond appropriately to situations that they had never experienced. Children seem to develop an intuitive “category representation” which takes on a general status. These general representations may then be utilized in specific novel, but related, situations. These representations then serve as a standard by which the categorical relations in novel situations can be assessed and understood.

McCabe and Peterson (1983) examined 4-year-old children’s narrative productions, using Labov’s description of narrative structure, including abstract functions, orientations, complicating action, evaluation, resolution and codas. These narratives were found to lack many of the basic constituent units of a story. Four-year-old children’s productions were in the form of event descriptions, or scripts, suggesting that, at this age, children may not yet have constructed story schemas, or that their schemas may still be in the process of being formed.

Hudson and Shapiro (1991) found that four-year-olds tended to report events, perhaps adding a specifically remembered episode. However, they could not restructure their event knowledge into a story format and rarely included a problem. Basically, their scripts consisted of the use of general event knowledge without episodic information.

Sugarman (1982) found that by age six, children were able to represent scripts in a reversible manner and could move backwards, as well as forwards, through a script. This suggested that at this age their representations became flexible. Reversibility is discussed

by Piaget (1950) as one of the intellectual developmental characteristics exhibited by children beginning at age six or seven . When the child is able to work with the events of a script in a reversible manner, the child is then able to consolidate and coordinate the script.

Development in children's script representation and the ability to regard these scripts in a flexible manner allows for their use in the comprehension and production of narrative. Children's social knowledge is initially represented in terms of specific event schemas or episodes that are subsequently available as a resource for analyzing or constructing novel situations in narrative form.

Once children are able to represent scripts in a flexible manner, more advanced structural elements are then incorporated into the narrative. Hudson and Shapiro (1991) found that within the narratives of 4- and 6- year-olds, there were no age-related differences in the amount of information reported. However, with age, more types of structural elements were included. Six-year-olds were aware that stories are more than the mere statement of general and episodic events. As children developed in their narrative ability they had some awareness of story characteristics and reported more problems, resolutions, and endings.

Stein (1988) found that by five years of age children move from temporally disorganized lists of actions to narratives that follow the temporal sequence of experienced events. An examination of the narratives of 5-year-olds revealed an inclusion of more episodic components, as compared to 4-year-olds, such as, information about the setting, initiating actions, and an attempt to develop a plot. The narratives, however, still lacked

in the provision of internal goals, motivations, and reactions, and tended to end prematurely at the high point, or climactic occurrence, of the story. By the age of six, however, most children told personal narratives that conformed to Labov's (1972) pattern of narrative. They oriented their listeners to the who, what, when, and where in their stories. They also provided a complicating action, a climactic event, an evaluation, a resolution, and sometimes a coda.

The development of narrative structure has also been explored by McKeough (1992), who asked children to generate stories about characters found in children's literature. Again, a shift was noticed in the structural organization of the children's narratives between the ages of four and six years. At four years of age, children's stories were in the form of a script where the action sequences cohered as part of a stereotypic social situation (e.g., playing with a friend). Four-year-olds produced stories that were similar to "happily ever after" scripts. The events were predictable, and temporally and causally related in a single event sequence that had an episodic structure. The episodic structure that was provided ranged in quality of production from what is known as a "barebones" basic story to a more elaborate story. However, the stories shared similar syntactic story elements, such as, setting and initiating event. Semantically, the stories included a familiar event in which the motivations or intentions were unexplained (See Table 1 for a sample story). These scripts, typical of 4-year-olds, can be viewed as basic or consolidated units that form building blocks for the production of more advanced stories.

By six years of age, children are able to combine two scripts, one centering on a problem episode, and the other on a resolution episode. Thus, by six years of age, the stories took the form of simple plots. This provides evidence of a higher order construction that is attained by coordinating one event sequence containing a problem, with a second event sequence providing a solution or resolution. There is a movement from the origination of story motivation from within the events to motivation from within the character's affective response to events. Thus, the development of narrative progresses from a script-like presentation of events to the production of stories in which a problem is presented that is subsequently followed by a solution or resolution.

By eight years of age, children include complications, or failed attempts, at resolution, and by ten years of age, story problems, complications, and resolutions were elaborated and integrated. The story scoring criteria are provided in Figure 1 and sample stories are offered in Table 1.

McKeough's (1991) plot structure scoring scheme was applied to the narratives of a talented group of children and was found to inadequately describe the developmental changes in plot structure. Therefore, further analysis of the developmental progression of narrative led to an extension and adaptation of McKeough's (1991) scoring criteria to include not only distinct "typical" levels but also transitional sublevels (Davis, 1994). It was discovered that the stories progressed through three separate sublevels within each structural level. These sublevels were identified as low, average, and high. The criteria for the sublevels was based on the presence or absence of semantic linkages (used to connect and to bind the stories) and descriptive detail in the stories. Linkages were

defined as abstract, semantic connections, apparent in the meaning or context. Semantic linkages allow the story elements to flow in a fluid temporal manner and make the relations explicit among the elements of a socially familiar script. Detail in this study was conceived of as the use of descriptive adjectives, adverbs, or elaborative and descriptive phrases.

Specifically, “low” sublevels were those stories in which the semantic linkages were missing or unclearly stated. The “average” sublevel, however, included those stories in which all of the semantic linkages were evident. The “high” sublevel was designated as those stories which contained clear semantic linkages as well as rich detail. The use of the adapted scoring criteria led to the determination that the narratives of verbally talented children develop in a manner that involves the progressive application and integration of plot structures, semantic linkage structures, and detail (see Appendix 1 for story examples at each of the levels and sublevels).

Microstructure

The story grammar approach to story structure elements, as discussed above, targets narrative macrostructures, but does not address microstructures. Hence, it does not capture the entire structural complexity of the text. Two microstructures will be addressed: the element of cohesion, which relates elements of the text and contributes to its continuity, and the element of coherence, which is the relationship between propositions and serves to add meaning to the story as a whole.

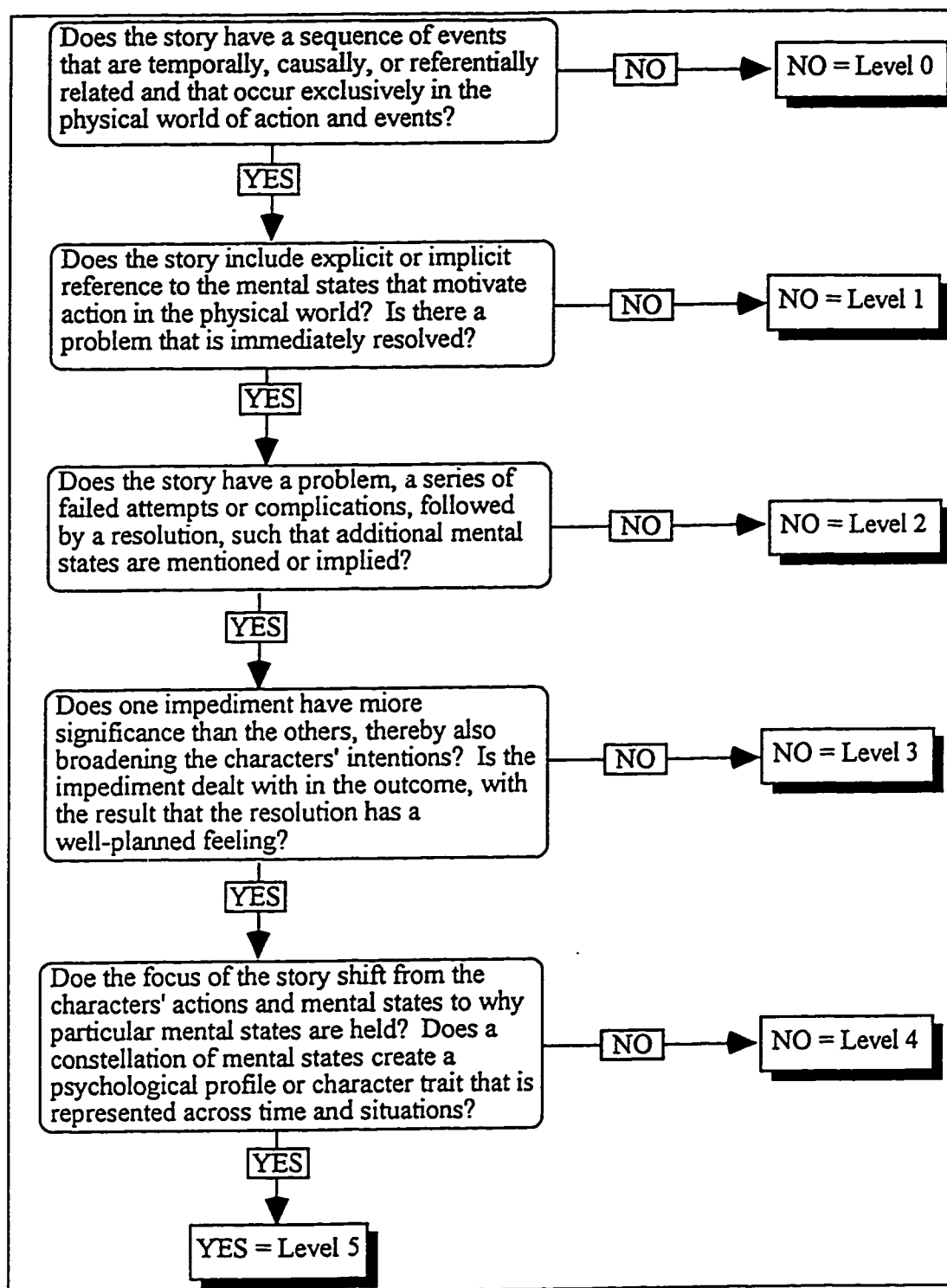


Figure 1 McKeough's Structural Scoring Scheme

Table 1

Sample Stories at Each of the 4 Age Levels4-year-old:

One day there -- a horsie came out to the barnyard. He was such a nice little horsie. For such long days he eated in the valley. Then some day for what -- his friend the lamb would come -- right -- to -- in -- then his friend the lamb would come to his house some time. And the lamb -- today the lamb came to his house. And they had such a good time.

6-year-old:

A horse was walking along in a field and he saw a little lamb in one of the places of the barn and it was a fence. And it was a nice little lamb and it -- it was lonely. So the horse jumped in and then the lamb jumped onto the horse and then they -- and then the lamb jumped onto the horse and then they got out. And then they went to a place where there was no one except them. And they picked some blueberries and they ate them. And the horse found some hay and he liked the hay better than the blueberries. And the lamb found some grass and he liked the grass better than the blueberries. And then they went and lived together. And they lived happily ever after.

8-year-old:

Once there was a little girl who was walking in the woods and she saw a helpless little lamb. And then she took it to her father but her father said, "No!" She can't keep it. The she built a little house in the woods for it and kept it there and brought food for her everyday. And then her father and mother found out that she was keeping the little lamb there and so, they told her that they should send her to a place where lambs live.

10-year-old:

Once upon a time there was a little girl. She was very sad because she didn't have a pet. One day one of her father's -- father's sheep had a little goat and it was going to die because she had lots of others and it couldn't get enough milk. She wanted it so badly. And then her father finally gave up and gave it to her. She was very happy. After that she always lived with it and was always happy with it. She took very good care of it and was very happy with it.

Then one day a ram came and he was -- the little girl was inside eating her supper. The ram came along and killed the little goat and ate it. She -- Finally she came out and she saw the little goat was dead -- had been taken away. She was very sad. Her father went out and bought her another little lamb and she lived happily ever after.

Narrative Cohesion

Cohesion, a term often used in psycholinguistic studies to represent the microstructure intricacies that exist in the text, is defined as a tie or relation between two members of the text. More explicitly, cohesion is the relationship between clauses or clause complexes. Textual cohesion allows for surface elements to appear as progressive and connected occurrences, thereby contributing to the unification of discourse (Weck & Schneuwly, 1994).

According to Halliday and Hasan (1976), cohesion is achieved through four grammatical processes: reference, ellipsis, conjunction, and lexical organization. *Reference* refers to a participant or circumstantial element that is introduced at one place in the text which can be taken as a reference point for something that follows. The process of *ellipsis* includes either omissions or substitutions, whereas *conjunction* involves elaboration, clarification, extension and enhancement of the text. Finally, *lexical organization* is a process that involves the selection of items that are related in some way to those that have gone before. Together, these grammatical resources provide what is known as “texture” (Halliday & Hasan, 1976).

Since we are concerned with the coherence, as well as the cohesion, of a text, this study focused on the grammatical process of conjunction. Relationships among propositions are signaled by conjunctions (e.g., “then”, “but”). Conjunctions mark the relationships between the concepts conveyed by two parts of a text.

Conjunction

In order to foster “texture” when constructing a story, important choices in terms of intersentence connectivity have to be made (Stromqvist & Day, 1993). For example, a choice is made whether or not to explicitly mark the interconnectedness of plot line sentences that move the narrative forward with connectors such as “so” and “then”. Therefore, the process of conjunction plays an instrumental role in binding propositions and plot lines.

There are four devices that provide conjunctive ties: temporal, additive, adversative and causal (see Table 2 for examples of the conjunctive devices). These semantic devices are marked by the use of identifying words (e.g., “then”, “and”, “but”, and “so”). Conjunction forms the basis of clarification, extension, and enhancement of a text and may occur either, within a single clause, or between clauses. The occurrence of conjunction between clauses is what provides the tie or linkage of the concepts or elements of the story as a whole. Therefore, conjunctive ties are a form of semantic connection that provide cohesion to a text (Halliday, 1978).

A text that is lacking in cohesion may have ambiguous cohesive devices. Ambiguous cohesive devices are ones that can be interpreted in several ways within the text or are uninterpretable. A lack of cohesive devices or the use of inappropriate devices leads to a disjointed series of sentences, whereas the existence of these devices provides a meaningful “whole.”

Development of conjunctives

There is a systematicity inherent in the way in which children come to use conjunctive ties. In other words, there is a progression towards more intricate and complex use of conjunctives, and ultimately, deeper semantic meaning.

The child's development of the use of conjunctives may be discussed in terms of type and degree of use. The concept of change in variation and variability of conjunctives supports the directional notions of development, and yet outlines stages based on transitional understanding (Tarone, 1988). According to Pratt, Boyes, Robins, and Manchester (1989), younger children have difficulty managing the systems of cohesion that serve to tie the propositions of a story together to make it a text (Pratt & MacKenzie-Keating, 1985). Research has demonstrated that younger children are able to use rudimentary cohesive devices but that they differ from older children in terms of the type and degree of usage (Peterson, 1993; Fox, 1993).

The degree of use of cohesive devices was addressed by Ripich and Griffith (1988) who looked at narratives produced by children aged five to twelve. They found that older children used a greater number of conjunctions than did younger children. Peterson (1993) examined the average number of conjunctives used and also found that children used a greater number of conjunctives as they get older. However, in an examination of the number of conjunctives used per utterance, rather than per narrative, it was found that by six years of age, children use the same total number of conjunctives as do older children. Therefore, the increase in the length of the narrative appeared to result in a further increase in the number of conjunctives used by children beyond grade one. In

Table 2. Examples of Conjunctive Devices

Additive

and, and also, nor, and...not, or, or else, furthermore, in addition, besides, alternatively, incidentally, by the way, that is, I mean, in other words, for instance, thus, likewise, similarly, in the same way, on the other hand, by contrast

Adversative

yet, though, only, but, and, however, nevertheless, despite this, in fact, actually, as a matter of fact, but, and, however, on the other hand, at the same time, instead, rather, on the contrary, at least, rather, I mean, in any case, in either case, whichever way it is, anyhow, at any rate, however it is

Causal

so, then, hence, therefore, consequently, because of this, for this reason, on account of this, as a result, in consequence, for this purpose, with this in mind, for, because, it follows, on this basis, arising out of this, to this end, then, in that case, in such an event, that being so, under the circumstances, otherwise, under other circumstances, in this respect, in this regard, with reference to this, in other respects, aside from this

Temporal

then, next, after that, just then, at the same time, previously, before that, finally, at last, first...then, at first...in the end, at once, thereupon, soon, after a time, next time, on another occasion, next day, an hour later, meanwhile, until then, at this moment, then, next, secondly, finally, in conclusion, first...next, finally, up to now, hitherto, at this point, here from now on, hence forward, to sum up, in short, briefly, to resume, to return to the point

From Halliday (1976)

addition to a discussion of the degree of conjunctive use, it is also important to address the type of conjunctives used in children's narrative.

The type of conjunctives used by younger children has been studied by Stenning and Mitchell (1985). They found that the narratives of children under seven or eight years of age are often strung together with additive conjunctives such as "and" or "and then". Similarly, Bennett-Kastor (1986) looked at genre and cohesion in the narratives of children aged two to five years and also found that "and" is the primary conjunctive used across age groups.

Scott (1984) examined the development of connectivity in natural language samples from older children aged six to twelve years. She found that the most frequently used conjunctives, in decreasing order, were "then", "so", "though", "now", and "anyway". Stromqvist and Day (1993) also studied narrative structure and the use of connectives in 6-year-old children. In an examination of narratives procured in response to pictures, they found that at six years of age, children showed a strong tendency to use conjunctions (i.e., "and", "but", "so", and "then") when starting a description of a new event.

Fawcett and Perkins (1980) found that, at six years of age, the most frequently used conjunctives are "and" and "then". However, they also found that other additive conjunctives, such as, "as well", were used in addition to the basic additive "then". Examples of adversative (e.g., "though", and "anyway"), temporal (e.g., "first of all" and "in the end"), and causal connectives (e.g., "so" and "else") were also found in children's narratives.

Overall, first grade children use more temporal conjunctions (e.g., “then”) than do pre-schoolers, who use more additive conjunctives (e.g., “and”) (Fox, 1994). Six-year-old children’s frequent use of “then” and “and then” indicates that their concept of narrative organization is moving from the additive “and” towards the temporal “then”.

The general progression of conjunctive use has been also addressed in studies. Sutton-Smith (1986) looked at the progression of conjunctives used by young children to bind the component structures of narrative. They found that children’s stories progressed with age from statements of action or events without conjunctives to an initial use of conjunctions, such as, “and” and “then”. According to Fox (1993), young children use additive conjunctives (e.g., “and”) more than temporal conjunctives (e.g., “then”, “next”). In turn, temporal connectives are used more than adversative-causal connectives (e.g., “but”). The acquisition of the use of conjunctives progresses developmentally from the sole expression of additive relations, to the inclusion of temporal, followed by causal, and then adversative, relations.

Kemper (1984) examined causality in the narratives of children two to ten years of age. She found that the ability to express cause and effect was gradually mastered from age two to age ten. Cause and effect relationships may be indicated by serially ordering the concepts in the story, or by causal conjunctives, such as, “so” and “because”. Bloom, Lahey, Hood, Lifter, and Fiess (1980) also studied the emergence of conjunctives and found that the order of acquisition was as follows: “and”, “and then”, “when”, “because”, “so”, “then”, “if”, and “but”. In other words, conjunctive use progresses, from purely additive forms, to those relating concurrent concepts, to causal relationships, and finally,

to the consideration of alternatives. Hence, stories produced at the highest levels of narrative complexity contain more linguistically complex language and sophisticated cohesive devices than stories produced at lower levels of complexity (Fox, 1993). Research, therefore, has generally indicated a developmental progression, in terms of degree and type of conjunctive use, with children only gradually coming to use and comprehend some of the latter forms of conjunction as postulated by Halliday and Hasan (1976).

Conjunctives provide cohesion of text, and ultimately coherence. In cohesion analysis, the connectivity of the discourse is primarily tied to the explicit marking of relations by the use of conjunctive words (e.g., “then”, “so”). Associated with the use of explicit conjunctives is the meaning relationship between propositions. Cohesive elements (conjunctives) serve as markers expressing the underlying relations between propositions (e.g., the conjunctive “then” marks a temporal relationship between propositions). In this way, conjunctives contribute to coherence by signaling the nature of the organization of the information, as well as the development of the semantic content.

Narrative Coherence

According to Bennett-Castor (1983), coherence of narrative is that quality which makes the discourse stand as a whole. In other words, it relates the utterances of the text to one another in some salient way. Each sentence serves as an information unit and provides for textual coherence by virtue of its meaningful semantic relationship with other sentences.

There are two ways in which a discourse can be coherent. The first type of coherence has been called *referential coherence*, or *topic continuity*, and focuses on the content of the discourse segments. Referential coherence, or topic continuity, occurs in three different presentations as follows: if there is repeated reference to the same set of entities (Kintsch & van Dijk, 1978), if there is semantic congruence between two discourse units (Polanyi, 1986), or if there is a pattern corresponding to stereotypic situations (e.g., birthday party) (Schank & Abelson, 1977). The second type of coherence is called a *discourse structure approach*. This approach to maintaining coherence focuses on the relationship that exists between two or more discourse segments. This theory of coherence relations differs from the theories put forth in referential coherence in terms of the location, as well as the nature of the coherence. Referential coherence focuses on the meaning contained within a discourse segment and the continuity of meaning from one segment to another in terms of the overall concept of the text. A discourse structure, in contrast, addresses relations between segments rather than the semantic meaning within segments.

Propositional Relations

The computational linguistics framework, a discourse structure approach, has especially focused on coherence relations. In most coherent discourse, consecutive discourse elements are related by a small set of rhetorical relations. Hovy (1990) viewed rhetorical relations as the basic element of coherent text.

The most well-known and comprehensive theory of propositional relations and coherence, is *rhetorical structure theory* (RST) (Mann & Thompson, 1986, 1987). RST

includes both the informational and the intentional relations between propositions. Successful language interpretation and generation requires a discourse model that includes both of these relations. Although rhetorical structure theory includes both types of relations, it targets discourse analyses in which a single relation holds between each separate pair of elements considered. A written or oral text is coherent because of the relations that hold between its subparts.

According to Mann and Thompson (1983), examples of relations include: solutionhood, elaboration, cause, and background. Solutionhood occurs when the second part of the text provides a solution to the first part of the text. In elaboration, one part of the text elaborates or adds to the concepts provided in the first part. Cause relations occur when one portion of the text presents a cause for a condition conveyed by the other portion. Finally, background involves relations between two propositions where one proposition provides background information without which the other proposition would not be properly understood.

Thus, propositional relations involve the joint construction of information from two parts of a text. This allows individuals to perceive relationships between parts of a text. The relations are conceptual entities and not the literal text. In this manner they may be either explicit or implicit (Mann & Thompson, 1983). However, many of the relationships conveyed by relational propositions may be signaled by conjunctions (e.g., “then”, and “but”). These conjunctions may serve to mark the relationships between the concepts conveyed by two parts of a text.

Propositional relations are essential to the effective functioning of the text.

Without propositional relations, text would lack coherence. Sentences could not be interpreted as meaningful connected units. There are breakdowns in text continuity when propositional relations are not included or are applied in an ineffective manner.

Although no studies targeting children's development of relational propositions have been done (or located) to date, RST as a descriptive framework for text is appropriate for developmental studies of narrative in that it provides a method to identify hierarchical structure in text, as well as to describe relations among parts of the text (e.g., propositions) in functional terms (Mann & Thompson, 1986). Therefore, RST provides a way to describe the text parts of children's narrative, how they are arranged, how they are connected, and how they develop to form a coherent whole.

The previous discussion addressed the *how* of narrative development (i.e., cognitive development) and the *what* of narrative development (i.e., plot structure, cohesion, and coherence components of narrative). The question now becomes how to best facilitate the instruction of narrative components while maximizing the use of available processing resources. To this end, the following portion of this dissertation will address previous research on the instruction of narrative, as well as the use of mnemonics, an instructional tool that has been shown to maximize processing capacity.

Narrative Instruction

Story grammars are structures that underlie the comprehension, as well as the production, of stories. Children who understand story structure have more completely developed story grammars (Tackett, Patberg, & DeWitz, 1984). Olson and Gee (1988) suggested that the use of story grammars in instruction help children understand the content of stories, as well as compose better organized stories.

Several studies have examined the effects of different methods of story instruction. Anderson, Wilkinson, and Mason (1991) conducted a study in six grade three classrooms comparing instruction emphasizing story meaning (i.e., plot elements) to instruction emphasizing surface elements (i.e., grammar and word analysis). The study targeted children's recall of propositions and important elements, short answers to questions, story interest, lesson time, and reading errors. Results found that the instruction that focused on plot elements resulted in superior performance on all of the measures. Gambrell and Chasen (1991) looked at grade four and five below average readers and compared explicit instruction in story structure (e.g., story generation) with general instruction in story structure awareness (e.g., introductions and examples). The stories were scored for story structure complexity and presence of story structure elements. The study found that the explicit instruction group produced more complex and well-formed stories than the awareness group. In another study, an examination of story grammar instruction was compared with a retelling experience in a group of kindergarten children. Again, the children in the grammar instruction group produced more complex stories. The grammar instruction was found to be more effective because it incorporated the structure rules for telling a story (George-Remy, 1991). Tackett, Patberg, and Dewitz (1984) performed a study that examined the effects of story structure instruction on the recall of sixth-grade students with low socio-economic backgrounds. Three groups were included in the study: students who received instruction in story structure, student who read the stories, and students who received neither instruction nor exposure to the stories. Results indicated that the students who received instruction in story structure recalled more information than did those students in the other two groups.

A developmental instructional methodology has been outlined that has been found to be effective in helping children produce more advanced stories (Case &

McKeough, 1990; McKeough, et. al., 1996; McKeough, 1989; McKeough & Sanderson, 1996). The instructional methodology initially identifies the typical narrative developmental pathway. Subsequently, the student's existing conceptual representations are solidified and the typical developmental sequence is recapitulated through conceptual bridging. Conceptual bridging is facilitated through the use of conceptual mnemonics (i.e., meaningful graphic representations of the instructional concepts).

The use of mnemonics in instruction with children has been demonstrated as an effective conceptual bridge (Scruggs & Mastropieri, 1990). Graphic mnemonics have also been found to be effective in narrative instruction studies with young children (McKeough & Sanderson, 1996). The usefulness of graphic mnemonics lies in the visual representation of children's existing knowledge. Visual representation of knowledge facilitates recognition, and subsequent solidification of that knowledge.

Instruction in narrative has successfully incorporated a graphic mnemonic that is comprised of story frames, line drawings, and mental state icons (i.e., pictures that represent the story problem/resolution structures) (McKeough, 1992; McKeough & Sanderson, 1995). Hence, graphic mnemonics can be used to solidify children's already existing narrative representation, while allowing them to integrate new information. This ultimately leads to a developmental shift from the production of stories that are of the problem-resolution type, to stories that include a failed attempt, and subsequently to integrated stories that incorporate the feelings and motivations of characters with the actions and events. Therefore, mnemonics are viewed as an important tool in the instruction of narrative.

Mnemonics as an Instructional Tool

The use of mnemonic supports has become an important instructional tool in circumventing limited processing capacity. Hence, the use of mnemonic supports has been found beneficial in terms of its contribution to learning. According to Scruggs and Mastropieri (1990) a mnemonic is a device, procedure, or operation that is used to improve memory. More narrowly, it is “a specific reconstruction of target content intended to tie new information more closely to the learner’s existing knowledge base and, therefore, facilitate retrieval (p. 271)”.

Imagery in the form of pictorial mediation, (i.e., providing pictures as a prompt), has been shown to be an effective mnemonic for children. Paivio (1972) noted that imagery mediation is more effective than verbal mediation because it is less susceptible to interference from extraneous information. Gambrell and Jawitz (1993) suggested that illustrations help students to build associations and to make abstractions and inferences.

Bower (1981) viewed imagery as useful in maximizing learning given limited time and working memory capacity. Images reduce the information processing burden by isolating pertinent spatial information, and therefore, providing for the most proficient use of working memory space (Gagne, 1985). Images, therefore, are valuable in alleviating the constraints on the limited capacity of working memory.

Imagery as an Instructional Tool

Since imagery reduces information processing load, it is an important tool for instruction and learning. The purpose of instruction is to regulate attention and aid information processing by manipulating instructional variables. The use of visuals as a working memory aid can be used to facilitate the processes of selective perception and selective encoding (Hicks, 1994). Dwyer, Dwyer, and Canelos (1988) also found that visuals also help learners to isolate and identify important material. In addition, visuals

were found to help learners recall information by allowing interaction with the content, thereby enhancing information processing and acquisition.

According to Winn (1989), the reason that visuals are successful instructional tools is that visuals make the abstract more concrete. This concreteness, in turn, fosters interactive visual-spatial processing, and subsequently, improves information processing and acquisition. Concrete visuals also facilitate the organizational capacities of imagery, in turn facilitating memory and generalization. To optimize the use of visuals in instruction, visuals should be clear and should present information in a framework that is familiar to the learner. They should also summarize and isolate the important attributes of the information (Winn, 1989).

In summary, research has indicated that visuals are valuable instructional tools that may be used to promote coding and learning. The following section will specifically address the domain of narrative and the use of picture mnemonics in the instruction of narrative.

Narrative Picture Mnemonic

Storytelling taxes children's abilities to produce coherent causal sequences by requiring them to "orchestrate" content, plot, and causal structure (Kemper & Edwards, 1986). Therefore, visual mnemonics are an important adjunct to the instruction of narrative and can be valuable in helping children produce coherent causal narratives. Children benefit from the use of visual mnemonics, in the narrative domain, because this context typically elicits visual processing, as the plot and characters unfold (Golden & Foley, 1993). Meaning and cognitive structure result from both the separate and collective actions of the visual and verbal systems. Hence, visual and verbal associative processes jointly determine learning and memory.

Picture prompts are one form of visuals. The type of picture prompt has differential effects on the resulting structure and organization of a narrative (Baggett, 1979). Pictures are often used as prompts for story writing in classrooms, without much thought being given as to the specific narrative skills that are targeted. Pictorial prompts may be used individually, or in multiples (i.e., two at a time or in a series). The use of varying types of picture prompts serves to target different components of narrative (e.g., a single picture prompt may be used to elicit description). The content of the picture may also vary and may be either event-based or problem-based. Each type of pictorial prompt serves a function as a narrative educational tool. Instructionally, prompts target and facilitate the use of certain narrative elements. Therefore, the use of a specific instructional prompt is dictated by the narrative element that the teacher wishes to target.

The use of description in narrative is one element targeted in instruction. Knudson (1993) provided pictorial prompts to children in grades three and five and found that the single picture condition tended to elicit descriptions rather than narratives. Children responded to this prompt as if asked, "Tell me what you see in this picture." In other words, the single picture was successful at eliciting extensive vocabulary and descriptive language.

The use of a series of pictorial mnemonics has also been examined with respect to their ability to elicit cohesive elements of narrative. The complexity of the structure of pictorial sequences has been found to affect cohesion. Fox (1994) looked at event-based, versus problem-based, multiple pictorial prompts and the corresponding use of cohesive devices. Children were found to produce the continuative conjunctives "now" and "and"

in response to simple event-based structures, whereas more complicated problem-based structures resulted in more causal and adversative-causal conjunctives, as well as a more complex narrative overall. This suggests that the use of explicit conjunctives is reliant upon the type of story prompt (e.g., causal conjunctives are needed more for structuring goal-based stories).

In summary, visual problem-based picture prompts provide the support needed by young children to construct complete and coherent problem type stories (Poulsen et. al., 1979). The use of conjunctives is also reliant upon the type of story prompt. The provision of pictorial prompts that contain more complicated problem-based structures results in the use of more causal and adversative connectives. Ultimately, the type of prompt chosen depends upon the narrative component targeted in the instruction program. An effective program incorporates prompts that inherently elicit the production of instructed narrative components.

Narrative Icon Mnemonic

Text-relevant illustrations at meaningful points provide a knowledge base from which children can construct appropriate mental images (Schallert, 1980). Visuals which reinforce the story line at pivotal points are most likely to support comprehension. Children are provided with concrete cues as to what images are appropriate. In this way, illustrations serve as a bridge in the process of transforming text into more elaborate and appropriate images.

Several studies of the ability of visual mnemonics to facilitate the production of narrative have been carried out (Case & McKeough, 1990; McKeough, 1989; McKeough,

1991). A visual mnemonic was designed to recapitulate the normal developmental sequence by building a series of conceptual bridges from one level to the next . The mnemonic provides a context that minimizes the load on children's processing capacity (Case, 1991). To illustrate, script-like stories, comprised of a sequence of actions and events, are depicted as a series of simple line drawings within a comic strip frame (see Figure 3). The intentional structures (i. e., feelings, thoughts, or desires that motivate actions) are depicted by mapping a series of mental state icons (e.g., happy/sad face) onto the line drawings (see Figure 5). This mnemonic presentation serves to highlight the distinct yet related nature of events.

Four- and 6-year-old children were instructed in narrative using the visual mnemonic. The narratives that were produced following instruction exhibited an advance in developmental level from scripts (i.e., stereotypic event sequences) to plots (i.e., simple problem-resolution structures) (McKeough, Humphry, & Harwood, 1988). McKeough (1989) applied the same technique to groups of learning disabled students and also found developmental advances in the children's narratives. These studies demonstrated the instructional value of visual mnemonics in producing advances in narrative production.

The instructional challenge becomes the tailoring of a program that combines the knowledge of narrative development with the knowledge of visual mnemonics. The resulting program should foster the development of narrative components, as well as narrative as a whole. In addition, such a program would need to incorporate the specific known strengths of each of the available narrative instructional tools in terms of their ability to target and elicit specific narrative components.

Summary

An examination of narrative development necessitates a consideration of a multitude of factors. Both macrolevel and microlevel organizational factors were considered. At the macrolevel, story grammars, or story structure elements (Stein & Glenn, 1979), were addressed. At the microlevel, intersentential connectedness or cohesion (Halliday, 1978; Halliday & Hasan, 1976) and propositional relations (Kintsch, 1977) were addressed. Also discussed were interacting variables associated with development including: working memory constraints, visual mnemonics, and instructional prompts. It is instructionally advantageous to incorporate an understanding of the development of narrative, at both levels of organization, along with a knowledge of the interacting variables, in the design of an effective instructional program.

In summary, at the macrolevel of organization, the plot structure progression of narrative appears to evolve along a specified pathway, from the production of scripts to the production of plots. To illustrate, by age six, the child is able to integrate two units, including a problem and a resolution. At 8-years of age, failed attempts at solving the problem are included, and by age ten, an integration of story plot is included (McKeough, 1989). Progression can thus be viewed as a move from a coordinated unit to a new and qualitatively different integrated unit (Case, 1991).

Progression in the production of narrative also exists at the microlevel of organization. Children develop in their ability to impose structure through the progressively more complex and complete use of cohesive devices and coherent propositional relations. Conjunctive use progresses in the following order: additive

(“and”), temporal (“then”), causal (“so”), and finally adversative (“but”) (Halliday, 1978).

The development of propositional relations (i.e., narrative coherence) has yet to be addressed, however, such knowledge is important to research in narrative development.

The amalgamation of narrative knowledge of plot structures, cohesion, and the propositional relations that establish coherence promises to enhance our understanding of narrative development.

There are several interacting variables associated with narrative development including working memory, visual mnemonics, and instructional prompts. Firstly, narrative development hinges on the ability to hierarchically coordinate and consolidate units in an upwardly spiraling fashion. This ability is dependent on the processing capabilities of the child (Case, 1991). Therefore, narrative is interrelated with, and dependent upon, the development of working memory, and associated cognitive capabilities. Secondly, visual mnemonics plays an important instructional role in circumventing limited processing capacity. It has also successfully been applied to the domain of narrative (McKeough, 1991). Thirdly, the use of developmentally appropriate tasks and prompts to foster the development of individual narrative elements is instructionally beneficial (Case & McKeough, 1990; McKeough, et. al., 1996; McKeough, 1989; McKeough & Sanderson, 1995). Instructional tasks become invaluable tools when integrated in a carefully designed narrative developmental instructional program.

An effective narrative instructional program, therefore, hinges upon knowledge of narrative and cognitive development, available processing capacity, mnemonics, and the appropriate use of visual and verbal instructional prompts designed to optimize the use of

available working memory. The instructional prompts are implemented in a manner that maximizes their inherent properties in order to target and foster the development of specific narrative components and narrative as a whole.

Overview of the Present Study

Grade one children were chosen for the present narrative instructional study because of the correspondence with developmental changes in the cognitive structure as predicted by the general theory guiding the study (Case, 1985). Also, it is at this point in the children's education that a transition exists in terms of the context within which narrative is produced. The production of narratives in response to contexts that are social and play-based, within which structural support is inherent, changes to a context that includes formal instruction, within which support is externally provided. It was thought that this group would benefit from instruction that specifically targeted the developmental components of narrative using a variety of teaching prompts. Oral narratives were specifically targeted for analysis, rather than written stories, since children in grade one are in the beginning stages of learning to write. Therefore, it was thought that the processes and mechanics involved in writing would affect the level of narrative produced. The narratives of these grade one children were examined for evidence of a systematic developmental increase in structural complexity in plot structure, cohesive linkages, and propositional coherence. The developmental increase was also analyzed in coordination with the instructional program to delineate the mitigating instructional concepts and prompts and associated timeline of narrative development.

Hypotheses

This study extends narrative research to the realm of the grade one classroom, mapping out the facilitative interaction between instruction and development of oral narrative. Based on previous research in the area of narrative, two hypotheses were put forward.

Hypothesis 1

It was predicted that there would be significant differences between oral narratives produced in the experimental, developmental instruction program, and those produced in the comparison, process approach instruction program (within group and between group). The significant differences would be indicated by gains in performance in the developmental group in terms of plot structure level and cohesion, indicated by an increase in the number, type, and relation of conjunctives used that are over and above that of typical child development.

The comparison group would be expected to evidence gains in plot structure level and in cohesion, indicated by an increase in the number, type, and relation of conjunctives used that are typically found in normal child development.

Hypothesis 2

It was predicted that a time series description of a subset of oral narratives, selected at five sample times throughout the instruction, would track developmental gains. The developmental gains would occur from instructional Block to instructional Block, and again from pre-test to post-test, in coordination with instructional activities, in plot

structure, cohesion (i.e., conjunctive use), and coherence, indicated by an increase in the breadth and depth of propositional use.

CHAPTER III

RESEARCH DESIGN AND METHODOLOGY

This study was designed to use two methods of story instruction and to compare the effects on the production of oral narratives of grade one children. The first (experimental) instructional program was based on a developmental narrative model. The second (comparison) instructional program was based on the current language arts curriculum.

The language arts curriculum was selected as a comparison instructional program since it is similar in some respects to the developmental narrative program yet different in others. Both methods are similar in that they are individualized programs and emphasize the use of age appropriate materials. A difference, however, is that the language arts curriculum program is a process-oriented approach, whereas, the developmental narrative program is a structurally oriented approach. The language arts curriculum program incorporates story processes that included: story writing practice, conferencing, publishing, and Author's Chair. The developmental narrative program targeted three major structural components of narrative: plot structure, cohesion, and coherence. Verbal and graphic task prompts were used to elicit narratives from the children. Instruction also incorporated both oral and written language processes since the two are integrated and support one another. The analysis, however, was performed on the children's oral narrative productions. As previously mentioned, it was anticipated that the developing mechanics of the written format would hinder the level of story produced. The developmental instructional program and the language arts curriculum instructional

program are described in greater detail in the section discussing the comparison of the two instructional methodologies.

Pre-instruction and post-instruction analyses of plot structure and use of conjunctives (i.e., cohesion) were performed on both experimental and comparison groups. The pre-post analysis provided information on the developmental differences in the use of plot structure and cohesion in the oral narratives of the two groups. In addition, a descriptive analysis was undertaken on a subset of children from the experimental group. The purpose of the descriptive analysis was to expand on the above analyses by examining the development of narrative in terms of coherence, in addition to plot structure and cohesion. The descriptive analysis also allowed for a determination of the interaction of instruction and narrative development by providing information regarding children's story production at a series of points in time that correspond with changes in instructional content. The scoring criteria used for the descriptive analysis emerged as a result of the data and are presented in Chapter IV.

Site Selection

The two participating classes were selected on the basis of the teachers' expertise and their high interest in children's narratives. The selection of expert teachers was important to ensure that literacy within the two classrooms was taught in the same manner with emphasis on quality teaching and a focus on children's writing. Moreover, both teachers used similar instructional techniques and held similar views on what constituted best practices in emergent literacy instruction. Specifically, the instructional programs were based on the whole language and process approaches to story writing. In addition,

both teachers consider it important to individualize the instructional program. For both teachers, program individualization involved taking each child's current skill level into account and then tailoring a program to meet specific needs. Both teachers reported that effective program individualization required their being aware of age appropriate materials and having those materials available in the classroom. Also, a strong link between home and school was seen by both teachers as crucial for fostering emergent literacy. Parents were kept up to date on their children's progress through a home journal and regular conferences. Extra materials were also sent home and parents were provided with literacy information (e.g., letter-sound associations) and their child's appropriate reading levels so that they could support and foster literacy at home. Both teachers engaged in these practices to ensure a positive learning environment in which each child experienced success in literacy and felt confidence in themselves.

Initially, the two identified teachers were informally approached regarding the study. The teachers indicated interest in participating, and subsequently, the principals of the two participating schools were provided with specific details of the study in the form of a brief written research proposal. Following principal approval, the teachers were provided with further details of the study, and asked to sign letters of consent.

Subject Selection

Letters were sent home to the parents requesting permission for child participation in the study. The purpose of the research and a description of the procedures and the involvement of the children were provided. Telephone numbers of the researcher and supervisor were also provided in the event that parents or teachers required additional

information. All children in both classes participated in the instruction program. However, data were gathered only from those children whose parents had given permission, and no coercion was used. The names were removed from the children's stories and replaced with identification numbers. There was no risk associated with the study, beyond those experienced in daily life, and participants could withdraw at any time without penalty.

Participants

Two grade 1 classrooms were selected from within a publicly-funded Catholic School System in middle to upper middle socio-economic status neighbourhoods in a large urban center in Western Canada. One class, which was comprised of 24 grade one children (including 13 boys and 11 girls, with a mean age of 6.0 years), served as the comparison group sample. The other class served as the experimental group, and included 26 children (including 11 boys and 15 girls, with a mean age of 6.3 years). Three children in the comparison group and four children in the experimental group were either absent, or could not or would not provide a narrative in response to one of the pre-test or post-test "problem-story" prompts. These cases were omitted from the data since they were incomplete.

Pre-Test Tasks: Language Ability, Cognitive Processing Capacity, and Oral Stories

The pre-testing consisted of the researcher either working individually with a child or with pairs of children. Three tests were administered to establish that the two classrooms were comparable in terms of conceptual language ability and cognitive processing capacity. Pre-testing of conceptual language was completed using the

Similarities task from the Weschler Intelligence Scale for Children, 3rd. edition (WISC III) (Weschler, 1991). Pre-testing of cognitive processing capacity involved the administration of two tasks: the WISC III Digit Span task, and the Opposites task (see Appendix 2 for a listing of the items and the scoring criteria). Together, the working memory and language tasks served to establish that the two classes were cognitively equivalent in the areas pertinent to the study. Finally, pre-testing of oral stories involved oral telling of a “problem” story (McKeough, 1991). The oral story pre-test served to establish that the two classes were equivalent with respect to oral narrative competence in plot structure.

The Similarities Task.

The purpose of the similarities task was to assess the children’s verbal processing. The Similarities task is a sub-test of the WISC-III (Weschler, 1991). It consists of a series of orally presented pairs of words for which the child explains the similarity of the common objects or concepts they represent (e.g., Question: “How are red and blue alike?; Response: “They are both colours.”). Test administration and scoring procedures followed the directions outlined in the test manual.

The Opposites Task.

The Opposites task (Case & Kurland, 1977) was presented in order to ascertain the children’s available working memory space. The Opposites test is composed of sets of familiar one-syllable word/s that were presented verbally, at approximately one-second intervals. The child was asked to state the opposite of each word in the set, after the complete set was presented. After the researcher stated: “cold-thin” the child would repeat “hot-fat”. A brief training session was provided to ensure that the subjects knew

the opposites of the words. One-item practice trials were also provided. The test consisted of five levels of difficulty in which the number of words presented in a set increased from one to five. Five trials were administered at each level and the test was continued until the child failed all five trials at a given level. (The words in each level are presented in Appendix B). The score was obtained by averaging performance across levels.

The Digit Span Task.

The Digit Span task is a subset of the WISC- III (Weschler, 1991). The purpose for administering the digit span task in the present study was to provide a second measure of the children's short-term memory. The Digit Span task is a series of orally presented number sequences. The child is required to repeat the sequence verbatim for the forward digits task (e.g., after the researcher stated "3-8-6", the child would repeat "3-8-6") and in reverse order for the backward digits task (e.g., "2-5-4", the child would repeat "4-5-2"). Each item consisted of two trials, using different numbers, with each trial consisting of the same number of digits. Test administration and scoring procedures followed the directions outlined in the test manual. (The descriptive statistics for the language and working memory tasks are presented in Table 3.)

Oral Stories.

Prior to instruction oral stories were gathered from both comparison and experimental groups. The participants were asked to tell a story about "someone who had a problem that they had to solve or make better." Previous research has shown that this prompt is effective in eliciting problem-resolution structures (McKeough, 1991). The

researcher provided encouragement and non-substantive feedback (e.g., “Wow!” and “Is that the end of your story?”). The oral stories were tape-recorded and transcribed by the researcher.

Pre-Test and Post-Test of Developmental Instructional Components

The oral stories were scored in two ways: plot structure level and level of cohesion. These two components of narrative were part of the experimental group instructional program. Pre-testing of plot structure and cohesion was conducted to determine if the two classes were equivalent in the use of these two components of narrative. It also provided an initial start point for instruction.

Plot Level Scoring

The stories were assessed as to the level of oral narrative competence in plot structure. Plot structure was assessed according to four “typical” age-appropriate levels: script, simple plot, sub-plot with complication, elaborated and integrated plot (McKeough, 1986) (see Figure 1 for Scoring). Each level was additionally subdivided into three levels: Low (semantic links are missing or inappropriate), Average (semantically coherent), High (semantically coherent and descriptive detail added) (Davis, 1994) (see Appendix 1 for scoring). A MANOVA, performed on the plot structure pre-test, indicated no significant differences between groups ($F(1, 39) = .45, p=.508$). (The descriptive statistics for plot structure are presented in Table 4.)

Cohesion Scoring

The analysis of conjunctive words (i.e., “and”, “then”, “so”, “but”, and “because”) was based on a frequency count of the use of conjunctives in the narratives. The words

Table 3

Pre-test Language and Working Memory Scores for Experimental and Comparison Groups

Group	Similarities		Opposites		Digits	
	Mean	SD	Mean	SD	Mean	SD
Experimental	9.88	3.50	2.40	.816	11.00	1.96
Comparison	8.84	2.79	1.88	.781	10.15	2.24

Table 4

Pre-test Plot structure Scores for Experimental and Comparison Groups

Group	Plot Structure	
	Mean	SD
Experimental	5.40	2.11
Comparison	5.00	2.18

qualified if used singularly (e.g., “and”) or in combination (e.g., “and then). If used in combination the conjunctive was counted in both word categories. (The descriptive statistics for conjunctive use are presented in Table 5.)

Table 5
Pre-Test Conjunctive Scores for Experimental and Comparison Groups

Group	and		then		but		because		so	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Experimental	6.21	8.48	1.26	2.23	.74	1.24	.42	.77	.37	.68
Comparison	6.65	8.07	1.39	2.23	.74	1.21	.39	.99	.30	.76

Procedure

General Instructional Method

One classroom was assigned to the comparison condition in which narrative was instructed according to the current Language Arts curriculum. The second classroom was taught according to a newly adapted/developed narrative instructional model of plot and cohesive structures. Both grade one classes were team taught with the teacher. In the comparison class, the teacher was the instructional leader and the researcher assisted. In the experimental class, the researcher was the instructional leader and the teacher assisted. Field notes were kept on the day-to-day instructional activities during the research program in both experimental and comparison classrooms. The field notes served to inform the instructor regarding the children’s progress and their responses to the

instructional activities. Subsequently, adjustments in the experimental program were made in terms of pacing and the inclusion of additional activities.

Initially, the researcher familiarized the students with her presence by reading a story to the children in a designated “story corner” during one class period. Additionally, the researcher spent three days observing, circulating, and casually helping the children. Subsequently, instruction took place over a three month period during daily 40-minute sessions. Both classes used a thematic approach to instruction (e.g., dinosaurs, Easter, etc.).

Experimental Instruction Method

The instructional strategies used in the experimental program were guided by six key principles which were derived from research. First, children are active constructors of knowledge and hold concepts that are qualitatively different from those of adults. Secondly, instruction should be guided by the knowledge of these concepts and by the pattern of their development. Third, expressing knowledge of these concepts and of their developmental patterns in teaching and learning goals results in more effective planning and increased learning. Fourthly, children’s learning is enhanced when they are made aware of their tacit knowledge. Fifth, maximum learning occurs when instruction builds on children’s existing knowledge and offers material that is slightly in advance of their knowledge. Finally, effective instruction makes use of a wide range of methods and activities (McKeough, Case, Bereiter, Anderson, Jager Adams, and Hirshberg, 1995).

The experimental instructional method was based on research on children’s conceptual understanding in the narrative domain at different points in their intellectual

development (Case, 1985; Case, 1992; Case, 1993; Case & McKeough, 1992; Davis, 1994; McKeough, 1990; McKeough, 1991; McKeough, 1992; McKeough & Sanderson, 1996). The instruction was designed to recapitulate the normal sequence of narrative development. This was accomplished by building a series of conceptual bridges from one developmental level to the next. A conceptual mnemonic and a way of talking about narrative was developed so that the children could become aware (conscious) of their current level of understanding. The instruction was tailored to help “bridge” the children from their existing level of plot (McKeough, 1991) and cohesive structures (Davis, 1995) to the next level in the developmental hierarchy. Gradually, the cueing mnemonic support was removed and practice was provided in a wide range of situations.

The developmental instruction in this study involved three major steps as follows: identifying normal developmental sequence, assessing children’s level, and attempting to move children to the next developmental level by conceptual bridging (Case, 1992). All of the types of instructional activities (i.e., plot, description [e.g., setting and character], cohesion, and coherence) followed this general model.

Plot Structure Instruction

The experimental instructional program was comprised of four components: plot structure, cohesion, coherence, and description (Table 6 outlines the components taught in each of the lessons). Plot structure was the primary targeted component with the other components (cohesion, coherence, and description) integrated into the plot structure instruction. Prior to plot structure instruction it was ascertained that the majority of the students were producing narratives that contained two combined scripts: one centering on

a problem episode and the other on a resolution episode. However, the plot structure instruction was initiated at the previous level where events were presented in single episodic sequences and typically include what Bruner (1986) calls the Landscape of Action. This level of narrative was revisited in order to ensure that the children understood and were able to produce narrative at this level. This was done by way of review and also by providing familiar material with which procedures and language could be developed. Support was then offered in the form of the new conceptual mnemonic or “conceptual bridge” to facilitate developmental progression to subsequent levels. The next plot structure level instructed involved the production of simple plots. As stated above, these simple plots contain two combined scripts, one centering on a problem episode, and the other on a resolution episode. In these stories there is also beginning evidence of the Landscape of Consciousness. That is, character’s actions are motivated by their intentional and mental states (e.g., desires, feelings, thoughts). The underlying intentional states are typically simply implied, however, they can also be explicitly named (McKeough, 1991b). Thus, average-functioning 6-year-olds are typically able to coordinate one event sequence containing a problem, with a second event sequence that provides a solution or resolution. Also, there is movement from the origination of story motivation, from within the events, to motivation from within the character’s affective responses to events. The final level that was instructed is typical of an 8-year-old child’s understanding of narrative and included complications, or failed attempts at resolution, with additional mental states that are mentioned or implied. Thus, 8-year-olds are able to combine, in a simple fashion, two or more dual landscape units.

The narrative components were taught through the combined use of graphic mnemonics, verbal explanations, and written activities. Instruction involved both independent and interactive activities. The use of these instructional methods was expected to alleviate working memory constraints, thus enabling a subsequent advancement in the developmental production of the narrative components. Children perform successfully when instructional task demands are kept within the child's processing capacity (McKeough, 1992b). In other words, when working memory is freed up, children are able to coordinate story elements. The instructional sequence presented concepts at progressively complex levels in response to the children's abilities to coordinate and consolidate previous components.

Plot Structure Materials

The materials used in the instructional program consisted of story frames, thought clouds, story lines, icons, character cards, and books.

Story Frames. Story Frames are similar to comic strips in that they are a series of attached boxes. Story events were drawn within the boxes as basic line drawings (stick figures). The line drawings represent children's understanding of stories in terms of a series of events and actions related in a time sequence (McKeough, Case, Bereiter et al, 1995) (see Figure 2 for an illustration of the story frames).

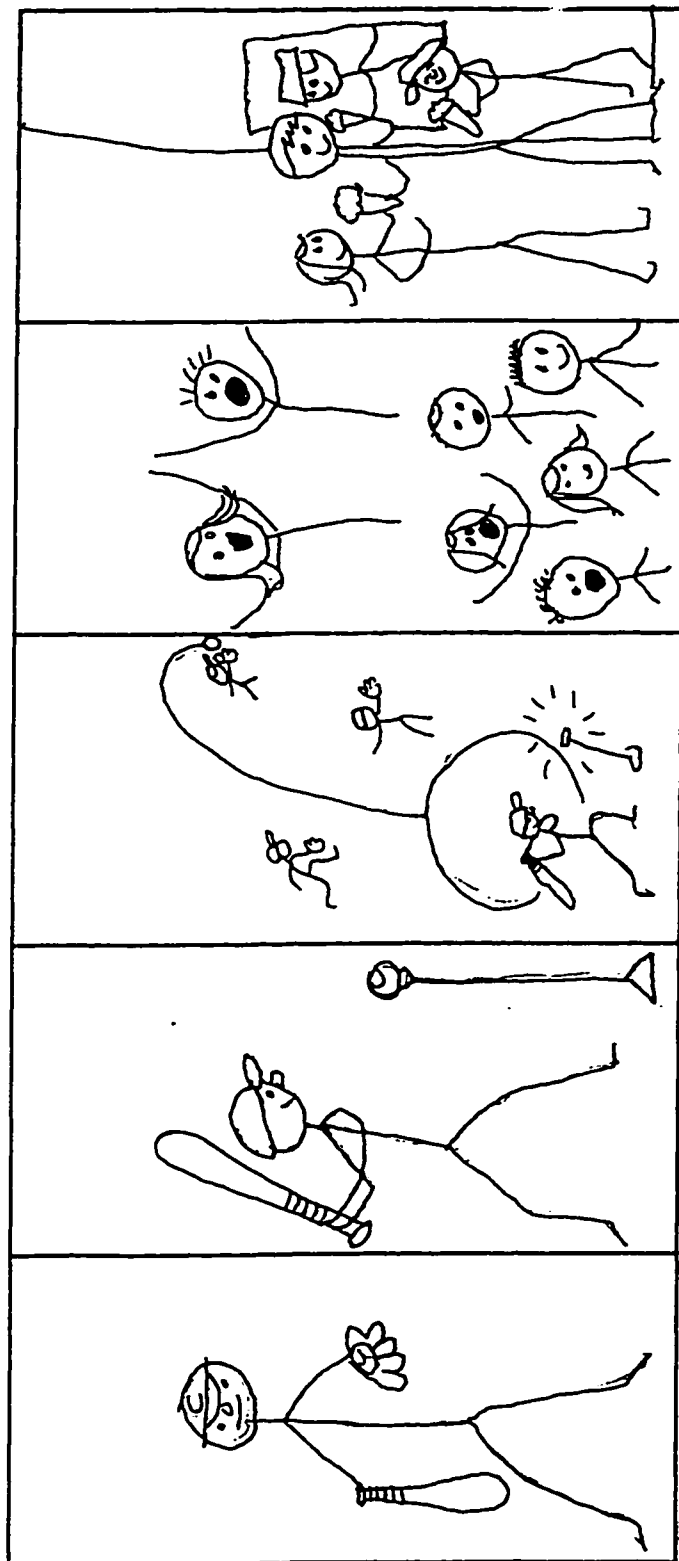
Thought Clouds. Thought clouds look like the thought balloons seen on cartoons and comic strips. Children develop a basic concept that events are related to characters' feelings and thoughts. The feelings and thoughts are displayed in the thought cloud (see Figure 3 for an illustration of the thought clouds).

Story Lines. Story Lines is an erasable “interactive” book on which the teacher and children can make drawings and write text captions. In other words, it allows the creation of an individualized book. The book contains stories that have three types of story structures: a “happy-ever-after” script structure, a simple problem-resolution plot structure, and a problem-failed attempt-resolution plot structure. The stories are presented in formats that include: incomplete and complete story drawings, text captions without story drawings or with incomplete story drawings. Blank story frames were also included for use with the above stories, as well as for use in the creation of new stories.

Icons. Icons are used to identify the separate plot elements (i.e., problem, idea, resolution), represented by images that convey character’s mental states (i.e., feelings and thoughts). Specifically, a happy face represents the positive situation at the beginning of a story, and a sad, angry, or scared face represents a negative emotion caused by the problem. The idea for solving the problem is represented by a light bulb and a happy face represents the return to a positive situation. Icon adhesives were used with the story lines book and icon stickers were used on the children’s independent story drawings (see Figure 4 for an illustration of the icons).

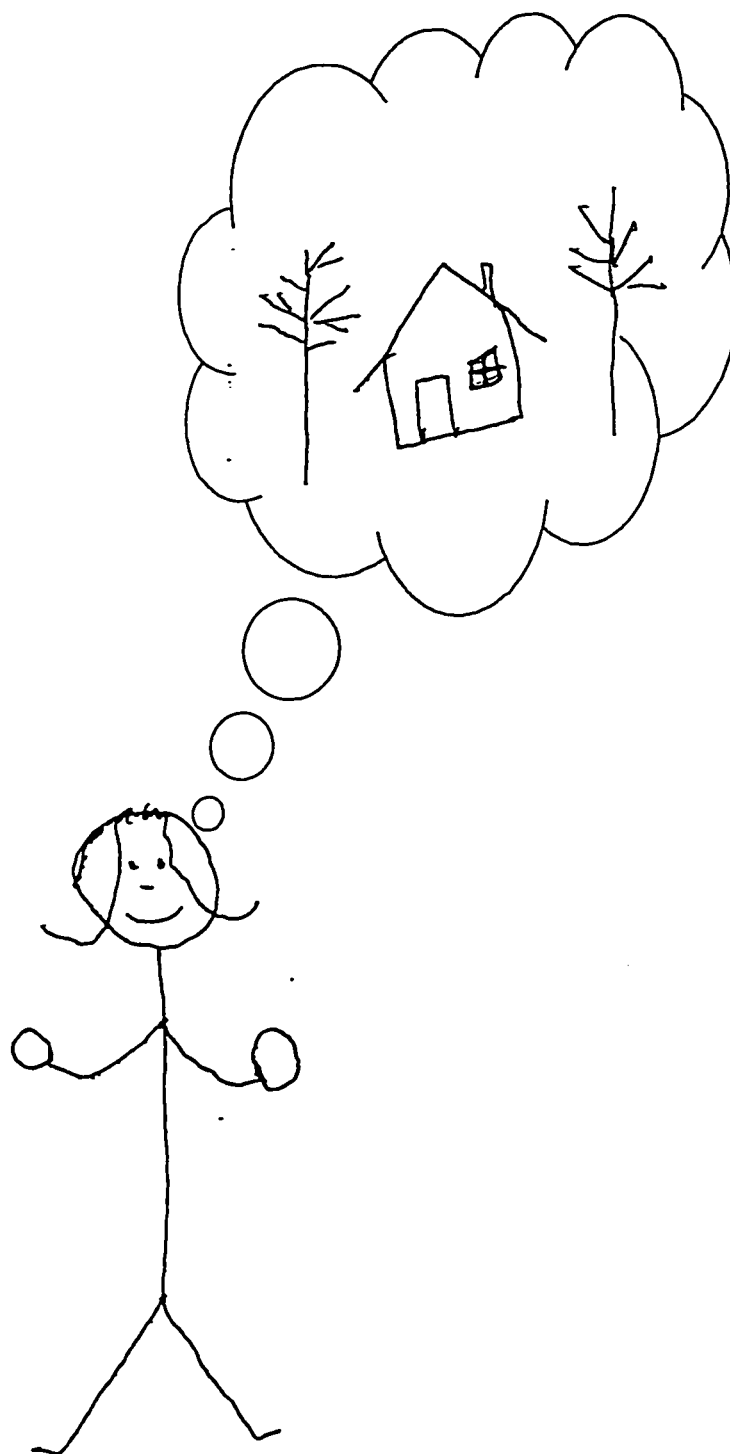
Story Starter Cards. Story starter cards are 3” x 5” cards on which there is a picture of a character, sometimes in an event, or situated in a setting. The children used these character cards to prompt them to tell a story that incorporated a character and a setting. The character cards also fostered the inclusion of descriptive detail (see Figure 6 for an illustration of the Story Starter Cards).

Figure 2. Story Frames



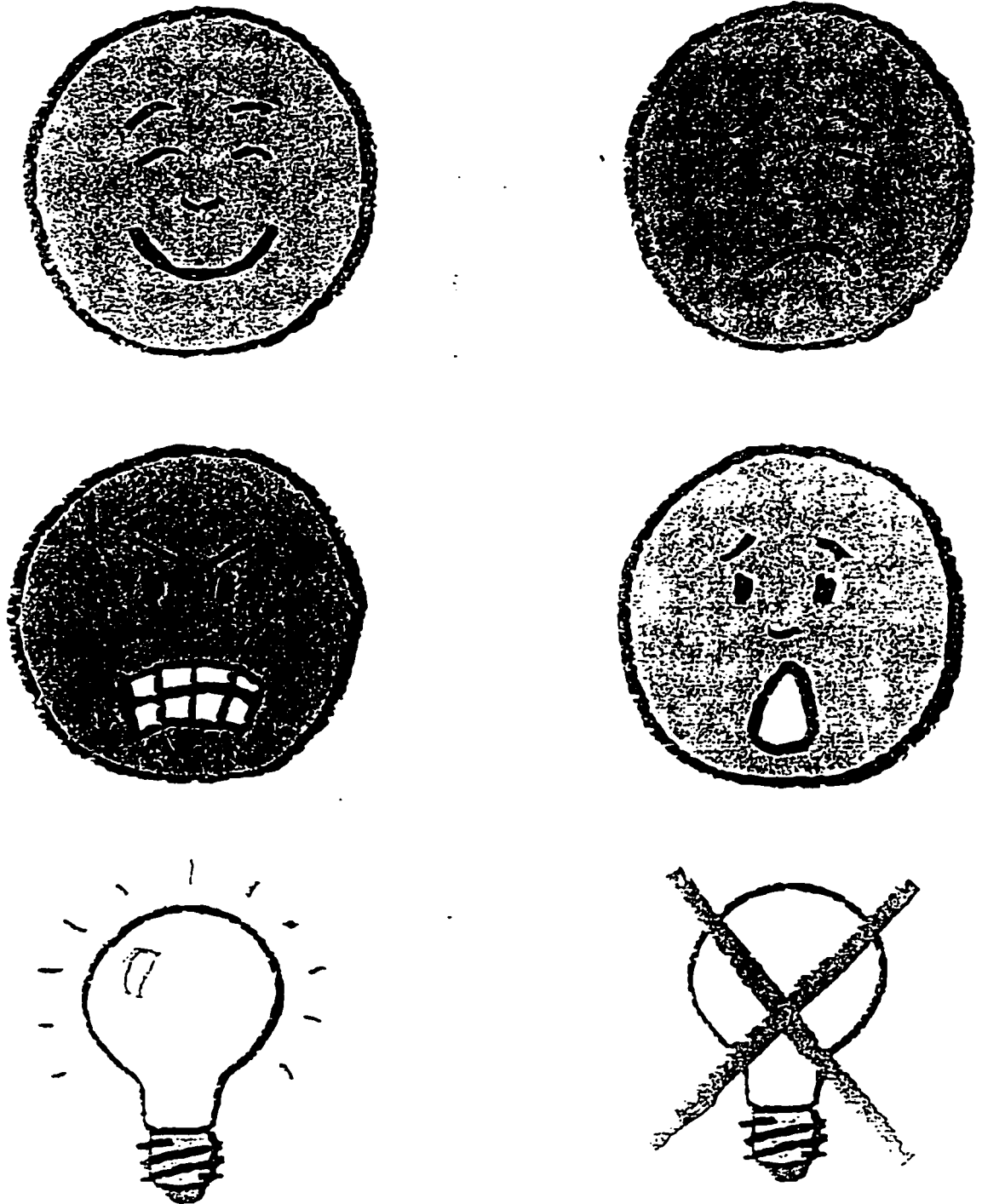
From McKeough, Case, Bereiter, et al. (1997)

Figure 3. Thought Clouds



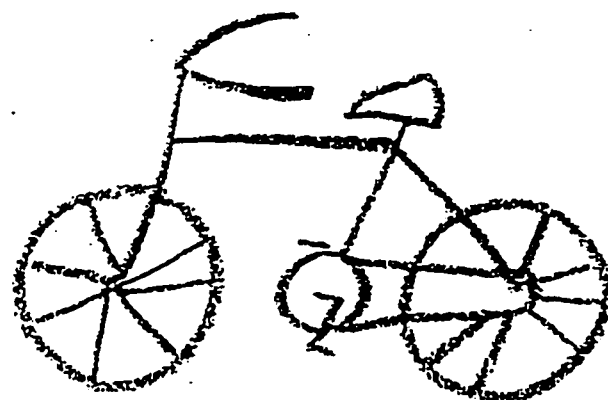
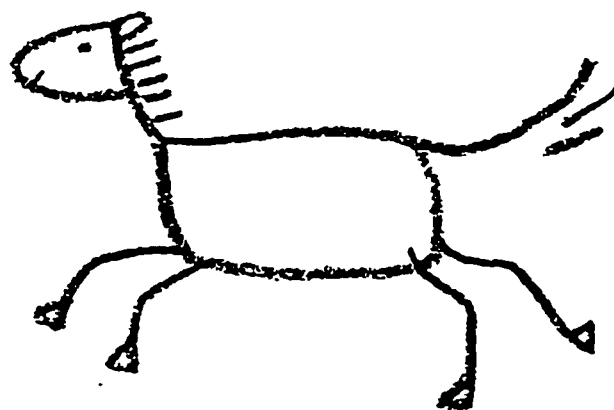
From McKeough, Case, Bereiter et al. (1997)

Figure 4. Icons



From McKeough, Case, Bereiter et al. (1997)

Figure 5. Story Starter Cards



From McKeough, Case, Bereiter et al. (1997)

Story Books. Story books were used to highlight and trigger discussion of the plot elements and thoughts/ feelings of the characters.

Story Frame Sheets. Story frame sheets were prepared by the teacher on both easel paper and regular sized (8.5" x 11") paper.

Plot Structure Instructional Activities

Instruction of plot structures (i.e., event structures, problem-resolution structures, and failed attempt stories) was comprised of three major classes of activities: graphic, verbal, and written. The types of activities involved in each of the classes are described below (see Table 6 for the instructional progression of plot structures and activities).

Graphics

The types of graphics used in the instructional activities consisted of: story frames, icons (e.g., plot structure components represented by mental states), and pictorial story starter cards. The graphic activities adhered to the developmental instruction methodology in terms of identification of the typical developmental sequence, assessment of children's current level of functioning, and recapitulation of the developmental sequence through conceptual bridging, in an attempt to move the children to the next developmental level.

Story Frames

The story frames were drawn on blank sheets of regular sized paper by the children individually, as a class, and by the instructor. The children individually drew pictures in frames telling about a problem-resolution scenario (e.g., "tell about a problem a dinosaur had once in the city and how to solve it.")(This activity followed a dinosaur theme that

was on-going in the classroom at the time.). This technique was again used for instruction at the next level in the developmental progression of the production of oral narrative.

Also, a Story Lines book (a large interactive erasable book on which teacher and students could make drawings and write text) was shared with the children and the children generated the story to go with the frames. The instructor then wrote the story on each of the frames.

Mental State Icons

Icons, paired with the line drawings in the story frames, represented the next developmental level in children's concept of story (i.e., the intentional level). To facilitate children's awareness of story concepts, the icons were used to identify the plot elements of a story (i.e., problem, idea, failed attempt, resolution) and to visually identify characters' feelings and thoughts (i.e., using thought clouds similar to the thought balloons in a comic strip). In terms of Bruner's dual pattern of action-motivation, the story frames promote narrative awareness of the Landscapes of Action (i.e., states, actions, and events) while icons promote awareness of the Landscape of Consciousness (i.e., feelings or thoughts that are associated with the events) (see Figure 4 for an illustration of the icons) (see Table 6 for the instructional progression of the mental state icon activities).

Problem-Resolution Icons. Problem-resolution icons were incorporated into the action frames. A light bulb graphic was placed over the corresponding action frame on stories generated by the children as well as on the appropriate frames in the Story Lines book in order to trigger the generation of a solution.

Failed Attempt Icon. Failed attempt icons were used to help the children make the move from the production of problem-resolution stories to problem-failed attempt-resolution stories. A light bulb with an “X” through it was used to indicate a failed attempt and the need for a further solution. The icons were placed over failed attempts on both action frame stories, generated by the children, as well as on a Story Lines book. Children also provided examples of similar ‘close call’ or failed attempt stories from books or movies.

Thought and Feeling Icons. Instruction of thoughts and feelings was integral to the program in terms of facilitating character, setting, description, and plot structure. Mental state icons (representing sad, mad, happy, and worried mental states) were used in the instruction of thoughts and feelings.

Thought/feeling icons promoted the production of feelings and thoughts, associated with the plot. that were generated in response to the problem-resolution and failed-attempt icons. The thought/feeling and idea icons were placed onto a Story Lines book, chart paper, story frames generated by the children, and frames prepared by the teacher.

Stories from Story Lines were read to the children and the children identified the characters’ feelings. Magnetic mental state icons were then placed in the corresponding places on the board. The icons were also used on teacher- and student-generated frames drawn on chart paper. In follow-up discussions the children were asked “why” they thought the character might be feeling that way and what they might be thinking.

Thought/feeling icons were also placed onto individual action frames generated by the children, as well as onto teacher prepared action frames.

Story Starter Cards. Story starter cards were used to help the children generate stories. The cards presented either a picture of a character or a picture of both a character and a setting. The children included the character and/or setting in their construction of oral stories. Multiple cards could be combined to help the children orally produce a more complex story that included two characters and a failed attempt. Children were encouraged to include descriptions of character and setting in their stories (see Figure 5 for illustrations of the story starter cards).

Graphic mental state activities were integrated with verbal activities. Following placement of icons onto teacher and child generated stories, the children orally retold the story to a partner, incorporating mental states. Throughout the instructional program the teacher modeled the inclusion of mental states in the production of oral stories.

Verbal

A language was developed for talking about plot components throughout all of the activities. The language enabled the teacher to communicate the plot components in an easy-to-understand manner in order to help the children coordinate and consolidate the plot components. The verbal plot structure instructional activities consisted of: story retelling, constructing individual oral stories, joint construction of an oral story, and identification of plot structures. Class discussions and sharing of ideas occurred throughout the instruction.

Story Retelling

Opportunities for retelling stories occurred in response to storybooks, story frames (8.5 " x 11" paper and easel paper), and a Story Lines book. Following the reading of a story, the children re-told the events while the teacher drew them onto the story frames. Discussion centered around identifying the problem and the solution, or the failed attempts, in orally read stories. Retelling also occurred in pairs after children had completed story frame drawings, after class drawings of a story on easel paper, and in response to a story in the Story Lines book.

Oral storytelling

Working in pairs, the children told each other stories. The stories were either event sequences about something personal (e.g., "what I did over the holidays"), or fictional or semi-fictional problem - resolution stories (e.g., "tell a story about a dragon who had a problem"). Oral stories were also told in response to graphic prompts (e. g., story starter cards). In this manner, oral and graphic processes were integrated.

Another oral activity was the joint construction of a story. For problem-resolution stories, each child contributed a part of the story. One child in the pair provided a problem and the other provided a solution to the problem. For failed attempt stories, the instructor initially provided problem examples, in response to which one child provided a failed attempt, and another provided a solution. Subsequently, the children engaged in this activity in pairs.

Identification of failed attempts

An identification activity was used to foster understanding of failed attempts. The instructor read stories and the children put up their hands when they heard an idea that didn't work (i.e., failed attempt), or that made things worse (i.e., complication).

Written

Written activities were provided in phases corresponding to the developmental levels. A topic was provided and the children were asked to write a problem-resolution story (e.g., "write a story about a dragon that has a problem"). Children also wrote stories on a problem-resolution topic of their choice.

Descriptive Detail Instructional Activities

The children participated in activities that involved generating descriptive detail for setting and character at each plot structure level. These descriptive activities were given once the children had mastered a particular story structure ("X") (i.e., consolidated it) and had, therefore, freed up working memory space. The descriptive activities were provided before instruction at the next developmental level ("X + 1"). At this point, instruction focused on having the children construct more elaborate stories at level "X". In other words, the children were asked to produce stories that had more elaborate descriptions of events, characters, and settings.

Instruction for description of character and setting are naturally integrated into the generation of plot structure stories, and therefore, were instructed in this way. Activities included verbal identification of descriptions, drawings and written descriptions, story frames and accompanying descriptions, oral problem story and incorporation of

descriptions, oral descriptions and production of story in response to story starter character and setting cards, and written story incorporating character and setting descriptions into a problem/resolution story.

The first activity was the verbal identification of story components. This activity involved the instructor reading stories and the children responding by identifying the descriptions of the characters and the setting.

Second, the children were asked to draw a character and to write a description. The drawing served to facilitate the generation of description. Subsequently the children described the character to a partner. The partner asked questions about the character to prompt additional descriptions. The partner was then shown the picture to see if it matched their visualization of the character. This activity provided practice in generating and clarifying character descriptions and made use of the three major classes of activities combined (i.e., graphic, verbal, and written activities).

The third and fourth activities were sequential in that they allowed the child to focus separately on each of the two aspects of a story. In the third activity, the children added descriptions to story frames that they had completed containing pictures and a written story. In the fourth activity, the children generated oral “close call” or failed attempt stories and told them to each other. After an initial telling, the children re-told the story, adding descriptions of the setting and the character.

The fifth activity was done in the reverse sequential order to the above activities with the children focused initially on description and then the story aspect of plot. Oral descriptions were first produced in response to story starter cards. One child described

the character and the other child described the setting. Subsequently, the children produced problem-resolution stories that included descriptions of a character and the setting. The children also made use of two story starter cards and incorporated two characters and a setting into a problem story. The above activities enabled the children to focus explicitly on description of character, and yet to be aware that it occurs in the context of the overall plot.

The sixth activity involved story writing in which the children could pick a character, name the character, provide descriptions of the character, and incorporate that character into a written story. When finished producing the descriptions and the story, the children drew their characters. This same activity was also completed with respect to setting. The children were provided with a general setting (e.g., a toy store) so that they could focus on description and plot structure. The children named the story, provided accompanying descriptions, and wrote a story. The goal of the above activities was to elicit the independent production of stories that included plot structure, as well as descriptions of character and setting (see Table 6 for the instructional progression of the description activities).

Cohesion Instructional Activities

Cohesion is an important component of story structure. Without cohesion a story is loose and disjointed. Cohesion-producing words, referred to as conjunctives, help to foster a unified text. For instructional purposes, to enhance an understanding of the purpose of cohesive words, conjunctives were referred to as “superglue words.” In order to promote the production of a cohesive story, instruction centered around the use of

conjunctives. The conjunctives targeted were ones that typically develop between four and ten years of age. Four types of conjunctives were instructed: additive (i.e., “and”), temporal (i.e., “then”), causal (i.e., “because”), and adversative (i.e., “but”).

Developmentally, the use of causal and adversative conjunctives is acquired later than the additive and the temporal forms (Halliday & Hasan, 1976). Following the general developmental model (Case, 1985), instruction corresponded to the progressive developmental understanding and use of conjunctives.

First, cohesive words were introduced during the retelling of stories and drawing of stories in story frames on easel paper. During instruction, the instructor prompted for the next frame by providing the cohesive word (e.g., ‘then’).

Second, story frames were used to highlight conjunctive use. Story frames provided awareness of the use of conjunctives in combination with plot structure. One activity required the children to “read” the pictures and to identify the appropriate conjunctive between frames (see Figure 6 for an illustration of the conjunctive activity). Another activity involved writing out the story underneath the story frames. The conjunctive words were provided to help signal the relationship between the frames (see Figure 7 for an illustration of the activity). In this way, pictures and cohesive words worked together to cue the children as to the components of the plot structure and the relationship between the components.

Third, children were paired and asked to construct compound sentences that were linked by the targeted conjunctives. That is, child A initiated a story with a sentence that ended with the conjunctive “because” and child B picked up the story (e.g., child A -

“Once upon a time there was a boy who had no friends because...”: child B - “he had just moved to a new city.”). Also working in pairs, one child placed a small card with a conjunctive word written on it between frames and the other child would ascertain the correctness of the chosen conjunctive. If the conjunctive was incorrectly placed, the children removed it and replaced it with the appropriate conjunctive (see Figure 8 for an illustration of the activity).

Two additional techniques were also used in the instruction of cohesion. One technique involved relocating the conjunctive words from their proper place, between frames, to an inappropriate place, and then having the children move the words back to their original place (e.g., Child A switches the “because” and “but” conjunctives and Child B has to identify the incorrectly placed “because” and “but” conjunctives and replace them in the correct positions) (see Figure 9 for an illustration of the activity). The second activity involved taking apart all of the frames and the conjunctive words and then having the children recombine the frames and the words (see Figure 10 for an illustration of the activity). Working in pairs, the children practiced these two techniques aimed at helping them understand the use and placement of conjunctive words (see Table 6 for the instructional progression of the cohesion activities).

Coherence Instructional Activities

The concept of coherence was presented as important to the integrity of narrative as a whole. A coherent narrative is one in which information is presented in a clear, progressive manner, moving the storyline forward in a logical, connected fashion. Coherent narratives make sense, in that the information provided is appropriate to the

topic, relates to previous and subsequent units of information, and appears in an appropriate order.

Instruction for coherence incorporated discussion of sample stories produced by both the instructor and the children. The focus was on the importance of information “making sense” in relation to adjacent information as well as to the overall gist of the story. Specifically, discussion centered on missing information, incorrect or inappropriate information, and improperly placed information.

Coherence was previously indirectly addressed through cohesion instruction since cohesion reinforces the unity of a narrative through signaling the progression of information. Specific instruction in coherence was in the form of paired activities that focused on altering the information structure of a narrative.

To illustrate, children were asked to draw action frames in response to instructor, group, and individually produced stories. Several instructional techniques were used with the frames to draw attention to the organization of plot structure. The first technique involved moving event frames from their proper place in the sequence to an inappropriate place and then having the children move the words back to their original place (e.g., Child A removes one of the event frames in the story and places it in an incorrect place then Child B identifies the incorrectly placed frame and replaces it in the correct location in the sequence) (see Figure 11 for an illustration of the activity). The second technique involved taking apart all of the frames and then having the children recombine them (see Figure 12 for an illustration of the activity). Another coherence technique involved

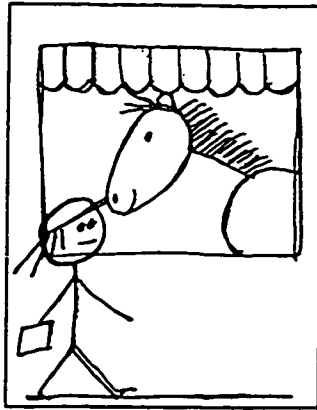
removal of frames to illustrate the effects of missing information. While working in pairs, one child removed frames, and the other child identified the missing frames.

Coherence between character description and setting was also addressed.

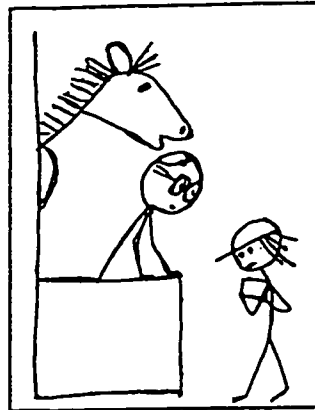
Examples of character description and setting were given and the children were asked why they did or did not make sense (e.g., “the little girl, who was dressed in a bathing suit, went to the soccer field to play a game).” This coherence activity was extended to incorporate descriptions of character and setting into a problem-resolution story (e.g., “the little girl, who was dressed in a bathing suit, went to the soccer field to play a game but she forgot her baseball bat...”). The instructor gave examples of character, setting, and a problem and asked whether or not they made sense. The children then generated their own oral examples of character, setting, and problems, and discussed whether or not their examples made sense and the reason for this. The presentation of incoherent descriptions of setting and character, as well as plot, and the children’s identifications of such, is helpful to their learning. Such an instructional technique highlights the necessity of presenting information and description in a manner that progressively and meaningfully leads the listener/reader from one point of the story to the next. It provides opportunities for the children to identify the nature of the information that renders a story either coherent or incoherent.

Subsequent to the previous activities, story starter character and setting cards were used in pairs. The children generated character descriptions that made sense in relation to the setting. The children then generated a story using the two starter cards (one was a

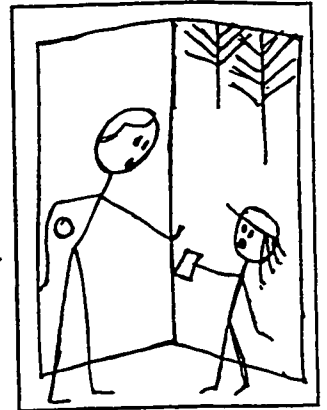
Figure 6. Conjunctive Instruction using Story Frames to Identify Appropriate
Conjunctives



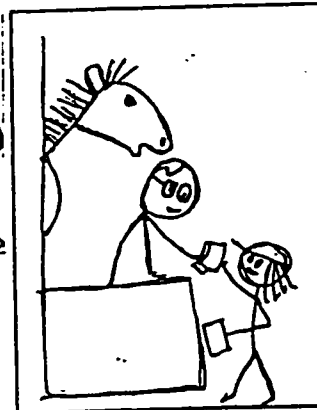
so
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and



so
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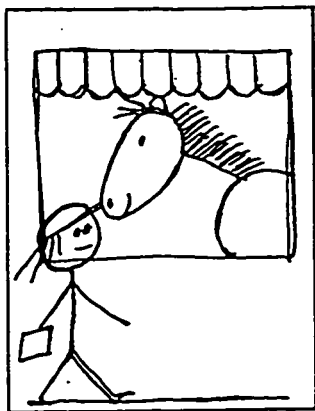
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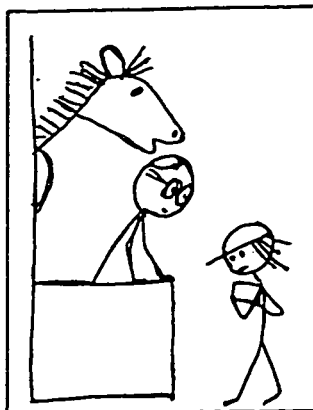
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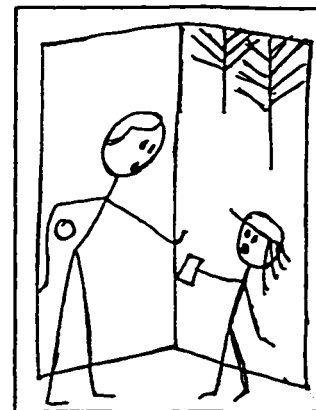
Figure 7. Story Writing With the Aid of Story Frames and Conjunctive Words



but



so



then



then



and

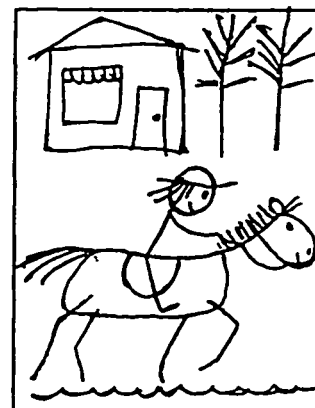
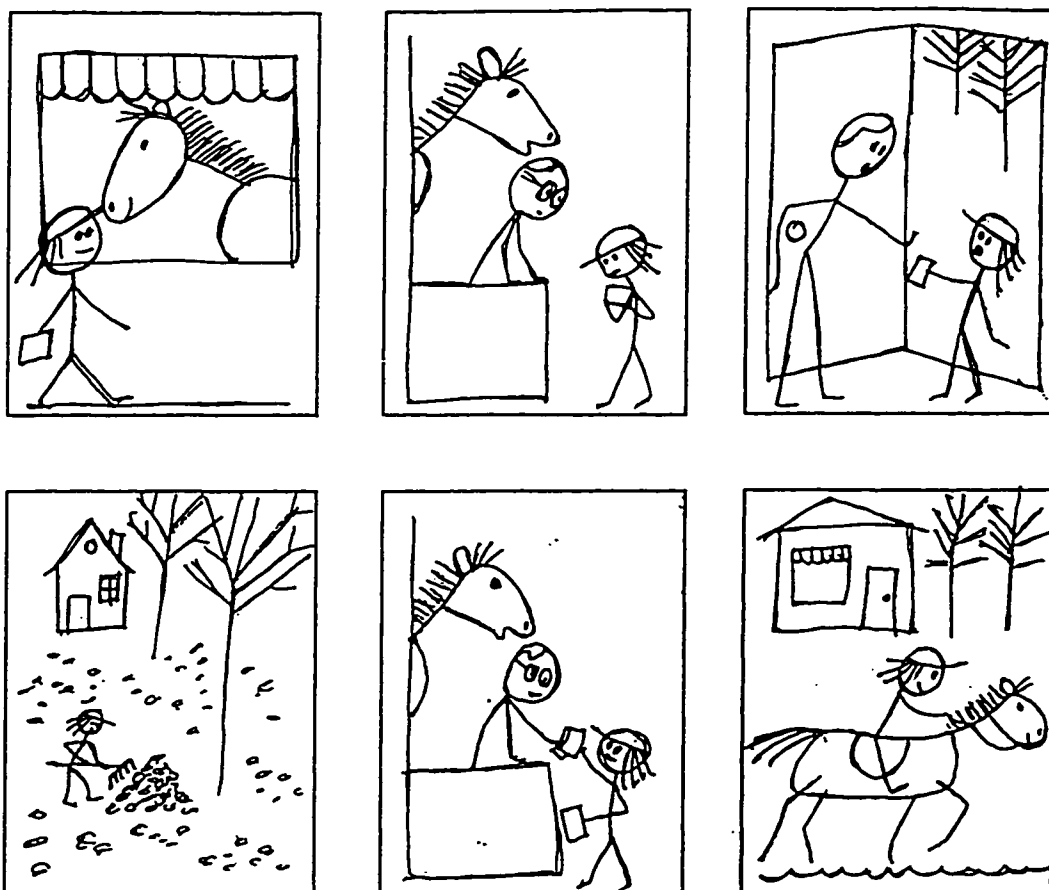


Figure 8. Conjunctive Instruction: Children Place Appropriate Conjunctive Word Cards Between Story Frames.



and

but

so

then

and

Figure 9. Conjunctive Relocation

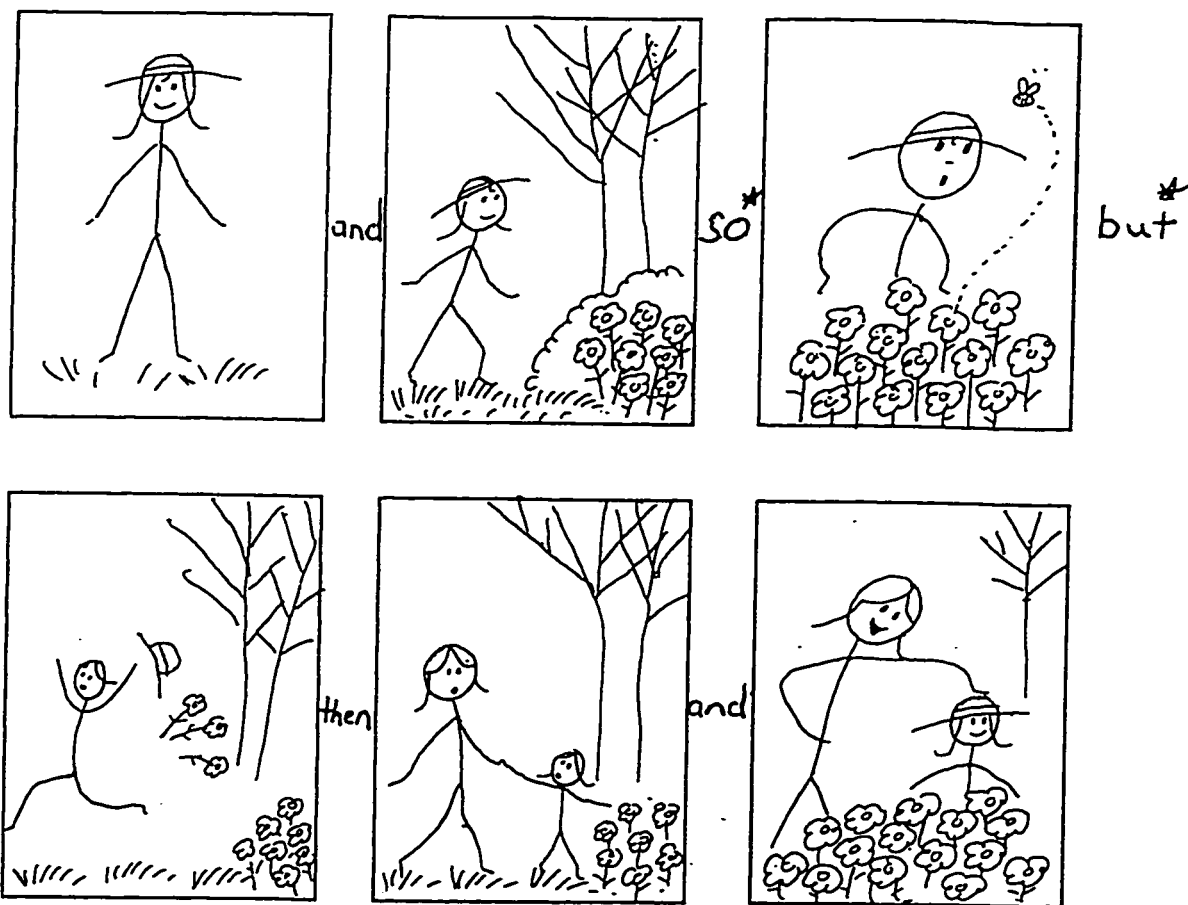
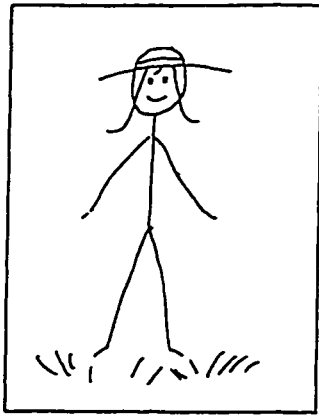
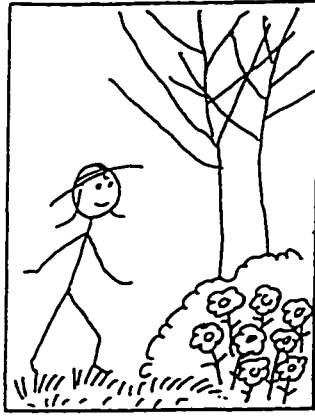


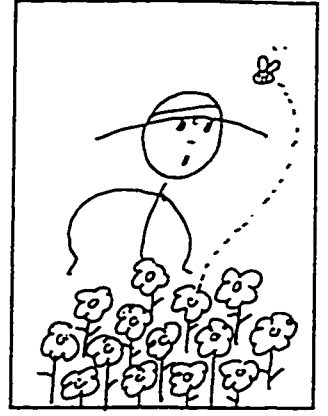
Figure 10. Conjunctive Recombination



and



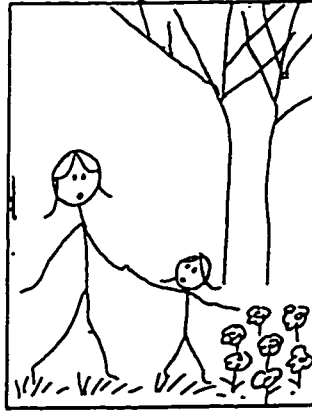
but



50



then



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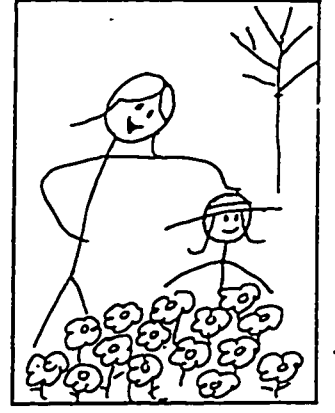
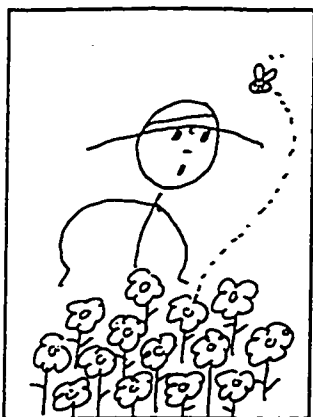
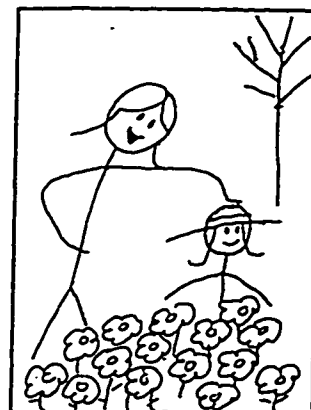
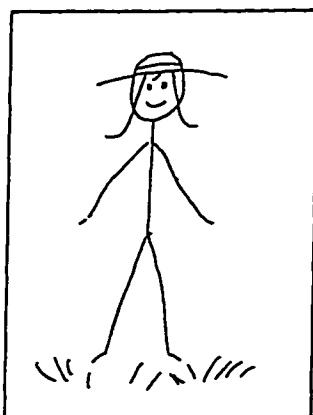


Figure 10 continued. Conjunctive Recombination

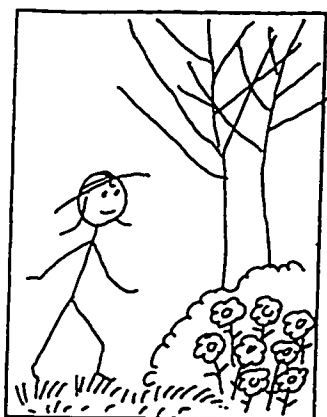


so

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and

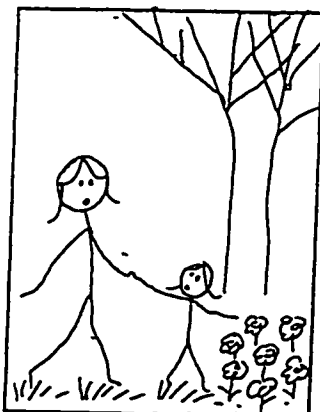


Figure 11. Coherence Relocation

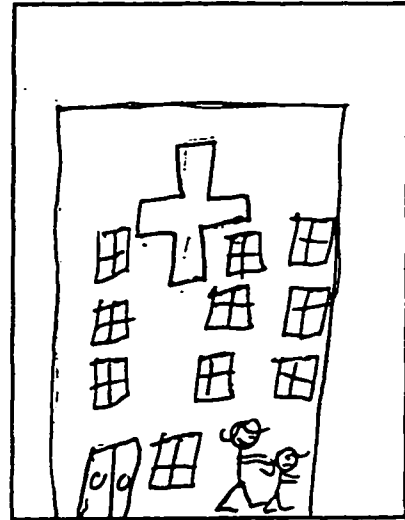
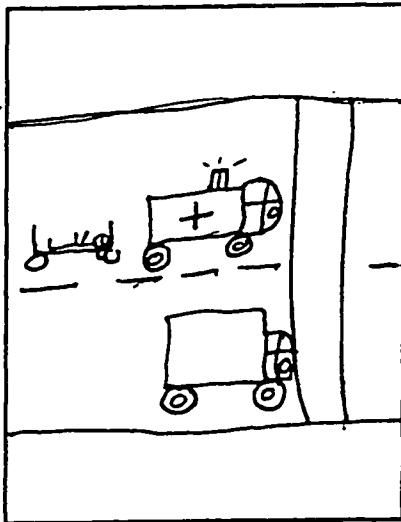
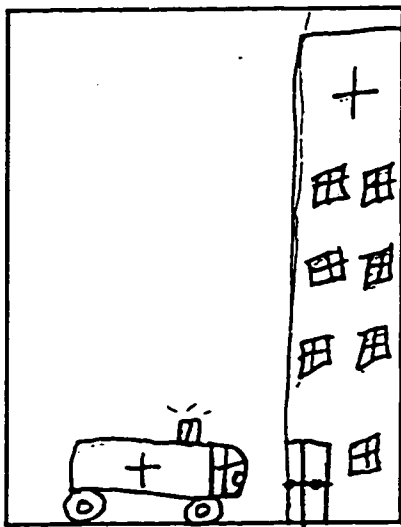
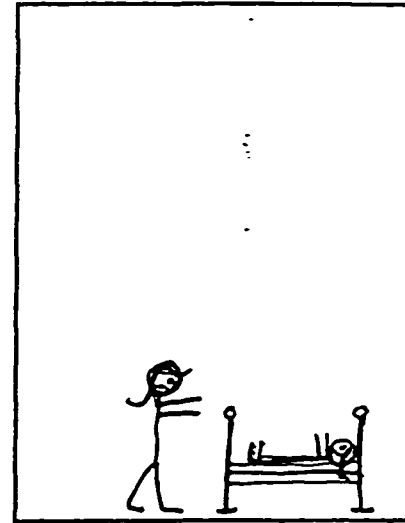
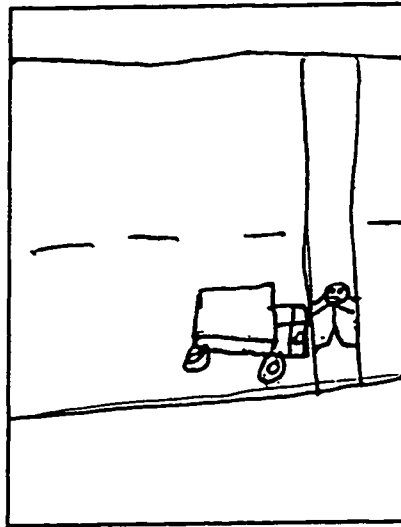
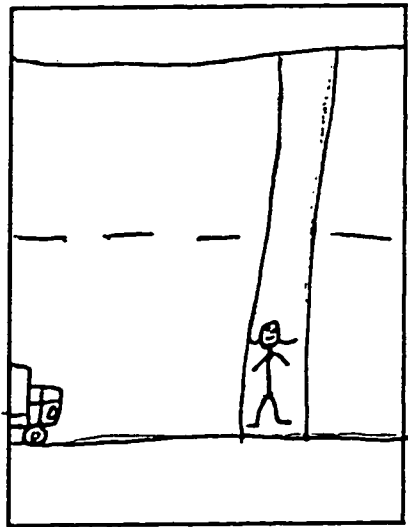


Figure 11 continued. Coherence Relocation

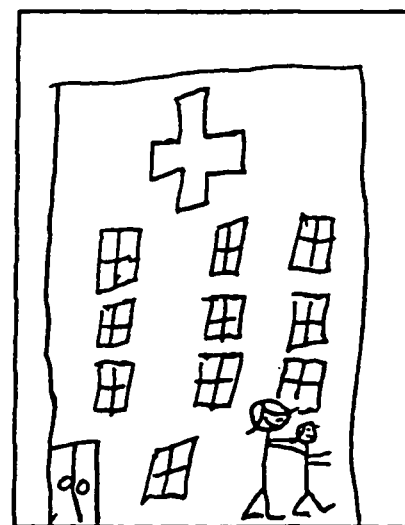
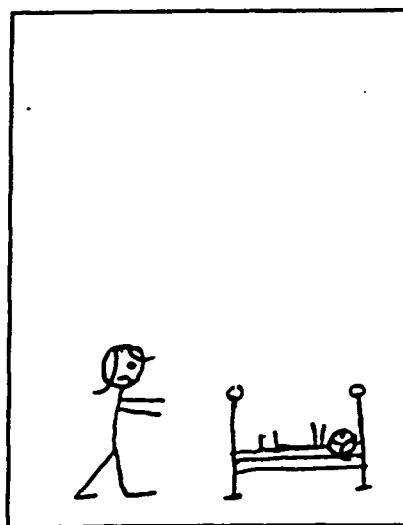
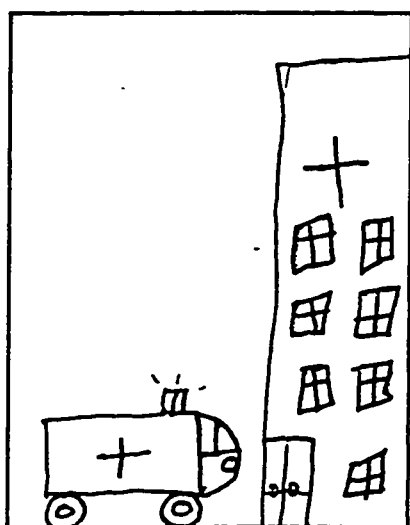
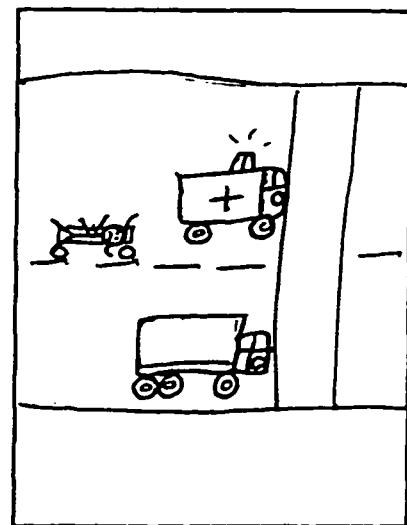
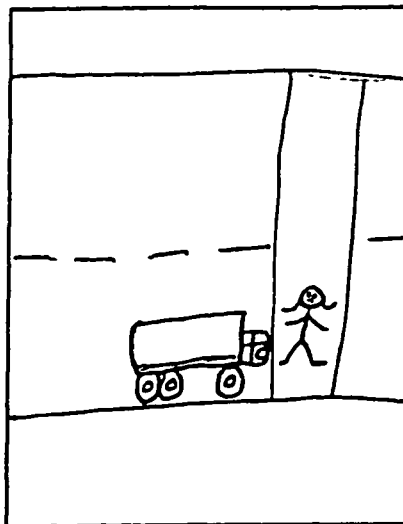
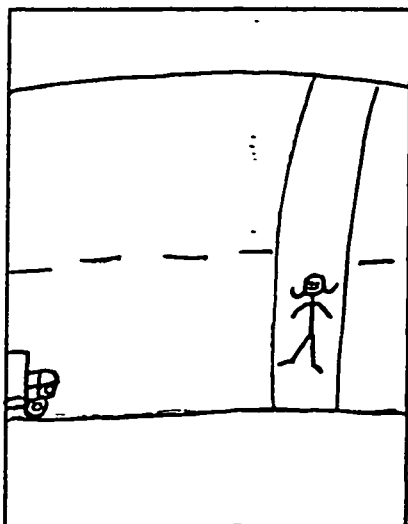


Figure 12. Coherence Recombination

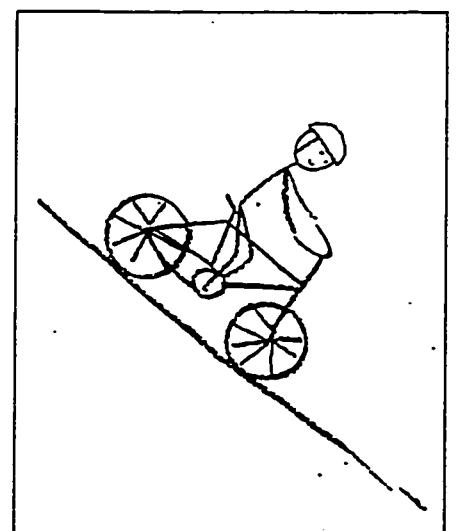
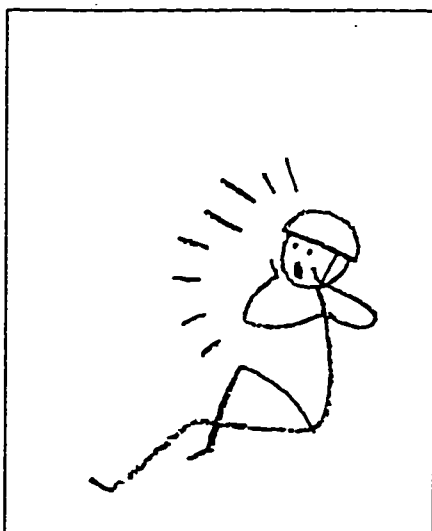
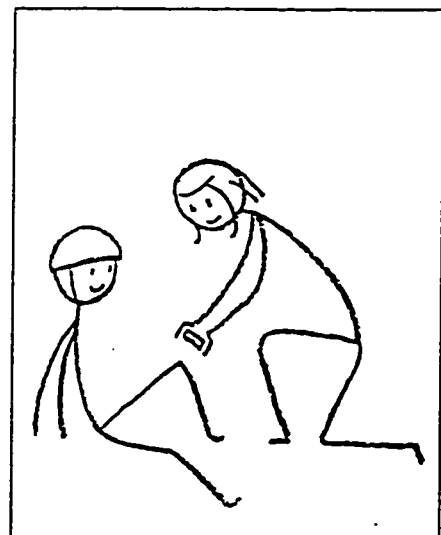
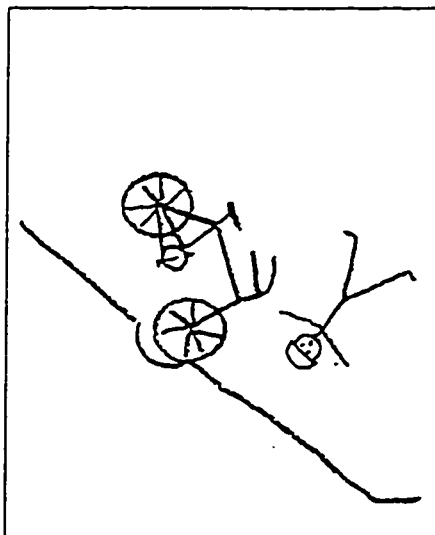
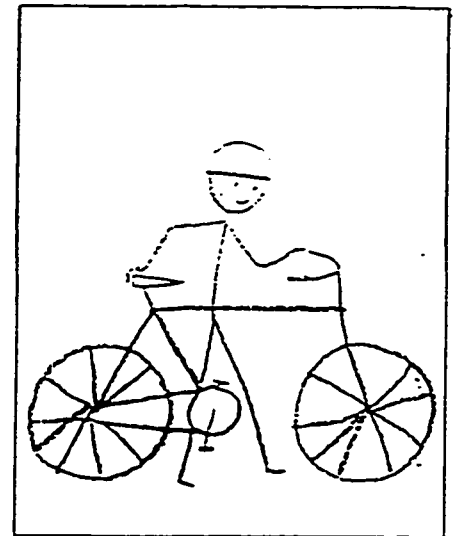
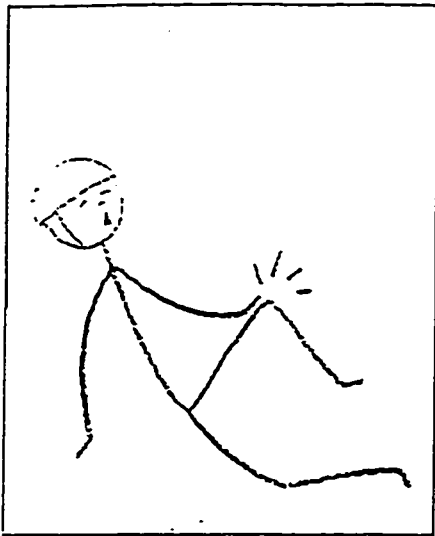
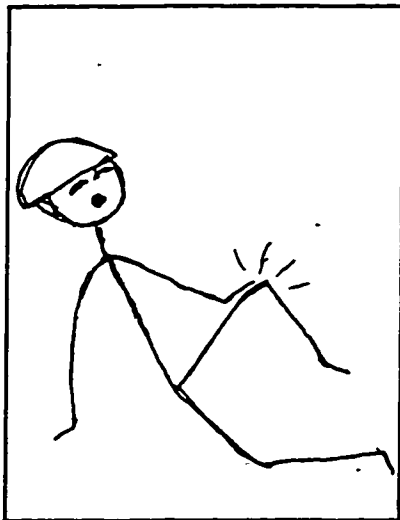
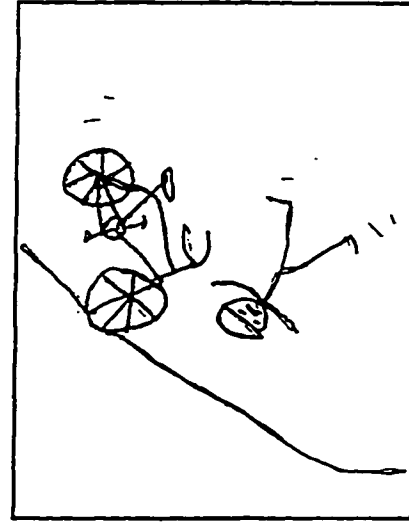
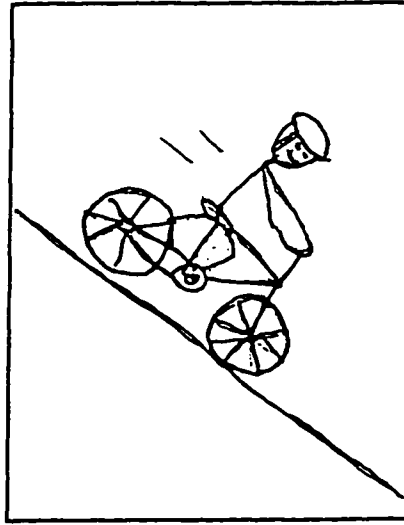
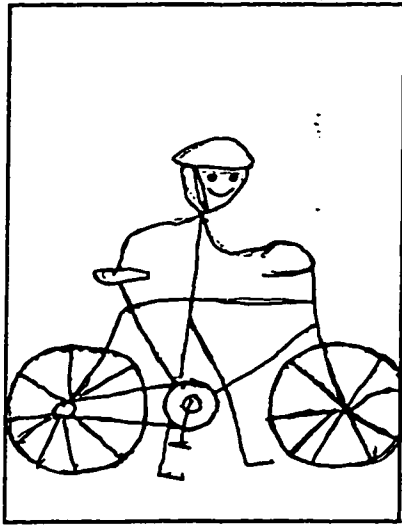


Figure 12 continued. Coherence Recombination



character card and the other a character and setting card) concentrating on making sure that the parts cohered. This activity allowed the children to practice combining plot structure and descriptions of character and setting into a coherent story (see Table 6 for the instructional progression of the coherence activities).

The above described the experimental instruction method. Before the comparison method is discussed, comments will be made with respect to the task administration and data gathering procedures of the experimental method.

Task Administration and Data Gathering Procedures

Instruction of plot structure, cohesion, and coherence were engaged in daily. Data, in the form of oral narratives, were gathered prior to, and following, the instructional program. An analysis of plot structure and cohesion of the pre-post narratives was undertaken. Field notes of the day-by-day instruction and children's responses were taken. Also, a time series sampling of a subset of children's oral narratives was undertaken at three additional points in time.

Comparison of pre-post performance on plot structure and cohesion

Individual oral narratives were gathered prior to, and following, completion of instruction in plot structure and cohesion. The pre-and post-instruction oral narratives were elicited in order to determine the narrative developmental change in terms of plot structure and cohesion.

Field Notes

Daily field notes were kept on the children's reactions to the instruction and performance on the activities and tasks. The field notes allowed the researcher to evaluate

Table 6
Instructional Progression of Narrative Components

Experimental Group

lesson #	events	problem- resolution	failed attempt	mental state	cohesion	coherence	description
1	X						
2	X						
3	X						
4					X		
5	X						
6						X	
7	X				X	X	
8	X						X
9							X
10	X						X
11	X						X
12	X						X
13	X						X
14		X					
15		X		X			
16						X	
17	X						
18		X		X	X		
19		X					
20					X	X	
21		X					X
22		X					
23		X		X			X
24		X		X			

Table 6 continued.

lesson #	event	problem-resolution	failed attempt	mental state	cohesion	coherence	description
25		X					
26				X			X
27		X		X			X
28							X
29							X
30							X
31		X				X	X
32		X				X	X
33		X					X
34		X					
35		X					X
36		X				X	X
37		X		X			X
38		X				X	
39						X	
40					X		
41		X		X	X	X	X
42		X					
43		X					
44			X	X			
45			X				
46			X				X
47			X				
48			X	X			X
49					X		

the effectiveness of the instruction and the developmental progression of the children in order to tailor the activities to meet the children's learning needs. Adjustments, in terms of the progression of the activities, and the length of the activities, were made in accordance with the researcher's reflections on, and evaluations of, the daily field notes and observations.

Time Series Sampling

Throughout the instruction, a small subset of seven children from the experimental classroom were followed. Oral narratives were gathered at three times throughout the instruction, in addition to pre- and post-test times. The additional narratives were taken at points that corresponded to changes in the level of plot structure. Narrative sampling was done in pairs, whereby the researcher asked the children to tell an oral problem/resolution type story.

The time series analysis targeted narrative coherence, in addition to plot structure and cohesion. Narrative coherence was addressed through the use of a propositional analysis. The propositional analysis targeted the breadth and depth of narrative. In terms of breadth, a proposition moves the narrative forward by providing primary information that contributes to the advancement of the storyline. Propositions contribute to the depth of a narrative when the information provided is additional or subsidiary in relation to a primary proposition. The time series sampling also facilitated an examination of the instructional interactions of all three narrative components: plot structure, cohesion, and coherence.

Comparison Instructional Method

Language Arts Curriculum

The comparison group instruction was based on the current Language Arts curriculum which is a process approach to story instruction. The activities were subdivided into the same three major focus classes of activities as for the experimental group: graphic, verbal, and written. Each of the individual activities in these three major instructional foci targeted one or more expectations of the language learning curriculum (i.e., to explore, to construct, and to communicate meaning). These expectations formed the basis of the program and function as guiding principles.

The learner expectations overlap on a continuum. This continuum reflects the developmental nature of language learning. The learner expectations address the need for students to grow in their abilities to use language to explore, construct, and communicate meaning. These three functions are interrelated and are viewed as part of a connected learning process. Learning may be classified under any of these three functions.

In order to more fully understand the three functions, the main concepts subsumed in each of the functions will be discussed. The exploring expectation encompasses five key concepts. The first concept is that language learning builds on positive dispositions toward shared talking, reading, and writing. The second concept states that prediction and questioning are key elements of language learning. Third, identifying and setting a purpose serves to focus reading, writing, and talking experiences. Fourth, knowing how ideas and information can be organized and presented contributes to the enhanced understanding and communication of ideas. Finally, understanding how words, phrases,

sentences and whole texts are formed contributes to the reception and expression of meaning.

The constructing expectation has six affiliated concepts. The first concept states that in the initial stages of constructing meaning, the demands of language conventions may be temporarily overlooked in order to focus on ideas. Second, the ability to make associations and connections is essential to the understanding and communication of meaning. Third, the ability to think analytically is necessary for critical reading, listening, and writing. Fourth, the ability to synthesize is necessary to the understanding and retention of ideas and information. Fifth, learning is enhanced when learners assume responsibility for checking their growing understanding. Sixth, students grow as independent learners when they reflect on and evaluate their learning experiences.

The communicating expectation has three main concepts. First, confidence in the ability to express ideas or viewpoints is essential to the development of skills. Secondly, effective communication often depends on coherent organization and precise expression of ideas. Third, communication is enhanced when the language is formed and structured to match the writer's or speaker's purpose and intended audience.

The following section will present the instructional materials used and will follow with a discussion of the array of activities in each of the major focus classes (i.e., graphic, verbal, and written)(see Table 7 for instructional progression of activities). The rationales linking the activities to the expectations are also provided.

Instructional Materials

Instructional activities for the comparison group were composed of story text/pictures, sheets/booklets, story books, songs/poems, personal dictionaries, journals, fact/ information sheets, content worksheet activities, and a story writing notebook.

Story text/picture sheet/booklet. In the booklet (e.g., “Goldilocks and the Three Bears”) some of the pages had pictures while others had sentences. Story sequence pictures were also provided and the children had to paste the picture sequences in the correct order (see Appendix C for “Goldilocks and the Three Bears” Booklet).

Story books. The children read stories of their choice as well as stories the teacher had chosen.

Songs/poems. Songs and poems were incorporated into the instruction and were based on topics that were being taught (e.g., Penguins). Some of the songs and poems were plays on words and some were just for fun (see Figure 13 for Penguin songs and Figure 14 for “Baby Chick” poem).

Personal dictionaries. For future reference, the children had personal dictionaries in which they wrote sight words and any other words that they thought important or that had been corrected in a story they had written.

Journals. Journals were notebooks in which the children wrote personal narratives (e.g., weekend events) as well as completed topic directed writing (e.g., class trips or story responses).

Figure 13. Penguin Songs

I'm a Little Penguin

Sung to: "I'm a Little Teapot"

C F C
 I'm a little penguin, black and white,
 G, C G, C
 Short and wobbly, an adorable sight.
 F C
 I can't fly at all, but I love to swim,
 F G, C
 So I'll waddle to the water and dive right in.

Charli McClaren
 Largo, FL

Penguin Friends

Sung to: "Oh, My Darling Clementine"

F
 Belly-flopping off an ice cliff
 C,
 Into the polar seas,
 F
 Swimming round and eating fishes
 C, F
 Are my hungry penguin friends.

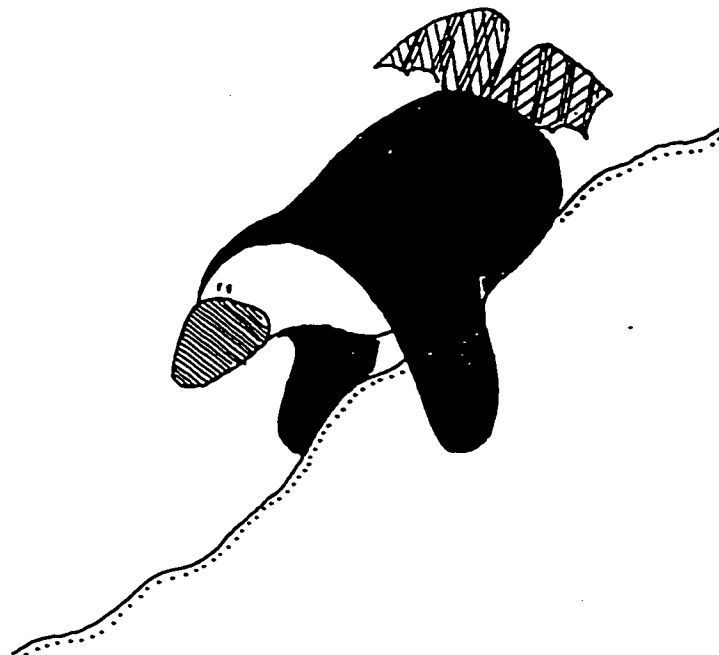
Susan Peters
 Upland, CA

Romp and Play

Sung to: "Twinkle, Twinkle, Little Star"

C F C
 Watch the penguins romp and play,
 G, C G, C
 Sliding on the ice all day.
 G, C G,
 Dressed in coats of black and white,
 C G, C G,
 They are such a funny sight.
 C F C
 Watch the penguins as they play,
 G, C G,
 On a cold, cold winter day.

Pat Beck
 Red Lion, PA



From the Files of W. Gray (Teacher for the Comparison Group)

Figure 14. Baby Chick Poem

Baby Chick

Peck

Peck

Peck

on the warm brown egg,

Out comes a neck,

Out comes a leg,

How does a chick

who's not been about,

Discover the trick

of how to get out?

From the Files of W. Gray (Teacher for the Comparison Group)

Fact/ information sheets. Fact/information sheets were sheets about a topic (e.g., penguins) or a story read to the class, that have missing information that had to be filled in.

Content worksheet activities. An example of a content worksheet is a cloze exercise activity that requires filling in missing words.

Story writing notebook. This is a notebook in which the children write stories that are either self-generated or developed from a topic list.

Instructional Activities

The instructional activities in the comparison group, based on whole language and process approaches to writing, were arranged in three major foci (i.e., graphic, verbal, and written). The activities in the three foci were chosen with the three main functions of learner expectations in mind (i.e., explore, construct, and communicate). Although, the activities may subsume and build upon many of the concepts from the three functions, only the main targeted concepts will be addressed in order to illustrate the relationship of the activities to the learner expectations.

Graphic

The graphic focus included the following activities: story text/picture activities, coherence activities, and a web.

Story Text/Picture Activities

Story text/picture activities were provided that made use of pictures and written text. One activity was in the form of a story booklet (e.g., “Goldilocks and the Three Bears”). On the pages with pictures the children wrote the corresponding sentences and

on the pages with sentences the children drew a corresponding picture (see Appendix C) (see Table 7 for the instructional progression of the story text/picture activities).

The story text/picture sheet activity followed discussions of the development of a butterfly. Each picture depicted one of the stages of development of a butterfly. The children wrote about each of the stages underneath the pictures (see Figure 15).

This activity targeted the *Constructing* function of learner expectations in the Language learning program of studies. In order to read, listen, and write, children need to practice thinking analytically and forming language connections and associations that help them to create meaning. Specifically, in these activities children are engaged in recognizing that illustrations can indicate what is in, or what is to come, in a story or text. Together, pictures and text facilitate the construction of meaning.

Coherence Activities

Coherence activities involved story sequence pictures that the children had to paste in the correct order and then write a sentence to accompany each picture. Coherence was also verbally reviewed by the teacher. The children were told that a story needs to make sense (see Table 7 for the instructional progression of the coherence activities).

This activity addressed the *Exploring* function of learner expectations. Exploring and understanding of how phrases, sentences and whole texts are formed contributes to the reception and expression of meaning. It also emphasizes how ideas and information are organized. Ordering the components of a story facilitates the understanding of the mechanics of language in terms of organizing information into a coherent whole. In

addition, the children made use of visual cues in conjunction with print to further help them to make sense of the manner in which language is formed.

Webs

A web is a mapping, done on the board, of the information that could be included in a report or story. The children generated a topic (e.g., squirrel), categories (e.g., food) and possible “exemplars” of each category (e.g., nuts and berries) and the teacher added them to the web (see Figure 16 for a sample web).

This activity addressed both the *Exploring* and *Constructing* function of learner expectations. Preparing a web provides the children with knowledge of how ideas and information can be organized. Children can classify and categorize information and ideas using strategies such as mind-mapping, webbing, and clustering. Also, the children are engaged in constructing associations and connections in preparation for the communication of meaning (see Table 7 for the instructional progression of the web activities).

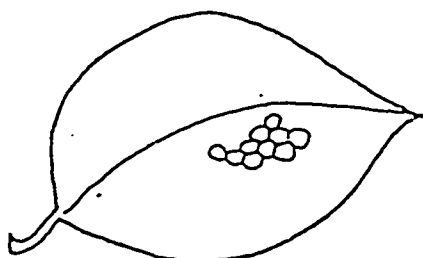
Verbal

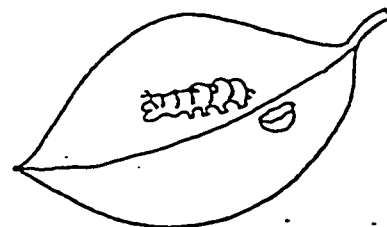
The verbal focus included: story reading, songs/poems, discussion of rules applying to the use of description of character and setting, and Author’s Chair.

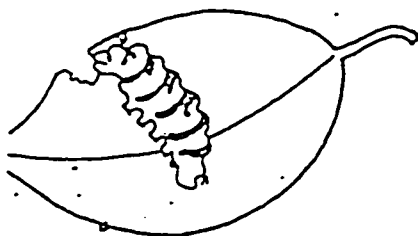
Reading

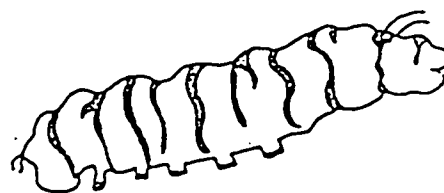
Reading was done both orally and silently. Oral reading involved either the teacher reading a story out loud to the class or the children reading to a partner. During silent reading, the children read stories of their choice as well as stories the teacher chose. Following reading of a common story, the class would discuss the story (e.g., what

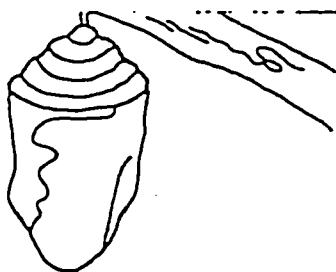
Figure 15. Story Text/ Picture Sheet Butterfly Activity











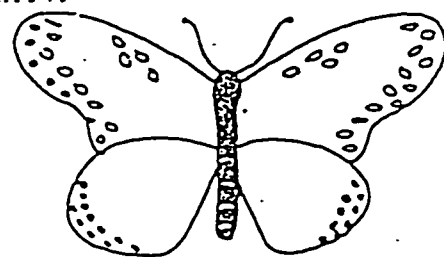
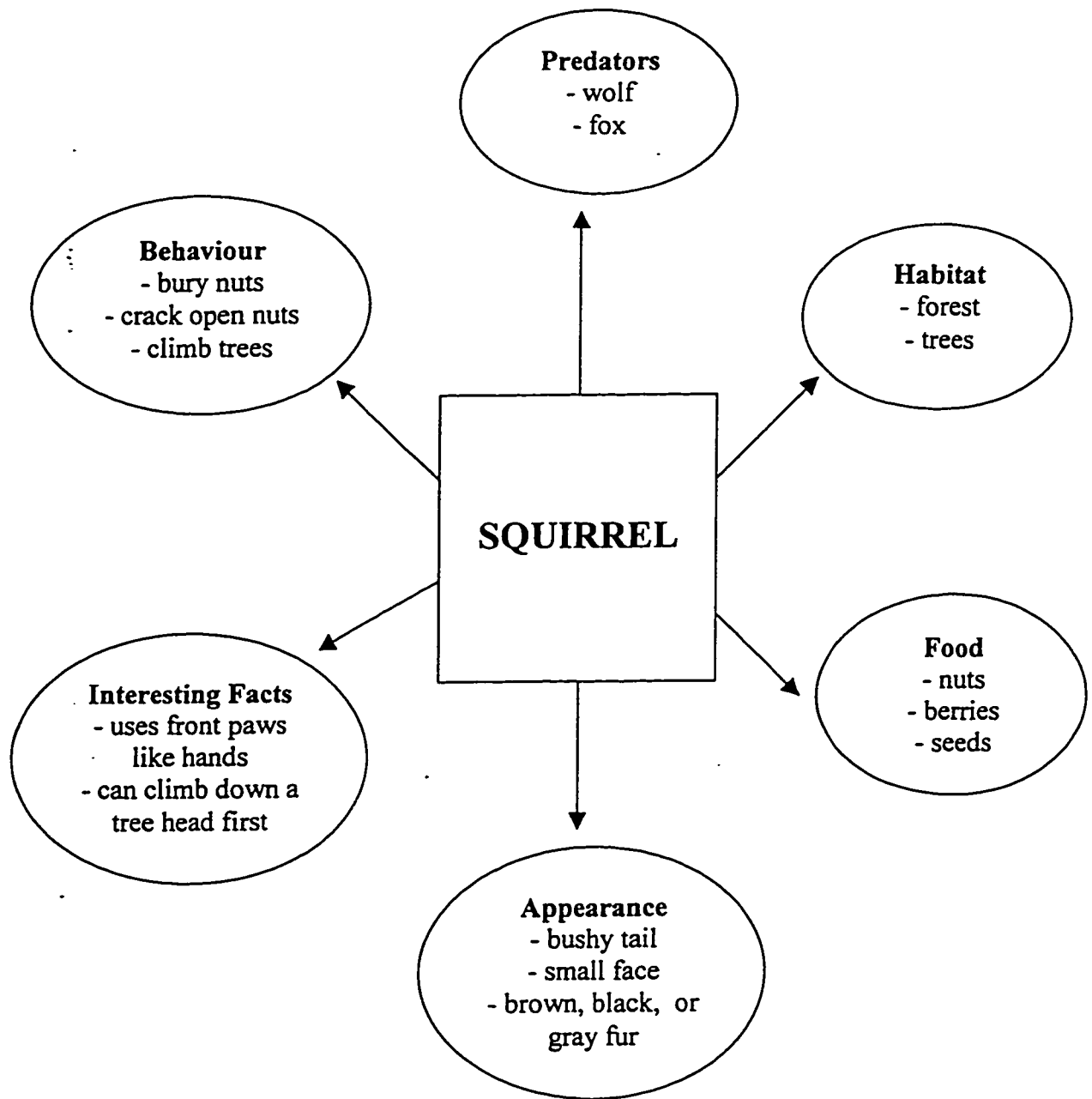


Figure 16. Sample Graphic Web Activity



happened, did they like the story, what did they like about the story) (see Table 7 for the instructional progression of reading activities).

This activity follows under the *Exploring* function of learner expectations.

Reading is for enjoyment as well as for information. Language learning is enhanced through positive experiences and dispositions toward shared talking, reading, and writing. Also, children read, listen to, and talk about literature which challenges them to grow as readers and writers.

Character and Setting Description Activities

Character was incorporated in the instruction in a teacher-led review of the rules and criteria of story writing. The children were told that they need to include descriptive words, character, and a setting. The teacher told the children that descriptive words are used to “make you think about things a little more” and to help make the story a little longer. The teacher emphasized that characters are the people in the story. Writing about a character can be through naming (e.g., “I saw a girl named Sue.”) and providing more information (e.g., “Sue was wearing a blue dress). The children suggested additional information in response to the teacher’s example (“Sue likes Sailor Moon.”). The teacher then added a further character description (“she has pretty hair”) and mentioned that the number of sentences about the character could be extended from one to three or even four sentences. The teachers circulated and when they saw a child extending their character they said “freeze” and read it to the class. The teacher also told the children that the setting is where a story takes place and that a setting should be included in writing a story

(see Table 7 for the instructional progression of character and setting description activities).

This activity follows under the *Exploring* function of learner expectations. Discussion concerning descriptions of character and setting provides information concerning the organization and presentation of ideas and information. This contributes to an enhanced understanding and communication of character and setting in the children's stories.

Author's Chair

The Author's Chair was a chair of prominence in the reading corner where a child could share his/her finished story product, in typed booklet form with accompanying pictures, with the class. The story was read to the class as part of an author's celebration. Following the reading, three children were chosen by the student to ask a question or to provide a statement about their story (e.g., "I wonder" and "I like"). The author responded to the questions or comments (see Table 7 for the instructional progression of the story writing activity).

This activity follows under both the *Exploring* and *Communication* function of learner expectations. Language learning builds on positive experiences and dispositions through sharing of the children's stories. The children also build confidence in their language communication abilities through sharing their stories and through asking questions, making comments, and providing answers.

Written

The written component focused on spelling, key words, journal writing, story content activities, story writing, and conferencing (i.e., editing and extending).

Spelling

Spelling was incorporated into story instruction so that the children could correctly spell the words that were of importance to them in their writing. Words that the children needed in order to write their stories were spelled on the board. The children also corrected words during self-editing, following conferencing, or when pointed out by the teacher while she was circulating through the classroom. During review lessons the children were told to be careful to use the correct spelling of sight words. If the children were not sure how to spell a word, they were to circle it and the teacher corrected it during conferencing.

As part of spelling, the children also had personal dictionaries. Following completion of a story, words that were repeatedly spelled incorrectly, especially grade one sight words, were spelled correctly in their dictionaries. The children could add other words to their dictionaries as well. If the children were unsure of how to spell a sight word they looked it up in their dictionaries (see Table 7 for the instructional progression of spelling activities).

This activity addresses the *Exploring* functions of learner expectations. The correct spelling of words is important to the reception and the expression of meaning.

Key Words

Key words are words that are written on the board by the teacher that are deemed important for the children to recognize, use, or spell. The words may be from stories read to the class or may be words needed for a written activity (see Table 7 for the instructional progression of key word activities).

This activity addresses both the *Exploring* function of learner expectations. The correct spelling of words is important to the reception and the expression of meaning.

Journal Writing

Journal writing involved personal writing (e.g., weekend events) and topic directed writing (e.g., class trips or responses to stories that were read to the class). The classroom teacher and researcher were responsible for circulating and providing written responses to the children's writing (e.g., "I wonder what you ate at the party?"). The written responses served to encourage the children to extend their writing. The children were responsible for answering the teacher's response questions. The children placed sticky tabs on their best journal page, and as the teacher circulated, she asked the children why it was their best page (see Table 7 for the instructional progression of journal writing activities).

This activity targets the *Constructing* and *Communicating* functions of learner expectations. The children focus on constructing meaning through writing about topics that have personal interest. Also, the children reflect on their journal writing through identification of quality work. Journal writing provides opportunities for the children to experience success in writing and builds their confidence in expressing ideas.

Story Content Activity

Activities such as fact sheets and Cloze exercises targeted the children's retention of story content in terms of the general gist of the story. Concepts and topics were discussed in class (e.g., Penguins) and followed up with fact/information sheets that the children had to fill in with the correct answers (see Figure 17 for "Playful Penguin" fact sheet). Fact sheets were also given following a class-read story (e.g., "Jack in the Bean Stalk") and the children filled in the answers to questions on the content of the story (see Figure 18 for "Jack in the Bean Stalk" fact sheet).

A close exercise worksheet activity was given to the children that focused on the informational content of a story. The children were to fill in the missing words in the story with words written on the board (see Table 7 for the instructional progression of story content activities).

These activities address the *Constructing* function of learner expectations. The ability to synthesize and extract important information is necessary to the understanding and retention of ideas and information. Specifically, in these activities the children are involved in recalling the key details or main ideas from a reading or listening experience.

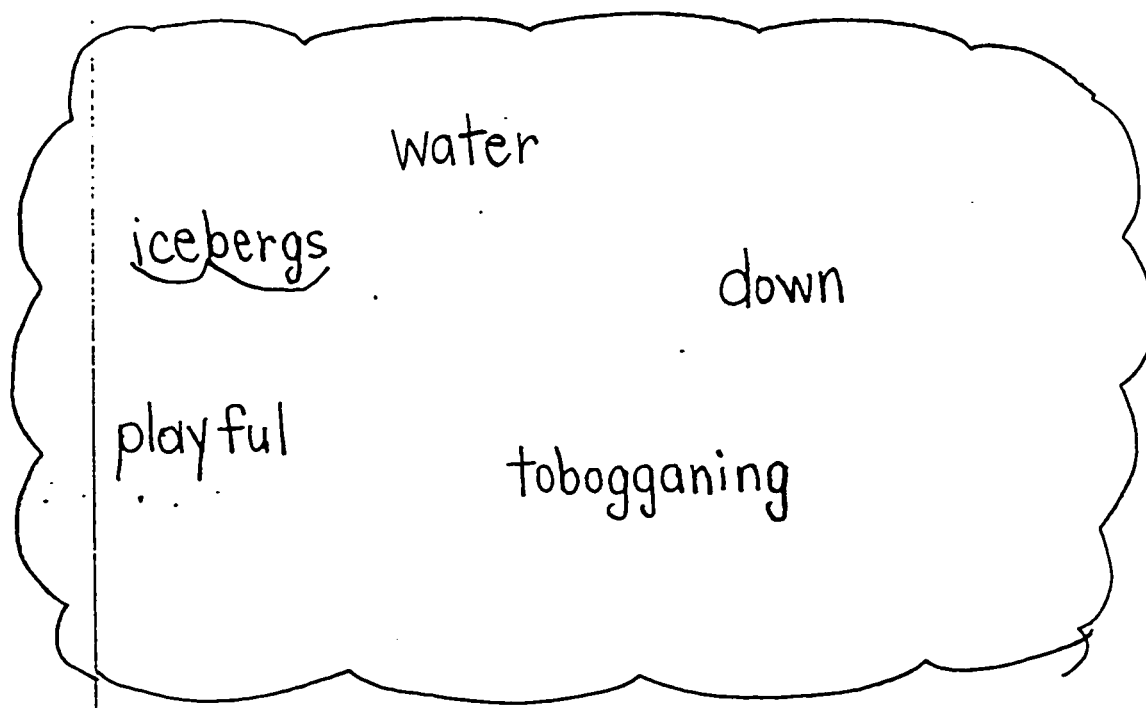
Story Writing

The bulk of instruction focused on story writing. Topics for stories were either generated by the children or provided by the teacher (e.g., "A little penguins tale"). If the children were having trouble coming up with a topic for self-generated stories they could pick a topic from the topic list on the door, or ask a friend for an idea. The children selected their best story writing to be put in their folders. During story writing the teacher

Figure 17. "Playful Penguin" Fact Sheet

Playful Penguins

Penguins are very_____. They can play on the land or in the_____. They will march up and_____. Penguins like to slide. When they slide on their bellies it is called_____. Penguins also like to ride on_____.



From the Files of W. Gray (Teacher for the Comparison Group)

Figure 18. "Jack In The Bean Stalk" Fact Sheet

Once upon a time
_____ was a boy named
_____. One day Jack
traded _____ cow for some
magic _____. These beans
grew into _____ enormous
beanstalk. When Jack
_____ the beanstalk
he had _____ adventures.

Discuss these adventures with a
friend.

From the Files of W. Gray (Teacher for the Comparison Group)

reviewed story writing rules and reminded the children that stories have a problem and a resolution. Children were also required to work on extending their story ideas in terms of making the story longer by adding more information (see Table 7 for the instructional progression of the story writing activity).

This activity is a combination of *Exploring, Constructing, and Communicating* functions of learner expectations. Although practice and experience with all of the concepts in each of the functions of learner expectations underlie this culminating activity, the more obvious directly targeted concepts will be briefly discussed.

Prior to engaging in writing, the children *explore*, identify, and set a purpose and a topic to focus their writing. Subsequently, children are actively involved in organizing their writing around a topic and focusing on the important ideas related to a topic. The children also assume responsibility for checking their work and for extending their stories while they are engaged in the *construction* of meaning. In terms of *communication* of ideas, the children structure their stories to reflect their purpose and intended audience. The children also focus on expressing their ideas in a coherent organized manner.

Conference/Edit/Extend Activities

Following completion of a story the children were required to self-edit. A self-editing sheet was given to the children and discussed. The children were asked to go through the sheet when finished a story (self-editing sheet is provided in Figure 19). After self-editing the children were ready to conference. Conferencing targeted editing and extension of ideas. The first step was to conference and to read their story with two friends. The friend's role was to provide extension suggestions through questions or "I

Figure 19. Self Editing Sheet

SELF EDITING

Name of Story				
Did I proofread?				
Do I need to add more information?				
Did I stick to the topic?				
Does my story make sense?				
Do I have an interesting beginning?				
Can I add more descriptive words?				
Can I add punctuation? periods/ question marks				
Can I add capitals or change to lower case?				
Can I add quotation marks? “”				
Did I circle words that don't look spelled correctly?				

From the Files of W. Gray (Teacher for the Comparison Group)

Table 7
Instructional Progression of Activities
Comparison Group

lesson #	journal writing	facts / info	coherence	key words	songs / poems	Authors chair	web	story frames/ booklet
1	x	x						
2			x					
3		x		x				
4		x					x	
5								
6		x			x		x	
7			x					
8	x							
9	x							
10								
11							x	
12								
13								
14					x			
15								

Table 7 continued

lesson #	reading	spelling	content worksheet activity	character	story writing	conference / extend/edit	Description, character, setting rules
1							
2							
3			x				
4			x				
5					x		
6							
7					x	x	
8							
9							
10	x				x	x	
11	x				x	x	
12			x		x	x	
13					x	x	
14					x		
15	x				x	x	

Table 7 continued

lesson #	journal writing	facts / info	coherence	key words	songs / poems	Authors chair	web	story frames/ booklet
16	x							
17								
18			x					
19								
20	x							
21								
22		x						
23	x							
24								
25								
26								
27	x							
28								
29								
30								

Table 7 continued

lesson	reading	spelling / punct.	content worksheet activity	character	story writing	conference / extend/edit	Description, character, setting rules
16							
17					x	x	
18		x				x	x
19					x	x	x
20							
21					x	x	
22							
23							
24							x
25					x	x	
26						x	
27							
28		x				x	
29		x			x		
30						x	

Table 7 continued

lesson #	journal writing	facts / info	coherence	key words	songs / poems	Authors chair	web	story frames/ booklet
31								
32	x							
33								
34						x		
35								
36	x							
37	x							
38								
39	x							
40		x						
41								x
42								
43	x							
44								
45								x
46		class	booklet	of	stories			

Table 7 continued

lesson	reading	spelling	content worksheet activity	character	story writing	conference / extend/edit	Description, character, setting rules
31					x	x	
32							
33		x				x	
34		x			x	x	
35					x		
36							
37							
38					x	x	
39							
40					x		
41							
42					x	x	
43							
44					x		
45							
46		class	Booklet	of	stories		

wonders". Following student conferencing, the children conferenced with a teacher. The teacher's role was to help the children with spelling, making sense, and extending the story (see Table 7 for the instructional progression of the conference/edit/extend activities).

This activity addresses the *Constructing* function of learner expectations. Learning is enhanced when learners assume responsibility for checking their growing understanding. In the initial stages of constructing meaning, the demands of language conventions may be temporarily overlooked in order to focus on ideas. Once the children have completed a first draft, the children make revisions by adding to or expanding on ideas or information. The children adapt, change, or rearrange ideas in response to teacher and peer feedback received during initial writing drafts.

Comparison of the Two Instructional Methodologies

In the experimental group the instructional program was a developmental program designed to recapitulate the normal sequence of narrative development. This was accomplished by building a series of conceptual bridges from one developmental level to the next. This approach was a structurally oriented approach to narrative instruction. Instruction targeted the concepts and components of story. Three major structural components of narrative were instructed: plot structure, cohesion, and coherence. Within each of the major components of narrative, three major classes of activities were targeted: *graphic*, *verbal*, and *written* activities. Instructional activities served to promote children's intuitive knowledge of story structure and content (McKeough, Case, Bereiter, et al., 1997).

In the comparison group, the curriculum program of studies focused on the importance for children to use language to *explore*, *construct*, and *communicate* meaning. This approach is a process approach to the instruction of narrative. Within a specific language skill such as storytelling, learning activities can be classified under any of these three functions. In the comparison group, instruction was divided into three main activity foci: graphic, verbal, and written activities. Each of the individual activities in these main foci groupings targeted one or more of the general language learning expectations (i.e., explore, construct, and communicate meaning).

In summary, the comparison methodology is similar to the experimental methodology since both are individualized programs and emphasize the use of age appropriate materials. Also, both methodologies use graphic, verbal, and written activities. However, the comparison methodology is a process-oriented approach, whereby activities are chosen according to learner expectations in terms of function (i.e., explore, construct, communicate meaning). On the other hand, the experimental methodology is a structurally-oriented approach with activities targeting the major structural components of narrative (i.e., plot structure, cohesion, and coherence).

Plan of Analysis

The analysis included three phases: protocol analyses, statistical analyses, and time series description. The protocol analysis involved developmentally scoring narratives with respect to plot structure level (i.e., problem/idea/failed attempt/resolution) and the use of cohesive structures (i.e., conjunctive words). The analysis of the story protocols was based on McKeough's (1992) narrative model of plot structure and Davis' (1994) model

of plot and linkage structure. Each narrative was scored as to the developmental level (see Appendix 1; Figure 1). Additionally, cohesion-producing components were examined in detail and a scoring scheme developed. This later analysis is discussed in the results chapter.

The second phase involved statistical analyses. To analyze plot structure, a two-way repeated measures simple effect analysis of variance (within group and between group) was performed (MANOVA). A one-way multivariate analysis of variance (ANOVA) was performed to analyze cohesion effects. The alpha level for all analyses was set at (.05).

The third phase involved a time series description of a subset of seven children at five instructional sample times. The analysis targeted the progression of plot structure, conjunctives, and propositional relations throughout the instructional program.

Summary

The current study involved two, grade one classrooms, one serving as the comparison group and another as the experimental group. The comparison group participated in forty-six, 40-minute instructional sessions designed to foster storywriting ability. The experimental group participated in forty-nine, 40-minute, instructional sessions designed to foster the development of narrative components. Three major components were instructed in the experimental group: plot structure (including description of character and setting), cohesion, and coherence. Three major activity foci were instructed in both the experimental and the comparison group: graphic, verbal, and written activities. Graphic, verbal, and written activities were used in the instruction of the

narrative components in the experimental group. In the comparison group the same activity foci served to target learner expectations (i.e., explore, construct, and communicate meaning). The children were supported in the production of both oral and written narratives. The oral narratives were subsequently analyzed for plot and semantic linkage structures, according to McKeough's (1986) and Davis' (1994) models of narrative structure and development. A subset of narratives was also procured and a descriptive time-series analysis applied to the development of plot structure, cohesive structures (i.e., conjunctives), coherence producing elements (i.e., propositional relations), and instructional interactions.

CHAPTER IV

RESULTS

Introduction

The purpose of the study was to investigate the relative impact of the current process-based language arts curriculum and the developmentally-based experimental program on the oral narrative productions of grade one children. Although the instructional approaches integrated both oral and written language processes, it was the oral stories that were used to assess the development of narrative.

A scoring system was developed incorporating developmental changes in the use of cohesive structures as well as the propositional relations of narrative. The new scoring system was based on two earlier systems that focused on plot structure (McKeough, 1992) and plot structure and semantic linkages (Davis, 1994).

In what follows, the descriptive analysis scoring system that emerged as a result of the research and data will be outlined. First, the scoring for plot structure and cohesive structure will be presented. This will be followed by the statistical analyses, including MANOVAs and simple effect ANOVAs. Next, the scoring for coherence relations will be provided and the results of a descriptive qualitative time-series analysis of a subset of the experimental group will be presented.

Plot Structure Scoring Criteria

The analysis of the story protocols was based on McKeough's (1992) narrative model of plot analysis (Figure 1) and Davis' (1994) adaptation of this which included detail and semantic linkage structures (Appendix 1). Each narrative was scored as to the

developmental level [Level 1 (4-year-old), Level 2 (6-year-old), Level 3 (8-year-old) or Level 4 (10-year-old)] and sub-level [(Low (semantic linkages are missing or unclear), Average (semantic linkages are provided and clear) and High (semantic linkages are provided and there is an addition of detail))]. This provided an initial placement of the narratives in terms of plot structure level as well as the use of semantic linkage structures and detail. In the earlier-developed scoring scheme (Davis, 1994), linkages were referred to as abstract semantic connections, apparent in the meaning or context, rather than as explicit word connections. Semantic linkages were considered to facilitate the fluid, temporal flow of the story elements, and to make the relations clear among the elements of a narrative. These linkages were found to develop in a progressive manner from the absence of use, to an inappropriate or unclear use, to an explicit and clear use of linkage, within each of the developmental levels of children's narratives. Stories considered rich in detail included descriptive adjectives, adverbs, and phrases.

Subsequent to the initial analysis of plot structure, semantic linkage, and detail, scoring systems were developed to incorporate cohesion (i.e., the use of explicit conjunctive markers) and coherence (i.e., propositional relations). These systems were derived from Halliday's (1978) research on the use of conjunctives and Mann & Thompson's (1987) discussion of the relations among propositions. The delineation and addition of these structures, as discussed in the following section, allows for a more complete analysis of the development of narrative.

Cohesive Structure Scoring System

In the previous analysis, linkages were defined as semantic connections apparent in the meaning or context (Davis, 1994). Further examination indicated that semantic linkages are often realized through the use of explicit words. These explicit words, known as conjunctives (Halliday & Hasan, 1976), signal interrelatedness among the propositions within a story (van Dijk, 1979). Conjunctives contribute to the semantic flow of a story. Therefore, due to their cohesive nature, conjunctives were viewed as a valuable addition to the analysis of a story. Analysis of the development of conjunctives in narrative involved an examination of type and degree of usage. The analysis of conjunctive words (i.e., “and”, “then”, “so”, “but”, and “because”) involved a count of the use of conjunctives in the narratives. The words qualified as conjunctives whether used singularly (e.g., “and”) or used in combination (e.g., “and then”). If used in combination, the conjunctive was counted in both word categories. Repeated use (e.g., “and then” - “and then”) was counted as a single instance of conjunctive use. False starts (e.g., “once there was a little boy- and then- no - who lived in the country. One day...”) were also not counted, as they were not part of the finalized narrative.

Quantitative Results

Data was analyzed from the narratives of 21 children in the comparison group and 18 children in the experimental group. Scoring and analysis was performed by the researcher. An interrater reliability check was performed on 25% of the stories by a second trained rater. Every fourth story was selected for the reliability check. Agreement

was reached with a Cronbach's Alpha of .97 on the stories and differences were resolved through discussion.

Table 8
Post-Test Results by Group and Narrative Plot and Cohesion Structures

Narrative Structural Component	Comparison		Experimental	
	Mean	Standard Deviation	Mean	Standard Deviation
Plot	5.91(6h)	2.30	8.35(8a)	1.93
Cohesion: and	14.52	10.76	13.16	10.44
then	4.87	5.68	5.74	8.49
but	1.09	2.02	3.00	2.87
so	.96	1.19	3.42	2.17
because	.65	1.03	.842	1.39

Two analyses were performed. A two-way repeated measures simple effect analysis of variance (within group and between group) was conducted in order to analyze plot structure effects. In addition, a one-way multivariate analysis of variance (MANOVA) was performed to analyze cohesion effects.

Plot Structure

Plot structure performance on the oral "problem-story" prompt was the dependent variable and group (comparison and experimental) was the independent variable. The mean scores and standard deviations are reported in Table 8.

Group Effects. The results of the statistical analysis of the post-tests indicated that there were significant differences between the developmental and process

instructional approaches. On average the MANOVA revealed a significant group effect ($F(1, 39) = 8.98, p = 0.005$). Therefore, in an analysis of the post-test results, the developmental instruction program was found to be effective in improving the level of children's oral stories in terms of plot structure level to a greater degree than the process approach to teaching storytelling.

Time Effects. There were significant multivariate time effects found in a comparison of the pre- and post-tests of the developmental and process instruction groups. The MANOVA revealed a significant time effect for the developmental instruction group ($F(1, 39) = 19.97, p = .000$). However, the time effect for the process instruction group was not significant ($F(1, 39) = 2.19, p = .147$). These time effects suggest that the developmental narrative instruction program was effective in encouraging conceptual change and improving the level of children's oral stories from pre- to post-instruction. In the developmental instruction group, all students, on average, improved in the level of plot structure produced following narrative instruction. The oral stories in the process group, however, were not significantly different from pre- to post- instruction in terms of plot structure level.

Interaction Effects. Significant results were found in an examination of the effects of the developmental instruction program on the level of plot structure in the oral stories. The MANOVA revealed a significant group by time interaction effect ($F(1, 39) = 4.69, p = 0.037$). This suggested that the developmental narrative instruction program directly interacted with and resulted in an increase in the level of structural complexity of plot in the stories.

Conjunctive Use

The one-way multivariate analysis of variance (MANOVA) was performed to analyze cohesion effects. Performance on the use of conjunctive words was the dependent variable and group (comparison and experimental) was the independent variable. The mean scores and standard deviations are reported in Table 8.

Group Effects. A MANOVA performed on conjunctive use in the oral story post-tests revealed a significant group effect ($F(5, 36) = 3.79, p = 0.007$). In other words, the results of the statistical analysis of the post-tests indicated that there were significant differences between the developmental and process instructional approaches. The students in the developmental instruction group evidenced greater improvements, than did the students in the comparison group, in both frequency and type of conjunctive use. This indicates that developmental instruction was successful at increasing the level of conjunctive use in oral stories.

Time Effects. There were significant multivariate time effects found in a comparison of the pre- and post-tests of the level of conjunctive use in the developmental and process instruction groups. The developmental program was effective in encouraging a greater use of conjunctives from pre- to post instruction. Follow-up simple effect analyses of variance (ANOVAs) also indicated a significant time effect ($F(5, 36) = 9.11, p = .000$) in conjunctive use. There were significant time effects for the conjunctives “but” and “so” for the developmental instruction group. However, there were no significant time effects for the conjunctives “and”, “then”, and “because”. These results indicate that the

developmental narrative instruction program was effective in encouraging the use of more complex conjunctives (i.e., “but” and “so”) from pre- to post instruction. Specifically, the developmental instruction group improved in the level of conjunctive use following narrative instruction to a significantly greater degree than did the process approach group.

Interaction Effects. Significant results were found in an examination of the effects of the developmental instruction program on the frequency and type of conjunctive word use in the oral stories. The MANOVA revealed a significant group by time interaction effect ($F(5, 36) = 4.55, p=0.003$). This suggested that the developmental instruction program directly interacted with, and resulted in an increase in, the level of conjunctives produced in oral stories, in terms of increased frequency of use and more complex types included.

There were no significant effects in the group by time MANOVA analysis for the conjunctives “and” ($F(1,40) = .07, p = .789$), “then” ($F(1,40) = .20, p = .658$), and “because” ($F(1,40) = .13, p = .722$). These conjunctive types (i.e., additive and temporal) naturally appear in the stories told by children in grade one, and therefore, would not be expected to increase dramatically as a result of instruction. Instruction of these conjunctives would serve to consolidate their use in preparation for the addition of more advanced types of conjunctives.

However, there were significant effects in the group by time MANOVA analysis for the conjunctives “but” ($F(1,40) = 5.01, p = .031$) and “so” ($F(1,40) = 18.15, p = .000$). The significant instruction effects for these two conjunctives

may be due to their more complex nature in terms of the hierarchy of use. In other words, since the conjunctives “but” and “so” are slightly more advanced forms, they would respond to direct mediated instruction.

Follow-up simple effect analyses of variance (ANOVAs) were performed on those conjunctive words that revealed significant effects in the group by time MANOVA analysis. The ANOVAs revealed that there were no significant group differences for the pre-test of the conjunctive “but” ($F(1,40) = .00, p = .995$), however, there was a significant group difference for the post-test of the conjunctive “but” ($F(1,40) = 6.40, p = .015$). The ANOVAs also revealed a significant time effect for the conjunctive “but” in the experimental group ($F(1,40) = 12.77, p = 0.01$). There was no significant time effect for the conjunctive “but” for the comparison group ($F(1,40) = .37, p = 0.549$).

An ANOVA was also performed for the conjunctive “so” and revealed no significant group differences for the pre-test of the conjunctive “so” ($F(1,40) = .08, p = .778$). There was, however, a significant group difference for the post-test of the conjunctive “so” ($F(1,40) = 21.87, p = .000$). The ANOVAs revealed a significant time effect for the conjunctive “so” in the experimental group ($F(1,40) = 53.59, p = 0.000$). There was no significant time effect for the conjunctive “so” for the comparison group ($F(1,40) = 2.96, p = 0.093$).

Summary

In summary, there was a significant group effect, time effect and group by time interaction effect for plot structure. In other words, analyses indicated that the experimental program was effective in promoting plot structure in narrative. There was

also a significant group effect, time effect, and group by time interaction effect for cohesion (i.e., conjunctive word use). The analyses indicated that the experimental program was effective in promoting cohesive structure in narrative.

Propositional Structure Coherence Scoring System

In the following section, coherence in terms of propositional relations is addressed. The scoring and analysis for plot structure and cohesion of narrative was previously described in chapter three. This section will present and discuss the coherence scoring system that evolved from the data incorporating plot structure, cohesion, and propositional relations. The scoring system that was developed was used in a descriptive time series analysis of the narratives of a subset of seven children. By way of review, coherence analysis involves the identification of the propositions of a narrative, the relations among the propositions, and the identification of the hierarchical structure of a narrative. The analysis provides information regarding the text parts of children's narrative, how they are arranged, and how they develop to form a coherent whole. The descriptive analysis was conducted on a sampling of oral narratives selected at five points in time throughout the instruction. The aim of the analysis was to examine developmental gains in plot structure, cohesion (as indicated by an increase in the number, type, and relation of conjunctives), and coherence (as indicated by an increase in the "breadth" and "depth" of propositional use).

Although we know that narratives are composed of propositional microstructures (Mann and Thompson, 1985; van Dijk & Kintsch, 1983), we do not currently have an understanding of the manner in which propositional relations develop. In an effort to

describe this development, a scoring system was devised that targeted the propositional structure of children's narratives¹. The scoring system was built on Mann & Thompson's (1985) assertion that text is organized in terms of a structural hierarchy and that relations exist among the component propositions of a text. The analysis of coherence stems from work by Mann and Thompson (1987) on Rhetorical Structure Theory (RST). As a descriptive framework for text, Rhetorical Structure Theory provides a method to identify hierarchic structure in text and the relations among the parts. Therefore, Mann and Thompson's approach to the analysis of propositional relations provides a good fit to the narrative development framework (McKeough, 1987; Davis, 1994) which underlies this study, as the two are hierarchical in nature.

According to Cook (1989), a proposition is "a unit of meaning which can be realized in different linguistic forms and which can be expressed as a simple declarative sentence (p. 158)". In other words, propositional microstructures are units of information that are self-standing pieces of information, or self-contained ideas. Propositions may be realized in a reported, or a direct speech, form. Reported speech includes those propositions that are recounted by a second person, such as, "She said she doesn't like chocolate ice-cream!". Direct speech includes those propositions that are recounted in the first person. Direct speech is indicated in the form of a quote, or in the voice of a character (e.g., She said, "I really like chocolate ice-cream!") and is often signaled through the use of words that identify the speaker (e.g., "She said").

¹ Several other theories of coherence have been offered (Grice, 1975; Schlegoff, 1973 ;and Goffman, 1974) however, they address relations in terms of semantic principles (i.e., ascribed meaning) rather than in terms of organizing principles (i.e., hierarchic structure).

The current study limits analysis to relations between adjacent propositions because normally, in the stories of young children, relations are restricted to proximal (i.e., neighbouring) propositions (Mann & Thompson, 1987). As children develop they are better able to extend relations and to maintain propositional coherence beyond adjacent relationships.

Two descriptors were created to characterize the contribution of various propositional relationships to the individual narratives, namely, “breadth” and “depth”. These terms distinguish between propositions that advance the narrative storyline and those that add depth to the narrative through additional descriptive information. In this manner the terms “breadth” and “depth” describe the spatial organization of the propositional analysis of children’s narratives. Specifically, the spatial concepts of “breadth” and “depth” were designed as a means of describing the hierarchical structure of narrative and the relations among the propositions that define the hierarchy (see Figure 20 for sample of stories analyzed in terms of these two descriptors.)

Propositions in a narrative may serve to advance either the “breadth” or the “depth” of a narrative depending on the nature of their structural relationships. The basic structural relationship of propositions can be categorized as either coordinated, or equal and relatively independent statements, or as subordinated and dependent in relationship to other propositions. That is, propositions may be independent and separate, or they may be dependent upon other propositions.

Independent propositions provide primary information and move the narrative forward by signaling episodic or event advancement along the storyline. In this way such

propositions contribute to the “breadth” of a narrative. Dependent propositions contribute to the narrative by elaborating and providing additional or subsidiary information related to a primary proposition. As such, they contribute to the “depth” of a narrative. In what follows, each type of proposition is described and sub-types identified. A division of the types of subsidiary information facilitates coding and provides a more complete delineation of the nature of the detail provided.

In summary, a “breadth”/“depth” analysis of propositions offers, to the study of narrative development, a means of understanding incremental change in young children’s storytelling. In order to analyze the concepts of “breadth” and “depth”, stories were subdivided into propositions. A breakdown of the propositional relations (including independent and dependent propositions), their contributions to the “breadth” and “depth” of a narrative, and accompanying examples, are provided in the following discussion.

Independent Propositions

Independent propositions typically are *self-contained* primary units of information (e.g., “the girl went to the park”). In some cases, an independent proposition is presented in the form of listings of associated propositions. In other words, what may initially appear as representing more than one proposition is actually a listing of information or actions that are typically associated (e.g., “he got out of his car and picked up the kids”). Listings, therefore, are treated as a single, primary, self-contained, proposition.

Dependent Propositions

There are two types of presentations of dependent propositions. The first type involves two successive adjacent propositions, one of which is in a subordinate

relationship to the other (e.g., “The little girl played on the soccer team. She had brown hair.”). The second also involves two propositions, however, one proposition is embedded within, and is subordinate to, the other proposition (e.g., “The little girl, who had brown hair, played on the soccer team.”). These two types of presentations of dependent propositions provide two kinds of subsidiary information: elaborative or subtopic. Elaborative and subtopic information are both considered descriptive detail related to the primary topic, however the nature of the information differs.

Elaborative Information

Elaborative information is presented in the form of a proposition that offers descriptive detail that is directly related to the topic. Elaborative dependent propositions (e.g., “the little girl, who had brown hair, played on the soccer team”) represent two propositions: “the little girl played on the soccer team” as a primary topic, and “who had brown hair “ as an elaboration, in this case, embedded. In some cases, elaborations are in the form of lists of detail that are created as sets (e.g., “they had bright blue eyes and brown shaggy fur”). The listing of descriptions is treated as a single propositional entity. Elaborations (descriptive detail) may be provided for places, objects, and characters. In the case of a character elaboration, the descriptions provide information regarding features or attributes (e.g., “They were very tall.”) and information regarding kinship relations (e.g., “ Their mom was the same as them.”).

Subtopic Information

Subtopic, dependent propositions (e.g., “The little girl, who went to our school, was a ballerina.”) represent two propositions. “The little girl was a ballerina” represents a

primary topic, and “who went to our school” represents a subtopic, in this case, embedded . While elaborations offer descriptive detail directly related to the topic, subtopics involve details that are tangentially related to the primary topic. For example, if the topic is “ice cream”, possible elaborations would include statements about “proof of liking” (e.g., “I bought an ice-cream cone at the store and the ice-cream was delicious.”), or “the flavour” (e.g., “I bought an ice-cream cone at the store. It was vanilla and chocolate.”). However, subtopics of the topic “ice cream” may be about “the shop” (e.g., “I bought an ice-cream cone. I bought it at the ‘Flavours’ store.”) or “the cost” (e.g., “I bought an ice-cream cone and the cone cost \$2.50.”). The above are examples of successive propositions in terms of their location with respect to each other.

Indicator words often facilitate identification of dependent propositions. Words such as “that”, “which”, and “who”, may be used to signal an embedded proposition. In the above examples of subtopic and elaborative information, the embedded proposition is indicated by the use of the word “who”. However, there are instances in which such markers are not visible. Under these conditions, a judgement is required on the part of the analyst to decide whether the embedding should be treated as a dependent proposition or as an independent proposition.

Descriptive adjectives located adjacent to a noun (e.g., “she wore a blue velvet dress”) are not viewed as an elaboration since such descriptions are not in the form of a propositional unit of information. Rather, they are in the form of conceptual units of information, and therefore, do not advance the propositional level of structural

complexity. Adjectives add to the quality of a narrative, however, they do not visibly impact the overall structural progression of the story in terms of “depth” and “breadth”.

Breadth and Depth Analysis

It is important to identify the independent and dependent (embedded and successive) propositions in a coding system in order to address the propositional levels of structural complexity. The analysis of propositions, as categorized units of information that together form a structural complexity, provides a more complete map of the development of narrative, as a whole, and of development in its constituent phases. The “breadth” and “depth” analysis of propositions was designed to capture this structural complexity of narrative.

An increase in narrative “breadth” occurs when information is primary in nature and serves to move the narrative forward by signaling episodic or event advancement. Information is provided in the form of an independent topic proposition. An increase in narrative “depth”, however, occurs when information is provided in the form of additional, or subsidiary, information related to a primary independent topic proposition. Therefore, from the perspective of “depth”, a dependent proposition may serve the role of developing the topic proposition. Additional or subsidiary propositions may, in turn, be supported by additional levels of subsidiary propositions (subtopics or elaborations). An additional subtopic may be introduced from a previous subtopic or a previous elaboration. When an additional subtopic is introduced from a previous subtopic it adds to the degree of depth. If the additional subtopic is introduced from a previous elaboration, however, it contributes to the “breadth” of the narrative adjacent to the previous elaboration. Each

level of subsidiary information contributes to the degree of narrative “depth” in a cascading pattern of detail. In this way, the level of propositional structural complexity is woven as the narrative telling continues. The levels of “depth” of a narrative represent the levels of descriptive detail that are provided. An analysis of the number of levels of descriptive detail, as well as the composition of each of the levels, provides information regarding the development of the structural complexity of narrative.

Conjunctivity

Conjunctivity is important in an analysis of propositions in that it serves to explicitly mark a cohesive relationship between adjacent propositions within a narrative. Conjunctions were chosen because they indicate the nature of the relational information between propositions and help determine whether the proposition advances the storyline (i.e., increases the “breadth” of the analyzed story) or provides detail (i.e., increases the “depth” of the analyzed story).

The temporal marker “then” is often a marker for primary topic information (e.g., “The boy ate a sandwich for lunch “then” he went outside to play”). The causal conjunctive “so” also signals a primary topic proposition (e.g., “The boy’s bicycle was broken in the fall “so” he took it to the repair shop”). The other causal conjunctive “because” indicates a subtopic proposition (e.g., “He went to the store to buy a new fire truck “because” he lost his old one”) or an elaborative proposition (e.g., “He went to the store to buy a fire truck “because” he really likes fire trucks”). In the first example, using the conjunctive “because”, the subsequent proposition indicates a previous condition or reason (i.e., a subtopic), that prompted the child to buy a new fire truck. In the second

example, the elaborative proposition provides additional descriptive information about “why” the child bought a fire truck.

The word “and” is additive and may signal either primary independent propositions (e.g., primary- “The girl went swimming “and” after that she went to see a movie”) or subsidiary dependent (subtopic or elaborative) propositions (e.g., subtopic- “The girl went swimming and the water was very warm”). The first example, using the conjunctive “and”, represents two primary and separate topics (i.e., “swimming” and “movie”). The second example, provides a description of the subtopic “water” with “swimming” being the primary topic. The word “and” can also be found within propositions, however, it is the use of the conjunctive “and” between propositions that is targeted.

The conjunctive “but” is adversative in nature and may signal either a primary proposition or a subsidiary elaboration (e.g., primary- “He hurt the dragon when he swung his sword “but” the dragon got up and breathed fire at him again.”; elaborative- “He hurt the dragon when he swung his sword “but” he didn’t swing hard enough”). In the first example, the proposition signalled by the conjunctive “but” indicates a successive primary action that moves the story forward (i.e., the dragon retaliated). In the second example, the proposition signalled by “but” is a description of the “swing” of the sword.

Conjunctives, therefore, facilitate coding by explicitly signaling adjacent propositions and providing indicators of the relational nature of the ties, and subsequently, the spatial location of the propositions in terms of narrative “breadth” and “depth”. On occasion, the explicit marker may be absent or misleading. However, there is often an inferred relationship that accounts for the sense of coherence. In other words, despite the absence

of a conjunctive marker, the relationship among the propositions can be inferred from the “type” of information presented in the propositions (e.g., elaborative or subsidiary).

Notational System

For every analytical framework there is the challenge of developing a notational system to best reflect the framework’s categorization. In this work, the different propositional relations within the matrix are represented by four example items, as follows;

1) *1 (topic) - 2 (topic)*

The first notational example represents a “breadth” of 2 propositions and a “depth” of one with no levels of descriptive detail. A story excerpt illustrates the notation: “(1) he had a problem because he was polka dotted (2) so he tried to wipe them off. In this example, the first proposition represents a primary topic problem while the second proposition, also a primary topic, provides an attempt to remediate the problem.

2) *1 (topic)* *1* *2 (subtopic)*

A second example of a type of notational system represents a “breadth” of one proposition (representing primary information with one primary topic item) with a “depth” of two (representing one level of descriptive detail, containing one item of descriptive detail). A story excerpt illustrates the notation: “(1) then there came an Allosaurus (2) the creature that poked him in the stomach”. In this example, the first proposition represents a primary topic, the arrival of the Allosaurus, and the second proposition provides a descriptive subtopic about a previous act committed by the Allosaurus.

- 3) *1a (topic)*
 1
 b (elaboration)

The third notational example represents a “breadth” of one proposition (representing primary information with one primary topic item) with a “depth” of two (representing one level of descriptive detail, containing one item of descriptive detail). Although the second and third examples are similar in terms of the overall matrix, the specific nature of the description provided in the first level of descriptive detail, differs. Example two provides subtopic information and example three provides elaborative information. An excerpt from a story example illustrates the notation: “(1a) One day there was a little girl that was running away from her home (1b) and she kept on doing it. In this example, the first proposition represents a primary topic, the girl running away. The second proposition represents a description, elaborative in nature, of the status of the running away behaviour (i.e., repetitive).”

- 4) *1a (topic)*
 1
 b (elaboration) 2 (subtopic)

The fourth notational example represents a “breadth” of one proposition (i.e., primary information with one primary topic item) with a “depth” of two (i.e., indicating one level of descriptive detail, containing a total of two items of description: one elaborative item, and one subtopic item related to the previous elaboration). This example is structurally more complex than example three in that there are two items of descriptive detail in the “depth” of the story, rather than one. An excerpt from a story illustrates the notation: (1a) Once there was two dogs (b) and they had floppy ears. (2) Their mom was

the same as them. In this example, the first proposition is a primary topic introducing the two dogs. The second proposition is elaborative in nature and provides a description of the dogs' ears. The third proposition is a subtopic in that it provides an additional topic, the mother dog, that stems from the previous topic, a description of the ears of the two dogs (see Figure 20 for further examples of the notational system applied to story analysis).

Coherence Analysis Decision Making Process

The process or sequence of decisions in analyzing the structural complexity of narrative, in terms of a propositional analysis, calls for questions to be asked and decisions to be made regarding the nature of propositions and the relationship between the propositions. The first question in the analysis is “ Does the proposition serve to advance the storyline?” If the answer is “yes”, the proposition is viewed as contributing to the ‘breadth’ of the narrative and is coded as either a primary topic independent proposition or a primary topic independent embedded proposition. If the proposition is a primary topic then it is given the next number in the sequence (e.g., 2), and placed on the first line adjacent to the previous topic independent proposition as shown in the following:

1 (topic) - 2 (topic).

If the answer is “no”, the proposition does not serve to advance the storyline, the proposition is considered subsidiary information contributing to the “depth” of the narrative and the next question asked is “Does the proposition provide elaborative or subtopic subsidiary information?” If the proposition provides elaborative information the relationship between the propositions is signaled by adding a letter to the primary topic

number (e.g., *2a*) and linking it to the subsidiary elaborative information with the subsequent letter in the alphabet (e.g., *b*). The letter *b*, representing the elaborative information, is placed beneath, at the next level of descriptive detail. This coding signals the nature of the elaborative relationship between the two propositions as shown in the following:

2a (topic)
|
b (elaboration)

On the other hand, if the proposition provides subtopic information it is coded with the next number and placed beneath the topic proposition at the next level of descriptive detail. This coding (2-3) signals a subtopic relationship with the topic proposition as shown in the following:

2 (topic)
|
3 (subtopic)

An additional decision that may need to be made in the process of analyzing narrative structural complexity occurs when there are additional levels of subsidiary propositions that contribute to the “depth” of the narrative . The question to be asked in this case becomes “Does the proposition provide additional elaborative or subtopic subsidiary information?”. If the proposition provides elaborative information it is coded with the next letter of the alphabet in the grouping to which it belongs. It is then placed on the next level of descriptive detail. The coding signals the additional elaborative information provided for the topic (*1a*), as shown in the following:

1a (topic)
 |
b (elaboration)
 |
c (elaboration)

(1a) represents a topic proposition and contributes to the “breadth” of the narrative. (b) and (c) are both elaborative in nature and contribute to the “depth” of the narrative.

If the additional subsidiary proposition is instead a subtopic, it is coded with the next available number and placed at the next degree of delicacy of descriptive detail. The coding signals a subtopic relationship with the previous topic (1a) as shown in the following:

1a
 |
b
 |
 2

(1a) represents a topic proposition and contributes to the “breadth” of the narrative. (b) represents elaborative information and contributes to the “depth” of the narrative. (2) represents a subtopic and also contributes to the “depth” of the narrative.

If the subtopic relationship is with the previous elaboration, the alpha-numeric coding remains the same, however, the placement of the subtopic changes. The subtopic proposition is instead placed in the next “breadth” position of the matrix at the same level of depth as the previous elaboration to which it is related, as shown in the following:

1a (topic)
 |
b (elaboration) – 2 (subtopic)

(1a) represents a topic proposition and contributes to the “breadth” of the narrative. (b) represents elaborative information and contributes to the “depth” of the narrative at that point in the narrative. (2) represents a subtopic that does not contribute to “depth”, in terms of additional degrees of delicacy of detail, but rather contributes additional texture within the existing “depth” of the narrative.

The resulting matrix of the “breadth” and “depth” of narrative lends itself to an analysis of the progression of a child’s storyline or plot development. Levels of descriptive detail, in terms of narrative “depth”, as well as the number of propositions within each of the levels, helps to establish the structural complexity of narrative.

Figure 20
Examples of Propositional Story Analysis

4 Average (see Appendix 1 for Davis' scoring criteria of plot structure levels)

(1) A bee went on somebody's nose and stung it (2) and a dog ran away to south Africa (3) and then a fish swallowed the Atlantic ocean (4a) and a turtle got old (b) and he had no teeth left (5) a witch grew pimples (6) and then a vampire lost their sharp fangs (7) then the devil burned himself .

Notation:

1	2	3	4a	5	6	7
			b			

Discussion:

(1, 2, 3, and 4a) represent topic propositions and contribute to the “breadth” of the narrative by advancing the plot. (4b) is elaborative in nature and contributes to the “depth” of the narrative. The resulting narrative has a breadth equal to 7 and a “depth” equal to 2. The narrative matrix has one level of descriptive detail containing one item of elaboration.

4 High

(no examples)

6 Low

(1) The Polka dot dragon (2a) he was very sick (2b) he threw up (2c) he sneezed really hard (3) he couldn't go outside anymore (4) he couldn't play in the snow (5) he couldn't build a snowman (6) he couldn't play with his friends (7) he couldn't blow fire anymore (8) he was smaller (9) he got sicker and sicker (10) he took his medicine (11) he doesn't have anymore scales (12) he doesn't have anymore wings (13) he couldn't do anything anymore (14) he almost felt better (15) and he played with his friends (16) and built a snowman (17a) he played with his toys (17b) he played with his stuffed animals (17c) he played with his dragon toys (18) he went to a dinosaur place (19) he grew bigger and bigger (20) he had wings again (21) he had scales (22) he had more polka dots (23) he can blow fire now.

Notation:

1	2a	3	4	5	6	7	8	9	10	11
	↓									
	b - c									
12	13	14	15	16	17a	18	19	20	21	22
				↓						
				b - c						
23										

Discussion:

(1, 2a, 3, ...17a, 18, 19, 20, 21, 22, and 23) represent topic propositions and contribute to the “breadth” of the narrative by advancing the plot. (2b and c, and 17b and c) are elaborative in nature and contribute to the “depth” of the narrative. The resulting narrative has a “breadth” equal to 23 and a “depth” equal to 2. The narrative matrix has one level of descriptive detail containing four items of elaboration.

6 Average

(1a) One day there was a little girl that was running away from her home (1b) and she kept on doing it (2a) and she was doing this (2b) because her parents kept on getting mad at her (2c) but she couldn't help it from running away (3) so one day she decided to say to her mom, mom I'm sorry for running away all those times (4) and her mom said I forgive you (5) and after that she never ran away again.

Notation:

1a	2a	3	4	5
b	b			
	c			

Discussion:

(1a) represents a topic proposition and contributes to the “breadth” of the narrative by advancing the plot. (1b) is elaborative in nature and contributes to the “depth” of the narrative. (2a) represents a topic proposition and contributes to the “breadth” of the narrative. (2b and 2c) are elaborative in nature and contribute to the “depth” of the narrative. (3) is a topic proposition that contributes to the “breadth” of the narrative. The resulting narrative has a “breadth” equal to 5 and a “depth” equal to 3. The narrative matrix has two levels of descriptive detail containing three items of elaboration.

6 High

(1a) Once there was two dogs. (b) And one of the dogs names was Amanda (c) and the other was Allyssa (d) and they were twins. (e) They had bright blue eyes, brown shaggy fur (f) and they also had floppy ears. (2) Their mom was the same as them (3) and their

dad was too. (4) And then one day the family got lost (5) but the dad was at work. (6) And they were on their way to the dad's work (7) but they didn't know where it was. (8) And then the dad was on his way home (9) and he saw them (10) and he was in his car (11) and he saw them (12) and he got out of his car and picked up the kids (13) and then they all went home. The End.

Notation:

1a	4	5	6	7	8	9	12	13
b - c						10 - 11		
d								
e - f	2 - 3							

Discussion:

(1a) represents a topic proposition and contributes to the “breadth” of the narrative by advancing the plot. (1b, c, d, e, and f) are elaborative propositions and contribute to the “depth” of the narrative. (2 and 3) are subtopic propositions that are introduced off an elaboration and contribute to structural complexity within the “breadth” of the narrative. (4, 5, 6, 7, 8, and) represent topic propositions that contribute to the “breadth” and advance the plot. (10) represents subtopic subsidiary information and contributes to “depth”. (11) represents a subtopic of (10) and a reiteration of (9) and contributes to the items of description within a “depth” level rather than increasing the number of levels of “depth”. (12 and 13) are topic propositions that advance the plot. The resulting narrative has a “breadth” equal to 9 and a “depth” equal to 4. The narrative matrix has three levels of descriptive detail containing five items of elaboration and four subtopic items.

8 Low

(1) One day there was a baby Teradodon (2) he was flying through the air (3) then a sea monster nuked his head up in the air (4) and he bit the Teradodon (5) the baby Teradodon fell down then in the water (6) then he had another baby (7) the baby flew up (8) and then a dinosaur tried to bite him (9a) but instead he escaped (9b) he was too small (10) and then he grew and grew and grew into a big one (11) then he squashed the T-Rex and he killed it. The End. (12) and then there came an Allosaurus (13) the creature that poked him in the stomach (14) and then he died (15a) and then there was this other Triceratops (15b) that was running around the fields toward a baby (16) and then a big Anklosaurus spiked his head (17) and he died. The End.

Notation:

1	2	3	4	5	6	7	8	9a	10	11	12
								'			'
								b			13
14	15a	16	17								
	'										
	b										

Discussion:

(1, 2...9a, 10... 15a, 16, 17) represent a topic proposition and contribute to the “breadth” of the narrative by advancing the plot. (13) represents subtopic subsidiary information and contributes to narrative “depth”. (15b) is an elaborative proposition that also contributes to the “depth” of the narrative. The resulting narrative has a “breadth” equal to 16 and a “depth” equal to 2. The narrative matrix has one level of descriptive detail containing two items of elaboration and one subtopic item.

8 Average

(1a) Once upon a time there was a dragon (1b) named polka (2) he had a problem because he was polka dotted (3) but the other dragons weren't (4) so he tried to wipe them off (5) but they still didn't come off (6) so he tried shaving cream (7) but they still didn't come off (8) and then he went into the water (9) and then all his fire got burnt out (10a) so he had to go to a doctor (10b) to get the spots off (11) and then the doctor got some special cream and wiped it on his polka dots (12) and then they were gone. The End.

Notation:

1a	2	3	4	5	6	7	8	9	10a	11
b									b	

12

Discussion:

(1a, 2...10a, 11, and 12) represents topic propositions that contribute to the "breadth" of the narrative by advancing the plot. (1b and 10b) are elaborative propositions and contribute to the "depth" of the narrative. The resulting narrative has a "breadth" equal to 12 and a "depth" equal to 2. The narrative matrix has one level of descriptive detail containing two items of elaboration.

8 High

(no examples)

10 Low

(1) Once there was a sky scraper. (2) He was so big (2a) that he was wiggling around (3) one day he fell (4) and then a little piece of him fell off (5) and a man came and picked it up (6) and put it into the chocolate factory (7) and then when it was finally done he tried to bite it (8) but his teeth fell out (9a) so he called it the unbiteable chocolate (9b) instead of biting it you had to lick it and suck on it (10) and then one day somebody put the skyscraper back up (11a) but whenever somebody looked at it, (11b) the biggest sky scraper in the world, they always saw a little piece of him that wasn't there (12) so one day a little boy got a piece of paper (13) and tried to put it and got to the top of the building and put it there (14) but it started to fly away (15) so the next day he tried to he put a speaker right there (16) and whenever and but it stayed there (17) but whenever somebody spoke the people inside of the skyscraper heard what everybody was saying out there (18) and one day the skyscraper was closed (19) because it was too big (20) so one day they shut it down (21) and then they opened it (22) and then they closed it (23) and then they opened it (24) and then they closed it (25a) and then finally a little mouse, ((25b) named Cheesy), went into the building (26) and tried to get the speaker (27) he thought the top of it was cheese (28) but it wasn't (29) so when Cheesy spoke in the speaker the skyscraper started to waddle again (30) then it got a little bit bigger (31a) and the piece that had nothing in it had a thing to fill it (31b) it was a little piece of cheese (32) but the mouse didn't see the cheese (33) so he just went back down the skyscraper (34) then he finally fell (35) and the little mouse fell down with the skyscraper (36) and then they went

to the bottom of the earth (37) and the sky scraper started to fall into the sea (38) and he turned into a little people.

Notation:

1a / b / c	2	3	4	5	6	7	8	9a / b	10	11a / b
12	13	14	15	16	17	18 / 19 - 20	21	22		
23	24	25a / b	26	27	28	29	30	31a / b	32	33
34 / 35	36	37	38							

Discussion:

(1a, 2, ...8, 9a, 10...11a, 12...18, 21, 22, 23, 24, 25a, 26...30, 31a, 32, 33, 34, 36, 37, 38) represent topic propositions and contribute to the “breadth” of the narrative by advancing the plot. (1b, 9b, 11b, 31b) are elaborative propositions and contribute to the “depth” of the narrative. (1c) is an additional elaborative proposition and contributes to the “depth” of the narrative. (25b) is an embedded elaborative proposition contributing to “depth”.

(19, 20 and 35) are subtopic propositions and also contribute to “depth”. The resulting narrative has a “breadth” equal to 35 and a “depth” equal to 3. The narrative matrix has two levels of descriptive detail containing six items of elaboration and three subtopic items.

10 Average

(1) Once there was a little girl (2) she liked dinosaurs (3) trouble was dinosaurs were extinct (4) and so she went to the museum (5) but the museum was closed (6a) then she went to her Grandmas (6b) her grandma liked dinosaurs also (7) but her grandma didn't know too much about dinosaurs (8) so she went to her Uncle (9) all her family loved dinosaurs (10) but they didn't know too much about dinosaurs (11) and so she fainted (12a) and when she fainted, ((12b) she loved dinosaurs so much that), she went back into the time of dinosaurs (13) then she saw the early early dinosaurs and then the middle dinosaurs and then the last dinosaurs (14) then she fell back into bed (15) and she wished she could do that again (16) so she fainted (17a) but nothing happened (17b) it only would happen once and that was all (18) and so she went to the museum when it was open (19) and she learned more and more each day about dinosaurs (20) and she lived happily ever after. The End.

Notation:

1	2	3	4	5	6a	7	8	10	11	12a
					,		,			,
					b		9			b
13	14	15	16	17a	18	19	20			
				,						
				b						

Discussion:

(1, 2, ...6a, 7, 8, 10, 11, 12a, 13, 14, 15, 16, 17a, 19, 20) represent topic propositions and contribute to the “breadth” of the narrative by advancing the plot. (6b, 12b, 17b) are elaborative propositions and contribute to the “depth” of the narrative. (9) is a subtopic proposition and also contributes to “depth”. The resulting narrative has a breadth equal to 19 and a depth equal to 2. The narrative matrix has one level of descriptive detail containing three items of elaboration and one subtopic item.

Time Series Descriptive Results

The narratives of a subset of seven children were tracked in order to provide a more complete picture of the interactions between the teaching and learning processes. An overview of the instruction segments is presented. This is followed by a discussion of individual children's unique narratives. Subsequently, general trends that emerged from the data are reported and are illustrated by examples from two children whose performance differed.

Structural Analysis

A descriptive content analysis was conducted on narratives procured from seven grade one children. These narratives were collected at strategic transitional time points, during the instructional phase of the study, corresponding to advances in the teaching of plot structure level. The time points marked the end of an instruction block (each block consisting of between eight to sixteen teaching sessions). Examination of a combination of narrative elements was undertaken in the time series analysis. The elements addressed were plot structure, cohesion (as measured by conjunctive word use), and coherence, (as measured by propositional relations).

Plot Structure Analysis of Session Blocks

Block 1 (Sessions 1-15).

During these sessions, the instruction focused mainly on teaching event structure stories (i.e., narratives that involve the production of scripts where events are presented in single episodic sequences). The aim of this instruction block was to solidify the children's understanding of story as an action-based script and to create a level of comfort with the context and teaching prompts. To meet this aim, children were asked to orally recount

event sequences from stories. As well, they were prompted to depict their stories in line drawings, within picture frames, in order to encourage them to reflect on their knowledge of story structure.

The last two lessons, following instruction of event structures, included an introduction to problem-resolution structured stories (i.e., narratives that contain two combined scripts, one centering on a problem episode, and the other on a resolution episode). The introduction to problem-resolution structure stories was done through teacher story reading and discussion. The shift to problem-resolution instruction was made when it was apparent that the children's understanding of story as an action-based script was solidified and the children exhibited a level of comfort in the classroom.

Prior to receiving instruction, six of the seven children were already producing problem-resolution stories. The analysis of their pre-test stories indicated that the mean was equivalent to a 6-year-old average level story. In other words, the stories they produced contained a problem-resolution plot structure, and were semantically cohesive (Davis, 1994).

Analysis of the children's stories in the initial stages of plot structure instruction, at the end of block 1, indicated that all of the children evidenced a boost from six average to six high level stories (see Table 9). Six-year-old high level stories contain a problem-resolution plot structure, are semantically cohesive, and include descriptive detail (Davis, 1994). The following is an example of a 6 high level story produced at the end of instruction block 1:

“Once there was two dogs. And one of the dogs names was Amanda and the other was Allyssa and they were twins. They had bright blue eyes, brown shaggy fur and they also had floppy ears. Their mom was the same as them and their dad was too. And then one day the family got lost but the dad was at work. And they were on their way to the dads work but they didn’t know where it was. And then the dad was on his way home and he saw them and he was in his car and he saw them and he got out of his car and picked up the kids and then they all went home. The End”.

It is believed that the use of line drawings during instruction allowed the children to further solidify and practice their current representation of story (i. e., 6-year-old average). As well, it is proposed that the line drawings alleviated working memory constraints thereby allowing the children to begin adding description to their stories. This appears to have resulted in the creation of stories that were at a level of a 6- year-old high story.

Block 2 (Sessions 16- 30).

During this instructional block, instructional sessions focused on teaching problem-resolution structure stories (i.e., narratives that contain two combined scripts, one centering on a problem episode and the other on a resolution episode). Problem-resolution instruction was aimed at providing a context in which the children could begin to differentiate between events and mental states, as well as encouraging them to begin coordinating the two. For example, a character experiences a problem and feels a negative mental state associated with the problem. Hence, the character wants to return to a positive mental state and this triggers some sort of action to remediate the problem. These instructional sessions also provided the children with experience in the production

of a more advanced story plot structure, one that included a problem (negative mental state) and a resolution (positive mental state). Instructional activities involved the use of mental state icons, line drawings in frames, story starter character, and setting cards.

Analysis of the stories produced at the end of block 2, during instruction in problem-resolution structure, indicated that the mean story level produced was that of an 8-year-old average story. This was an increase in plot structure complexity from the previous block of sessions, from a 6 high level to an 8 average level (see Table 9). Individually, however, only five of the seven children evidenced an increase in plot structure level, while two of the children remained at the previous level. The following is an example of an 8-year-old average level story produced at the end of instruction block 2:

“Once upon a time there was a dragon named polka he had a problem because he was polka dotted but the other dragons weren’t so he tried to wipe them off but they still didn’t come off so he tried shaving cream but they still didn’t come off and then he went into the water and then all his fire got burnt out so he had to go to a doctor to get the spots off and then the doctor got some special cream and wiped it on his polka dots and then they were gone. The End”.

The increase in structural complexity from that of a 6-year-old story to a 8-year-old high story is consistent with the instructional emphasis. Teaching focused on the production of problem-resolution stories with the aid of line drawings. The line drawings are proposed to facilitate the production of a story with a more complex plot structure by alleviating working memory constraints. Also, instruction focused on incorporating character mental states with the events. This, in turn, was believed to facilitate the production of a higher

level narrative plot structure. Of the two children that produced narratives at the previous 6-year-old plot structure level, one child produced a narrative that was more semantically cohesive and the other child added more descriptive detail. Therefore, the focus for these two children during this instruction block was on producing a more advanced narrative in terms of the addition of other narrative components (i.e., semantic cohesion and description).

Block 3 (Session 31- 43) .

During this instructional block teaching continued to focus on the elaboration of problem-resolution structures in which a story includes a problem (negative mental state) and a resolution (positive mental state). The last two instruction sessions introduced stories whose structure contained a failed attempt structure stories. Failed attempt structure stories included a problem (negative mental state), a failed attempt at remediating the problem, and a resolution (return to positive mental state). Instructional activities involved line drawings, written stories, story re-telling, and story starter cards. Mental state icons were depicted in line drawings in picture frames to allow the children to reflect on the new story structure.

Analysis of the plot structure level of the stories produced at the end of block 3 instruction indicated that the mean level of stories dropped from 8-year-old high to 8-year old low (see Table 9). Five of the seven children exhibited this drop in plot structure level. The following is an example of a typical 8-year-old low story produced at the end of instruction block 3:

“One day there was a baby Teradodon he was flying through the air then a sea monster nuked his head up in the air and he bit the Teradodon the baby Teradodon fell down then in the water then he had another baby the baby flew up and then a dinosaur tried to bite him but instead he escaped he was too small and then he grew and grew and grew into a big one then he squashed the T-Rex and he killed it and then there came an Allosaurus the creature that poked him in the stomach and then he died and then there was this other Triceratops that was running around the fields toward a baby and then a big Anklosaurus spiked his head and he died. The End”.

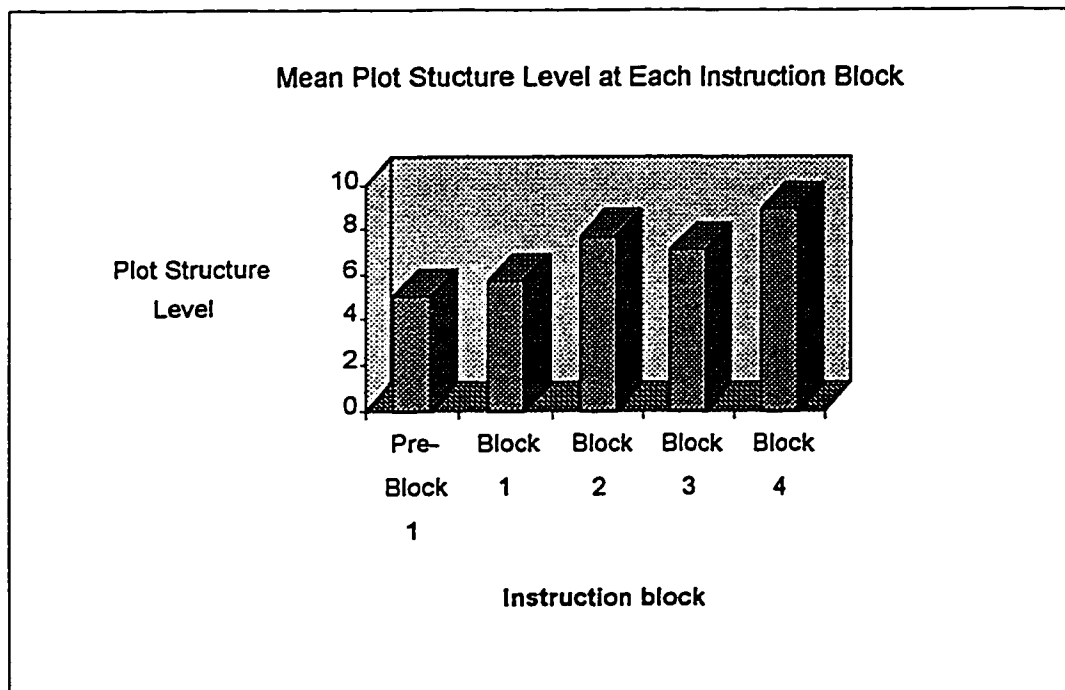
The use of mnemonics during this instruction block alleviated working memory constraints, thereby facilitating the production of a failed-attempt story. However, there was a decrease in terms of the production of stories that were semantically cohesive, from 8-year-old high to 8-year-old low. This decrease is consistent with the instructional emphasis. Teaching during this instructional block focused mainly on problem-resolution plot structures (i.e., 6-year-old average stories), with the last two sessions preceding sampling time introducing failed attempt stories (i.e., 8-year-old average stories). The change of focus in level of plot structure instruction from 6-year-old stories to 8-year-old stories, may have temporarily adversely affected the level of production of stories. The reason for the drop in level, in terms of semantic cohesion, lies in the nature of the activities. The use of line drawings and mental state icons prompted the children to consciously examine the level of story structure. The focus on understanding and consolidating the plot structures and associated mental states may cause a temporary drop in the cohesion of the stories as a result of working memory constraints.

Block 4 (Sessions 44- 51).

This block of instructional sessions focused on teaching failed-attempt stories that contained a problem (negative mental state), a failed attempt at remediating the problem, and a resolution (return to positive mental state). The goal of the instruction was to advance the children's understanding of story to include a failed attempt to solve the problem with an eventual return to a positive mental state (resolution). Instruction, therefore, focused on solidifying the children's understanding of story to include the incorporation of a failed attempt. Stories were depicted in line drawings in picture frames with the use of mental state icons to allow the children to help alleviate working memory constraints. Instructional activities included discussion of failed attempts, identification of failed attempts, turn taking in generating the components of a problem-failed attempt-resolution story, oral stories, line drawings, and the use of mental state icons.

Following failed-attempt (8-year-old level) instruction, all of the children were successfully producing stories at or above the instructed level, with a mean level of story at 8-year old high (see Table 9). Four of the children were producing stories at the 8-year-old level and three of the children were producing stories at the ten-year-old level.

The return in mean story structure level produced, from 8-year-old low to 8-year-old high, was consistent with the instructional focus. The children were further instructed in problem-failed attempt-resolution type stories using mental state icons and line drawings. The use of mnemonics facilitated the final consolidation of the 8-year-old plot structure and alleviated working memory such

Table 9

that the children were able to additionally include descriptive detail in their stories. Three of the children further advanced to the production of 10-year-old level stories. These three children may have successfully consolidated the 8-year-old plot structure, and with the aid of the instructional mnemonic, were able to produce a more advanced story at the 10-year-old level.

Cohesion Analysis

In order to examine children's story cohesion the use of five main conjunctives were instructed. The targeted conjunctives were "and", "then", "because", "so", and "but". Instruction focused on the nature and use of each conjunction in promoting cohesion and signaling propositional information. The following is a description of the use of the conjunctives at each of the sample times.

Conjunctive Analysis of Session Blocks

A discussion of each of the instruction blocks will facilitate understanding of the progression of conjunctive use. Such a discussion will also provide insight into the instructional impact on conjunctive use.

Block 1 (Sessions 1- 15).

Instruction in the use of conjunctive words to provide cohesion was limited during this block of sessions to either teacher modeling or to prompts given during story re-telling (i.e., children provided part of the story and the teacher prompted for the next part by saying the word "and" or "then"). Direct instruction instead focused on facilitating an understanding and solidification of story structure as well as familiarization with the instructional methods.

Analysis of the stories produced at the end of the block indicated that the mean use of the additive conjunctive “and” and the adversative conjunctive “but” (see Tables 10 and 14) decreased, whereas the use of the causal conjunctives “so” and “because” (see Tables 12 and 13) increased. The use of the temporal conjunctive “then” remained consistent during this block of sessions (see Table 11).

The increase in the use of “so” and “because” is thought to have occurred as a result of the instructional focus on extending events and adding character thoughts and feelings (e.g., sad or happy). The instruction and subsequent increase in the use of the conjunctives “so” and “because” (that serve to prompt for additional information) is consistent with the increase in the level of stories produced (i.e., problem-resolution structure stories) (see Table 15 for frequency of word use per story).

Block 2 (Sessions 16- 30).

During these instructional sessions, within the problem-resolution plot structure instruction, lessons also focused on the use of conjunctive words to provide cohesion. The two conjunctives taught were “and” and “because”. The aim of this instruction was to help the children to produce more cohesive stories through the use of additive (“and”) and causal (“because”) conjunctives. These conjunctive words signal relationships among the parts of the text and help to create cohesion. Conjunctive instructional activities were integrated with plot structure activities so that the teaching focused on the use of the two conjunctives within a problem-resolution story. Instructional activities consisted of story mapping on easel paper with conjunctives provided as a prompt between frames, inserting

appropriate conjunctive words (written on cards) between cut up story frames, and re-ordering the conjunctives.

Results indicated that the children demonstrated an increase in the use of the instructed conjunctives “and” and “because” (see Tables 10 and 13). However, the increase in the use of “because” was relatively small (see Table 13). There was also an incidental increase in the use of the conjunctives “so” and “but” (see Table 12 and 14).

The use of the conjunctive “then” remained at the same level of use as at Block 1. As explained earlier, the increase in use of the two causal conjunctives “because” and “so” is believed to result from the instructional emphasis on producing problem-resolution stories and on incorporating character thoughts and feelings. The increase in the instructed conjunctive “and” is proposed to have occurred due to its facilitative role in the provision of description and additional information of all types. The incidental decrease in the mean use of the adversative conjunctive “but” is thought to have occurred as a result of the instruction focusing on the production of problem-resolution stories, which are not adversative in nature (see Table 15 for frequency of word use per story).

Block 3 (Sessions 31 - 43).

During these instruction sessions, teaching focused on the use of the conjunctives “so” and “then”. The aim was to help the children to produce more cohesive stories and facilitate the production of problem-resolution type stories through the use of the causal conjunctive “so” and the temporal conjunctive “then”. The instructional activities included inserting the conjunctives (written on cards) between frames, mixing up the placement of

the conjunctive words and re-ordering, and oral storytelling in pairs using the conjunctives “so” and “then”.

This block of sessions resulted in an increase in the mean use of the instructed conjunctive “then” and a decrease in the instructed conjunctive “so” (see Tables 11 and 12). Incidental increases also occurred in the use of the conjunctives “and”, “because”, and “but” (see Tables 10, 13, and 14).

The instructional emphasis at this point in time was on incorporating descriptions of character and setting into problem-resolution structure stories. The instructed increase in “then” is consistent with the provision of temporal information in the production of problem-resolution structure stories while the incidental increase in “and” is consistent with the addition of description. The decrease in the causal conjunctive “so” may be a result of an attempt to incorporate more “because” and “but” conjunctives into the stories. The increase in the use of “because” may be a result of the previous instructional focus. The causal conjunctive “because” was instructed in Block 2 to facilitate explanations and the addition of description. The adversative conjunctive “but”, however, facilitates the production of a failed attempt stories which quite a few of the children were producing at this point in time (see Table 15 for frequency of word use per story).

Block 4 (Sessions 44 - 51).

During this instruction block, following failed attempt instruction, teaching focused on the use of the adversative conjunctive “but”. The use of the conjunctive “but” was integrated within problem-failed attempt-resolution stories. The aim was to use the adversative conjunctive to help prompt the inclusion of a failed attempt. The children

participated in a paired activity that involved generation of one part of the story and prompting for the next part through the use of the word “but” (written on a card).

The stories evidenced a substantial increase in the instructed adversative conjunctive “but” (see Table 14). Also, there was an incidental resurgence of the conjunctive “so” as well as a continued substantial increase in the use of “and” and “then” (see Tables 10, 11 and 12) . However, the causal conjunctive “because” decreased in use (see Table 13).

The instructional focus on the production of failed-attempt stories and the use of the adversative conjunctive “but” may have resulted in the large increase in use. The production of failed attempt stories requires both types of information, which may have resulted in the increase in use of “and” and “then”. The children continued to practice incorporating descriptive detail, which contributes to the increase in the use of “and”, and adding to the temporal events of the story through the conjunctive “then”. The causal conjunctive “because”, however, evidenced a decrease in use since the main focus was on a resurgence of use of the causal conjunctive “so”. The conjunctive “so” provides a causal condition that serves to move the storyline forward in time (see Table 15 for frequency of word use per story).

Coherence Analysis

The instruction applicable to a coherence analysis involves an amalgamation of all of the components addressed thus far: coherence, cohesion, mental state icons, description, and plot structure. The creation of a coherent narrative involves the presentation of information in a clear and connected manner.

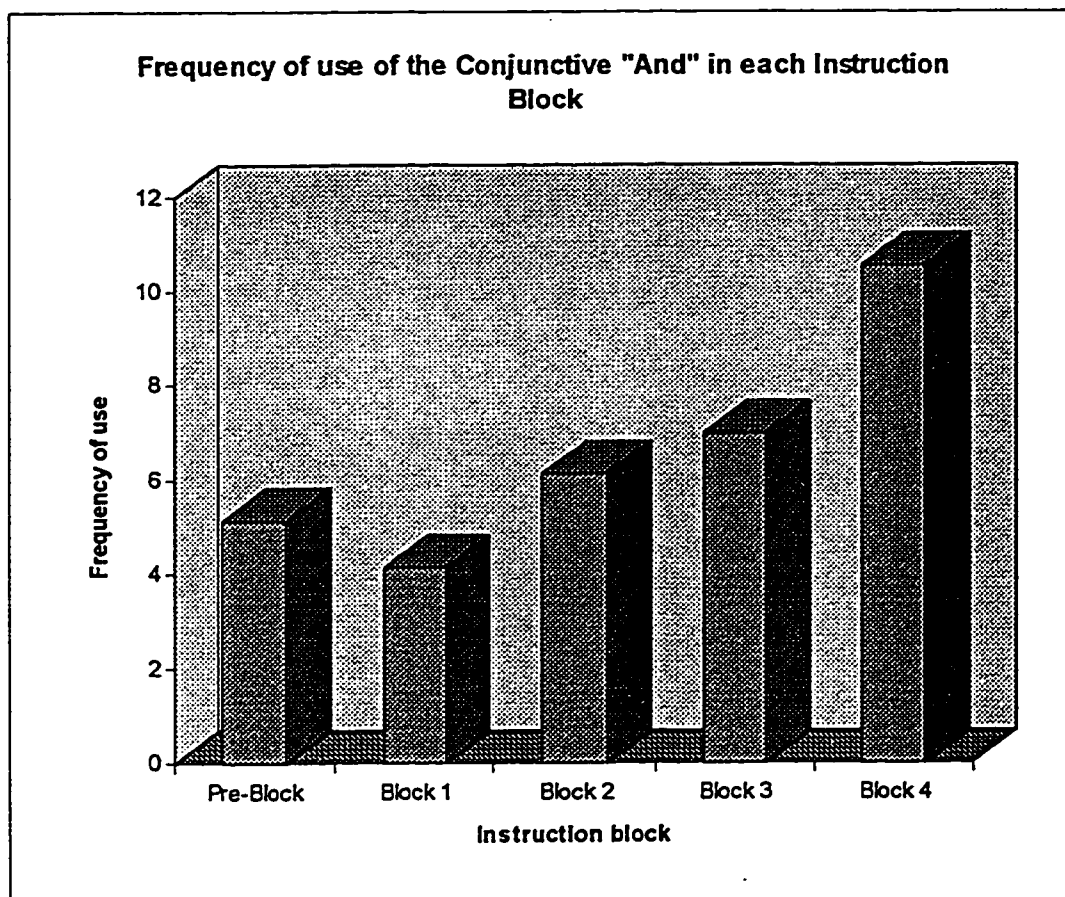
Table 10

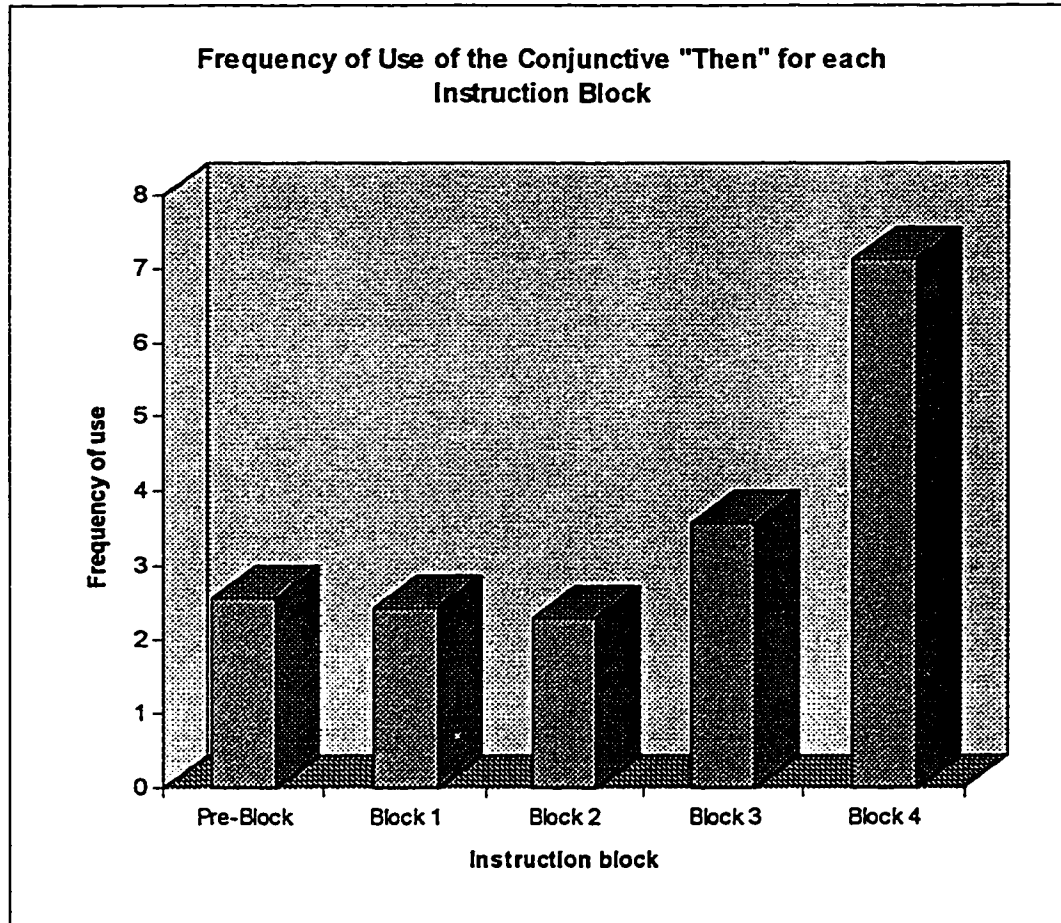
Table 11

Table 12

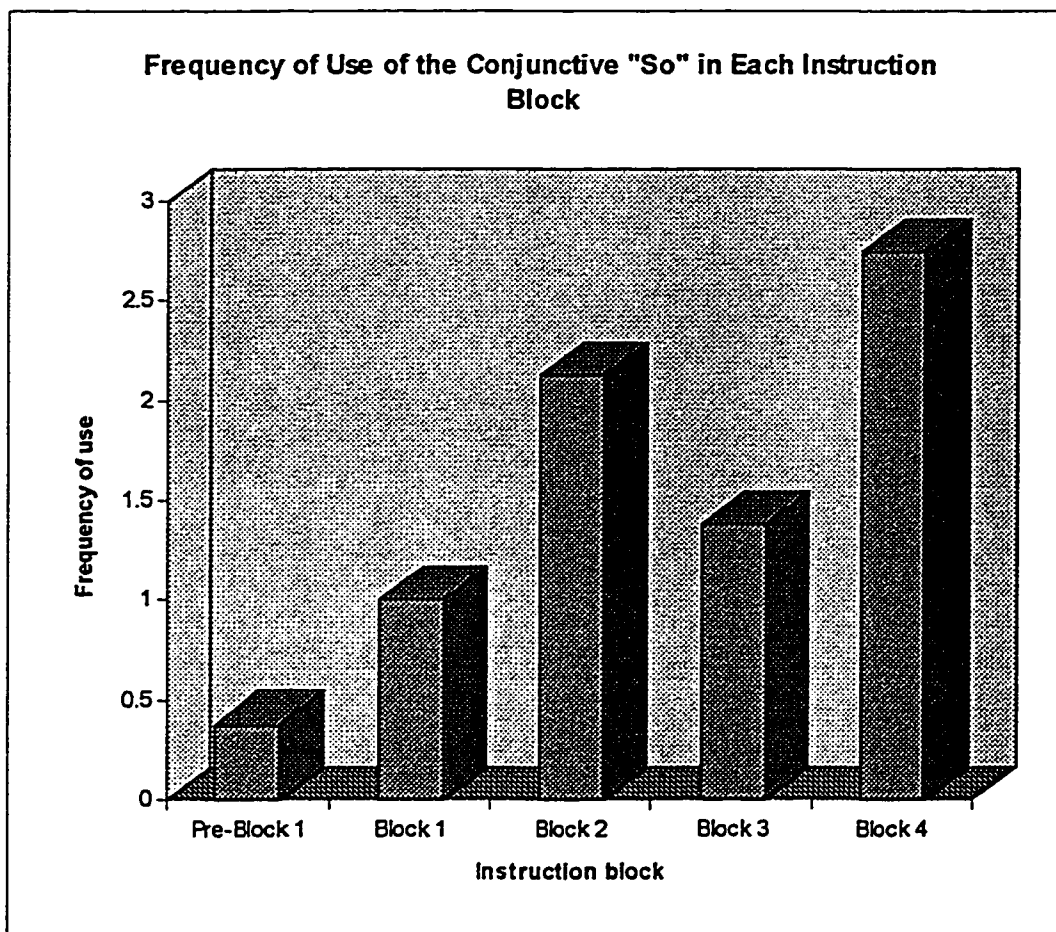


Table 13

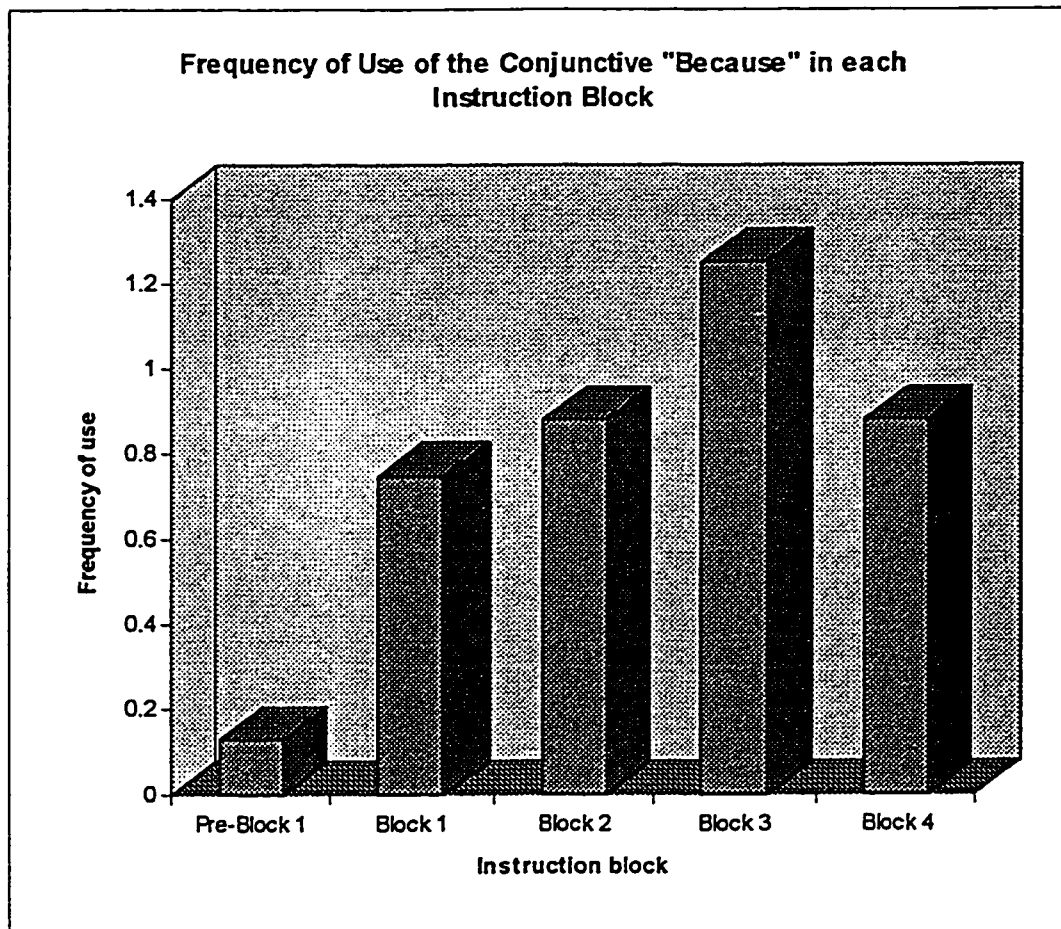


Table 14

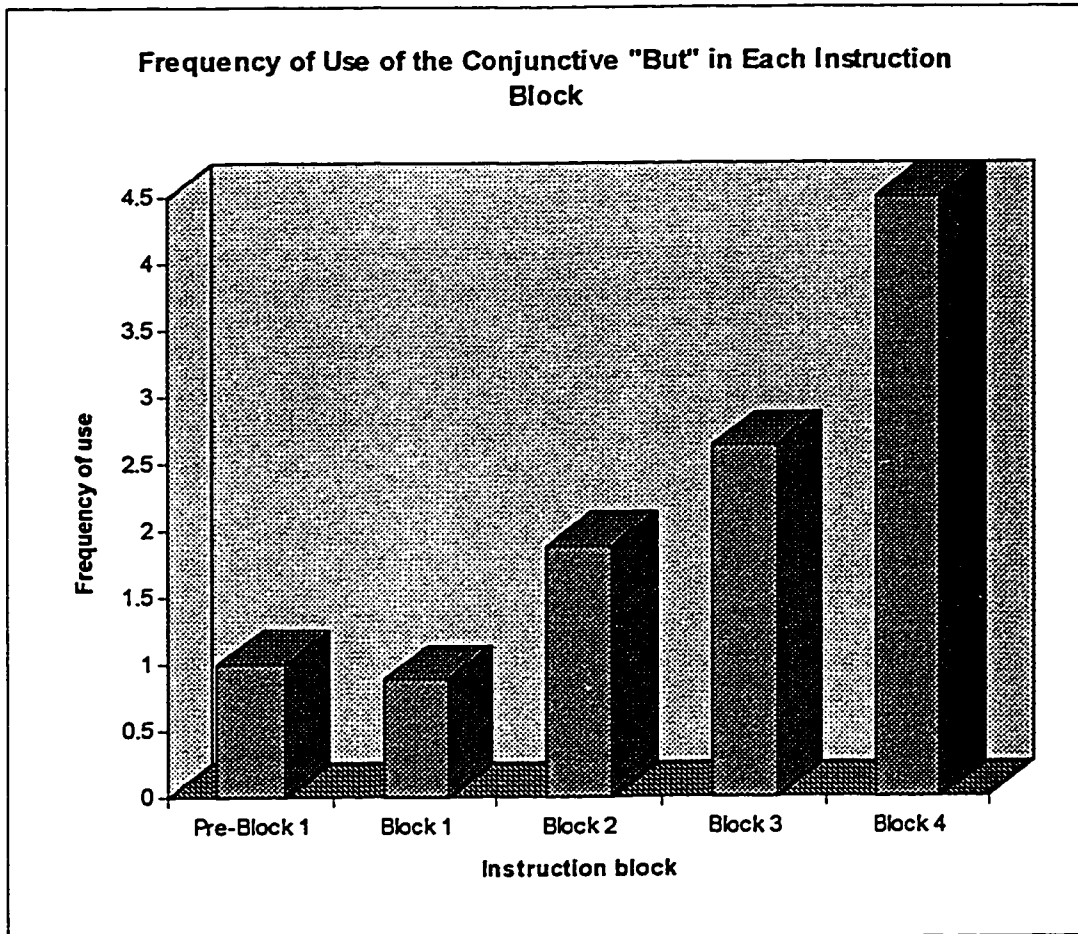


Table 15

COHESION

FREQUENCY OF WORD USE PER STORY

	AND	THEN	SO	BECAUSE	BUT
Pre-Block 1	5.14	2.57	.38	.13	1.00
Following Block 1	4.14	2.43	1.00	.75	.88
Following Block 2	6.14	2.29	2.13	.88	1.88
Following Block 3	7.00	3.57	1.38	1.25	2.63
Following Block 4	10.57	7.14	2.75	.88	4.50

A narrative is coherent when the information is appropriate to the topic, relates to previous and subsequent units of information, and appears in an appropriate order. The use of conjunctive words signals relations among the units of information thereby contributing to the coherence of a narrative. Also, the use of appropriate and meaningful descriptions of character and setting helps to facilitate coherence among the components of a narrative. The use of description provides additional information that contributes to a more complete understanding of the story. Ultimately, the appropriate integration of character, setting descriptions, and plot is critical for the production of a coherent narrative whole. Coherence analysis provides a means to target the development and use of narrative components by examining the hierarchical relations among the propositions through the use of spatial descriptors (i.e., “breadth” and “depth”).

Initially, the instructional focus, aims, and activities in each of the instructional blocks will be addressed. Subsequently, the mean development of the “breadth” and “depth” of a subset of the narratives produced by the seven children will be examined at each sample time, in terms of plot structure and propositional relations. Following this discussion, individual children’s narratives will be described to illustrate the mean group development.

Propositional Relations Analysis of Sessions

Block 1 (Sessions 1-15).

The instructional focus, in terms of coherence, was directed at the importance of information “making sense” in relation to adjacent information as well as the overall gist of the story. Specifically, discussion centered on missing information, incorrect or

inappropriate information, and improperly placed information. In order for a story to be coherent, it is important that the information makes sense, critical information is provided, and the information is presented in the correct order. Instructional activities included: mixing then re-ordering story frames, and moving one or two frames and then re-placing them in the correct location.

In terms of plot structure instruction, the focus was on event structure stories with the last two lessons introducing problem-resolution structure stories. The aim was to solidify the children's understanding of story, as an action-based script, and to create a level of comfort with the context and teaching prompts. Instruction in the use of conjunctive words was in the form of teacher modeling or prompting during story re-telling.

The instruction of mental states was introduced in the last session along with an introduction to problem-resolution plot structure. Mental state icons were used to facilitate the production of problem-resolution structure by indicating the existence of a negative state that needs to be rectified. Activities included placing thought clouds above characters indicating how they might be feeling (e.g., happy, sad, angry etc.), working in pairs to place mental state icons on story frames, and orally telling the story including the mental states.

Description instruction focused on the addition of descriptions for the character. Description serves to extend and enrich stories such that the resulting oral production is much more multifaceted and complete. The instructional aim was to facilitate the children's use of description, and ultimately, the depth of their narratives. Instructional

activities included: the addition of oral descriptions to the first frame of a story, making drawings of a character and accompanying them with oral descriptions, and writing descriptions in response to a character frame.

With respect to the analysis of plot structure during these sessions, the plot structure level remained consistent throughout Block 1. The “depth” and levels of descriptive detail (i.e., elaborative and subtopic items) in the stories remained the same prior to instruction and at the beginning of instruction. By way of review, “depth” is provided through dependent propositions that contribute to the narrative by elaborating and providing additional or subsidiary information related to a primary proposition.

There was, however, an increase in the “breadth” of the stories. The “breadth” of a story is indicated by primary propositional information that moves the narrative forward by signaling episodic or event advancement along the storyline. One of the areas of instruction in these sessions was the extension of events and the addition of information on character thoughts and feelings. The use of thoughts/feelings provides additional units of information that serve to advance plot and therefore increase the breadth of a story. Also, the preceding three lessons involved the extension of stories through the addition of successive “adventure frames”, which resulted in an increase in breadth (see Tables 16 and 17 for the number and type of propositional relations produced by each child in Pre-Block 1 and Block 1).

A discussion of an individual child’s story illustrates the above:

(1) The Polka dot dragon (2a) he was very sick (2b) he threw up (2c) he sneezed really hard (3) he couldn’t go outside anymore (4) he couldn’t play in the snow (5) he couldn’t

build a snowman (6) he couldn't play with his friends (7) he couldn't blow fire anymore (8) he was smaller (9) he got sicker and sicker (10) he took his medicine (11) he doesn't have anymore scales (12) he doesn't have anymore wings (13) he couldn't do anything anymore (14) he almost felt better (15) and he played with his friends (16) and built a snowman (17a) he played with his toys (17b) he played with his stuffed animals (17c) he played with his dragon toys (18) he went to a dinosaur place (19) he grew bigger and bigger (20) he had wings again (21) he had scales (22) he had more polka dots (23) he can blow fire now.

Notation:

1	2a	3	4	5	6	7	8	9	10	11
	I									
	b - c									
12	13	14	15	16	17a	18	19	20	21	22
				I						
				b - c						

23

In the above story, produced by Michelle, the plot structure was at a 6-year-old average level. At the beginning of instruction the cohesiveness of the story had dropped from the prior sample time and was suffering. The depth of the story dropped from 3 levels, prior to instruction, to 2 levels, near the beginning of instruction. This resulted in a drop, by 1, in the number of levels of descriptive detail. However, the number of items of elaboration (4) remained the same. Of interest in Michelle's story is the change in breadth. The breadth of the story increased from 5 to 23 units of propositional information. The drop

in cohesion and “depth” were as a result of a shift in focus from the addition of descriptive detail to the addition of information resulting in a greater “breadth”.

Block 2 (Sessions 16 - 30).

Coherence instruction during these sessions focused on ordering frames and identifying missing information. Instructional activities included: cutting up and reordering story frames, and the identification of missing frames. During these sessions, plot structure instruction focused on problem-resolution stories. Problem-resolution instruction also provided a context for the children to begin to differentiate between events and mental states and to begin coordinating the two. The aim was to facilitate the production of a story plot structure that included a problem (i.e., negative mental state) and a resolution (i.e., positive mental state). Mental state icons were used to prompt the inclusion of character mental states as well as the more advanced problem-resolution structure. Activities included: drawing line drawings of a story, adding mental state icons and then writing the story underneath the frames, incorporating the mental states, description of the mental state of a character depicted in the first frame on easel paper, and drawing frames in response to story starter cards and then attaching mental state icons.

Two conjunctives were taught: “and” and “because”. The aim was to help the children to produce more cohesive stories through the use of additive (“and”) and causal (“because”) conjunctives. These conjunctive words signal relationships among the parts of the text and help to create cohesion.

Description of character and setting were incorporated into instruction of problem-resolution plot structure. The aim was to enable the children to extend their stories and ultimately create stories with greater “depth”. Instructional activities included: introduction of setting as descriptions of where the character lived and what the surroundings looked like, descriptions of the character and setting from frames (i.e., on a regular sheet of paper and on easel paper) and from story book pictures, written stories with added descriptions of character and setting, and descriptions, generated in pairs, from character and setting story starter cards.

These sessions, during plot-resolution instruction, evidenced an increase in “depth”. It is proposed that the witnessed increase in “depth” can be attributed to instruction in description and practice received at extending stories through the addition of description (character and setting) as well as thoughts/feelings. Multiple lessons targeted description and the subsequent integration of description into problem-resolution stories. This translated into an increase in the use of elaborative items.

Some children used description to further the depth of the story while others worked on weaving further description throughout the story at existing levels of “depth”. By way of explanation, the first story example, discussed below, exhibits additional depth, whereas the second story example demonstrates the focus on weaving additional description at a particular “depth” (see Table 18 for the number and type of propositional relations produced by each child in Block 2).

The first story by Hope is as follows:

“(1a) Once there was a dinosaur (b) who lived long long ago (c) and her name was Dorothy Ann the dinosaur (d) she was a Diplodocus (2) and she had lots of friends (3) but one day they wanted to all do something else (4) they couldn’t really find out who wanted to do the most exciting (5) and so they all did their own thing (6) but then they never found each other again (7) and so they couldn’t be friends anymore (8) soon Dorothy Ann found some more friends (9) and then the friends found each other (10) Dorothy Ann was happy (11) and they lived happily ever after.”

1a	2	3	4	5	6	7	8	9	10	11
/										
b										
/										
c										
/										
d										

Hopes story remained consistent, at the 8-year-old level, in terms of plot structure and “breadth”, however it evidenced an increase in “depth” from 2 levels to 4 levels, and in levels of descriptive detail from 1 level to 3 levels. It is thought that this increase in description resulted from the instructional focus on the addition of descriptive detail.

However, there was a drop in the total number of elaborative items provided, from 5 items to 3 items. The drop in elaboration is explained by a shift in focus towards the integration of additional levels of detail at the existing plot structure level.

The second story by Alyssa is as follows:

“(1a) Once a little girl, (b) named cheetah, was walking down the path in the forest (2a) and she saw a dinosaur. (b) The dinosaurs name was terrible T-rex (3) he ate her up (4)

but then she went up to his nose (5) and tickled it (6) and terrible T-rex sneezed (7) and cheetah went flying out and landed in a nest (8a) and a pterodactyl came along (b) the pterodactyls name was Lucy. (9a) Lucy the pterodactyl was mad at her (b) because cheetah broke out of her egg (c) and the baby pterodactyl flew away (10) and then the pterodactyl kicked her (11) and she went flying all the way into a brontosaurus's nest (12a) and the brontosaurus (b) named Bronty (13) he was very was mad (14) so he kicked her all the way to London and then over France and then over China and then over Disneyland."

1a	2a	3	4	5	6	8a	9a	10	11
b	b				7	b	b	c	

12a	13	14
b		

The above story, by Allyssa, was also at an 8-year-old plot structure level, consistent with the previous time sample. However, there was an increase in the number of propositions, from 8 to 13, that contributed to the story "breadth". The "depth" of the story was consistent, from block 1 to block 2, at 2 levels, with 1 level of descriptive detail. Allyssa appeared to be focusing on incorporating description into her story as the number of elaborative items increased from 0 to 4, and the number of subtopic items increased from 2 to 5.

Block 3 (Sessions 31-43).

Coherence instruction during these sessions focused on integrating the components of narrative to create a meaningful whole. Instructional activities included: discussions of character and setting being appropriate to the story and meaningful, generation of examples of setting and characters that make sense together and those that do not (children identified the reasons for coherence or lack of coherence), linking of character and setting with problem, use of story starter cards (character and setting) to produce a coherent story, ordering of frames, and the use of cohesive words to foster coherence through identification of relations among the components of the story.

During these instruction sessions, plot structure instruction continued to focus on problem- resolution structures in which a story included a problem (negative mental state) and a resolution (positive mental state). The last two sessions introduced failed attempt structure stories. Failed attempt structure stories include: a problem (negative mental state), a failed attempt at remediating the problem, and a resolution (return to positive mental state). Instruction focused on solidifying the children's understanding of story to include the provision of a problem and a resolution. Mental state icons were used to facilitate the production of the problem-failed attempt-resolution stories by providing a mnemonic prompt that indicated the mental states of the characters. Instructional activities included: drawing frames in response to a teacher read story and adding mental state icons to indicate the character's thoughts and feelings, and writing stories that included mental states.

During these instruction sessions, instruction in cohesion focused on the use of the conjunctives “so” and “then”. The aim was to help the children to produce more cohesive stories and to facilitate the production of problem-resolution type stories through the use of the causal conjunctive “so” and the temporal conjunctive “then”.

Description instruction focused on integrating description of character and setting with the plot. Instructional activities included: discussion of the interrelationship between setting and character and problem, generation of oral stories using story starter cards (integrating character, setting, and plot), identification of descriptors from teacher read stories, and writing a problem story incorporating character and setting descriptions.

During these sessions, after problem-resolution instruction and before failed attempt instruction, the mean “breadth” of the stories remained the same. However, there was a decrease in the mean “depth” and, therefore, the levels of descriptive detail, both elaborative and subtopic. This decrease was seen despite the instructional emphasis on the incorporation of descriptive detail, especially elaborative descriptions of character and setting (see Table 19 for the number and type of propositional relations produced by each child in Block 3). An examination of a typical story illustrates the above:

“ (1) Once there was a little girl (2) she wanted to go to the park. (3) She asked her mom (4) but her mom said “no”. (5) She asked her mom “please please please” (6) she said “no.” (7) Then she had a Birthday. (8) She wanted to go to the park for her birthday. (9) Her Birthday was a surprise party. (10) For the surprise party they went to the park

she wanted to go to”.

1 2 3 4 5 6 7 8 9 10

In the above story, by Michelle, the plot structure increased from 6-year-old average to 8-year-old average. There was a decrease in “breadth” by 2 units of information, from 12 to 10. There was also a decrease in the “depth” of the story by 1 unit of information, from 2 to 1. With respect to descriptive detail there was a decrease in the number of levels of detail, by 1 level, as well as in the number of elaborative items provided, from 1 item to 0 items. Subtopics remained the same at 0 items. Despite the instructional focus on elaboration, there was a decrease in all of the components except for story plot structure. This was the first point in the instruction that Michelle has produced an 8-year-old-level story. It is proposed that, in order for this child to produce a cohesive and coherent failed attempt story, the other components are temporarily sidelined. At the next time sampling Michelle maintained the 8-year-old level and reintegrated the descriptive detail that was taught, specifically elaboration, and subsequently there was an increase in depth.

Block 4 (Sessions 44 - 51) .

During these sessions instruction on coherence was integrated with the production of failed attempt stories, description, and cohesion. Plot structure instruction focused on failed-attempt stories which were comprised of a problem (i.e., negative mental state), a failed attempt at remediating the problem, and a resolution (i.e., return to positive mental state). The goal was to advance the children’s understanding of story to include a failed

attempt to solve the problem and eventual return to a positive mental state (i.e., resolution). Instruction focused on solidifying the children's understanding of story to include the incorporation of a failed attempt.

Mental state icons were integrated with instruction in problem-failed attempt-resolution plot structure. Icons were used to indicate the character's thoughts and feelings, with the aim of facilitating production of failed attempt stories. Instructional activities included: the identification of mental states in response to teacher read story, identification and placement of icons on frames that were drawn on easel paper in response to a teacher read story, generation of written story to go with frames and placement of magnetic mental state stickers to identify character thoughts and feelings, and the incorporation of mental states in the production of oral and written stories,

During these sessions, cohesive instruction focused on the use of the adversative conjunctive "but". The use of the conjunctive "but" was integrated within problem-failed attempt-resolution stories. The aim was to use the adversative conjunctive to help prompt the inclusion of a failed attempt.

Description instruction focused on integrating descriptions of character and setting within a problem-failed attempt-resolution story. The aim was to facilitate the production of more complete stories in terms of the provision of "depth". Instructional activities included: addition of descriptions to go with a written big book story, production of oral failed attempt stories, in pairs, with retellings that focused on the inclusion of character and setting descriptions.

In terms of coherence analysis, following failed attempt instruction, there was an increase in both “breadth” and level of plot structure. The depth remained the same since the children were focused on developing the storyline resulting in an increase in “breadth”. The addition of propositions is necessary to provide enough units of information to produce failed-attempt or integrated stories. The levels of descriptive detail and elaboration remained the same, however there was an increase in subtopics which contributed to the plot and to the weaving of description into the story (see Table 20 for the number and type of propositional relations produced by each child in Block 4). Discussion of an individual child’s narrative will further illuminate the development of the production of story and the instructional interaction, as follows:

“(1a) Once there was a sky scraper. (b) He was so big (c) that he was wiggling around (2) one day he fell (3) and then a little piece of him fell off (4) and a man came and picked it up (5) and put it into the chocolate factory (6) and then when it was finally done he tried to bite it (7 but his teeth fell out (8) so he called it the unbiteable chocolate (9a) instead of biting it you had to lick it (b) and suck on it (10) and then one day somebody put the skyscraper back up (11a) but whenever somebody looked at it, (b) the biggest sky scraper in the world, they always saw a little piece of him that wasn’t there (12) so one day a little boy got a piece of paper (13) and tried to put it and got to the top of the building and put it there (14) but it started to fly away (15) so the next day he tried to he put a speaker right there (16) and whenever and but it stayed there (17) but whenever somebody spoke the people inside of the skyscraper heard what everybody was saying out there (18) and one day the skyscraper was closed (19) because it too big (20) so one day they shut it

down (21) and then they opened it (22) and then they closed it (23) and then they opened it (24) and then they closed it (25a) and then finally a little mouse (b) named cheesy went into the building (26) and tried to get the speaker (27) he thought the top of it was cheese (28) but it wasn't (29) so when Cheesy spoke in the speaker the skyscraper started to waddle again (30) then it got a little bit bigger (31a) and the piece that had nothing in it had a thing to fill it (b) it was a little piece of cheese (32) but the mouse didn't see the cheese (33) so he just went back down the skyscraper (34) then he finally fell (35) and the little mouse fell down with the skyscraper (36) and then they went to the bottom of the earth (37) and the sky scraper started to fall into the sea (38) and he turned into a little people".

1a	2	3	4	5	6	7	8	9a	10	11a
b								b		b
c										

12	13	14	15	16	17	18	21	22	23	24
						19 - 20				

25a	26	27	28	29	30	31a	32	33	34	36
b						b			35	

37	38
----	----

The above story illustrates that during these sessions, Stephen produced a story that increased in plot structure from 8-year-old low to 10-year-old low. There was an increase in the “breadth” of the story, from 17 propositional units to 35 units. The “depth” of the story, however, remained the same at 3 levels, as did descriptive detail, at 2 levels. Elaboration increased from 5 items to 6 items, and subtopic increased from 0 items to 3 items. Stephen jumped a full level in the production of plot structure, although the story was not coherent or cohesive. The current focus was on the production of a 10-year-old level story plot structure, and therefore “breadth”, and not on the provision of additional levels of descriptive detail. The additional detail that was provided, both elaborative and subtopic, was incorporated into the additional propositions in the “breadth”. Subtopics are especially important when weaving a more integrated plot structure.

Table 16. Number of Propositional Relations Provided by Each Child in Pre-Block 1.**PRE-BLOCK 1 (Before Problem-Resolution Instruction)**

Child	Units of Breadth	Levels of Depth	Levels of Descriptive Detail	Elaborative Items	Subtopic Items
1	7	2	1	1	2
2	5	2	1	2	0
3	2	2	1	0	1
4	16	3	2	6	0
5	18	2	1	2	1
6	5	3	2	4	0
7	7	2	1	2	0

Table 17. Number of Propositional Relations Provided by Each Child in Block 1.**BLOCK 1 (Beginning of Problem-Resolution Instruction)**

Child	Units of Breadth	Levels of Depth	Levels of Descriptive Detail	Elaborative Items	Subtopic Items
1	8	2	1	0	2
2	8	2	1	3	1
3	13	2	1	0	1
4	12	2	1	5	0
5	8	3	2	5	1
6	22	2	1	4	0
7	12	2	1	2	0

Table 18. Number of Propositional Relations Provided by Each Child in Block 2.**BLOCK 2 (During Problem-Resolution Instruction)**

Child	Units of Breadth	Levels of Depth	Levels of Descriptive Detail	Elaborative Items	Subtopic Items
1	13	2	1	6	1
2	16	2	1	4	4
3	8	2	1	1	0
4	11	4	3	3	0
5	8	2	1	1	1
6	12	2	1	1	0
7	21	3	2	10	0

Table 19. Number of Propositional Relations Provided by Each Child in Block 3.**BLOCK 3 (After Problem-Resolution Instruction/Before Failed-Attempt****Instruction)**

Child	Units of Breadth	Levels of Depth	Levels of Descriptive Detail	Elaborative Items	Subtopic Items
1	13	2	1	6	1
2	10	2	1	3	0
3	11	1	0	0	0
4	29	3	2	4	0
5	7	2	1	1	0
6	10	1	0	0	0
7	17	3	2	5	0

Table 20. Number of Propositional Relations Provide by Each Child in Block 4.**BLOCK 4 (After Failed-Attempt Instruction)**

Child	Units of Breadth	Levels of Depth	Levels of Descriptive Detail	Elaborative Items	Subtopic Items
1	58	2	1	3	0
2	15	2	1	0	1
3	17	3	2	3	0
4	19	2	1	3	1
5	6	1	0	0	0
6	9	2	1	1	0
7	35	3	2	6	3

Table 21

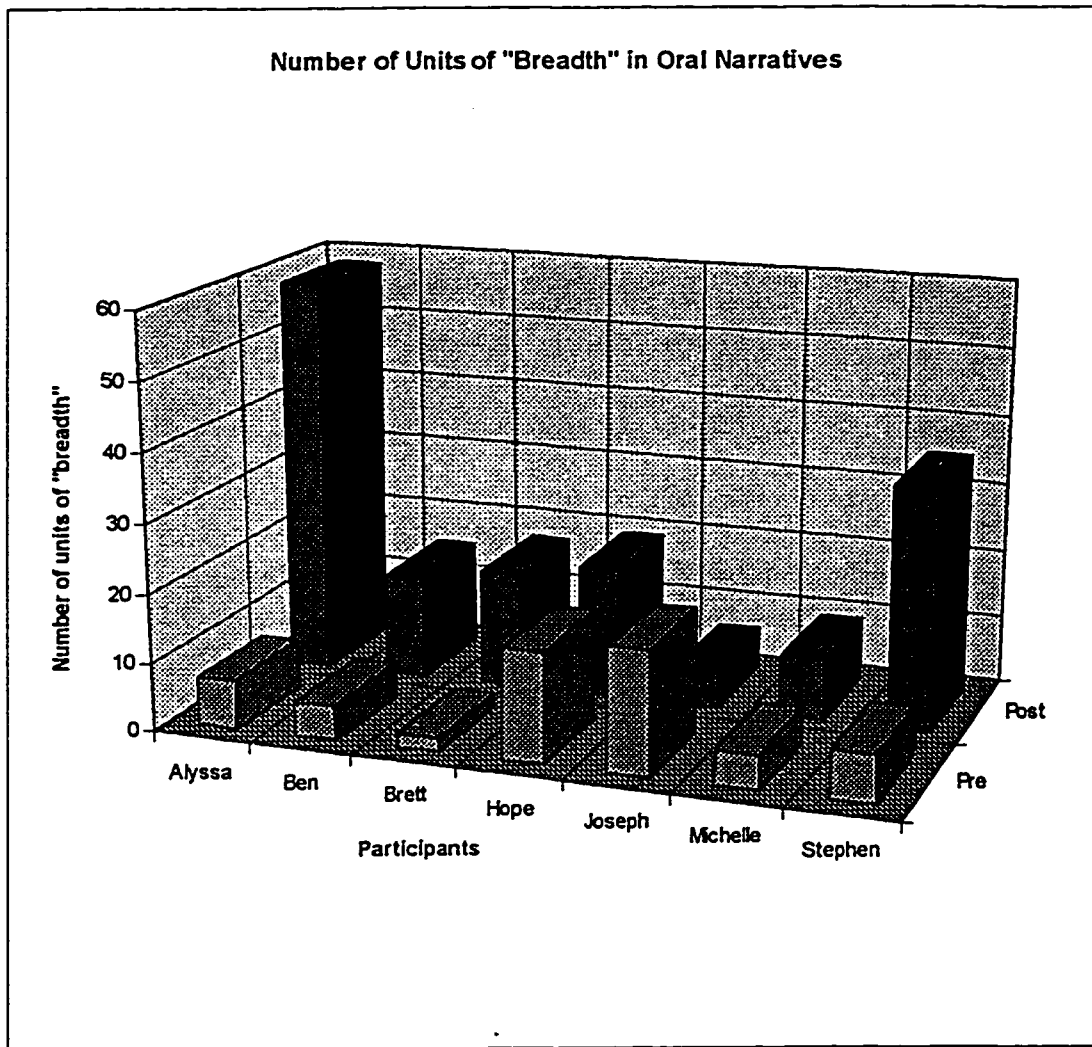
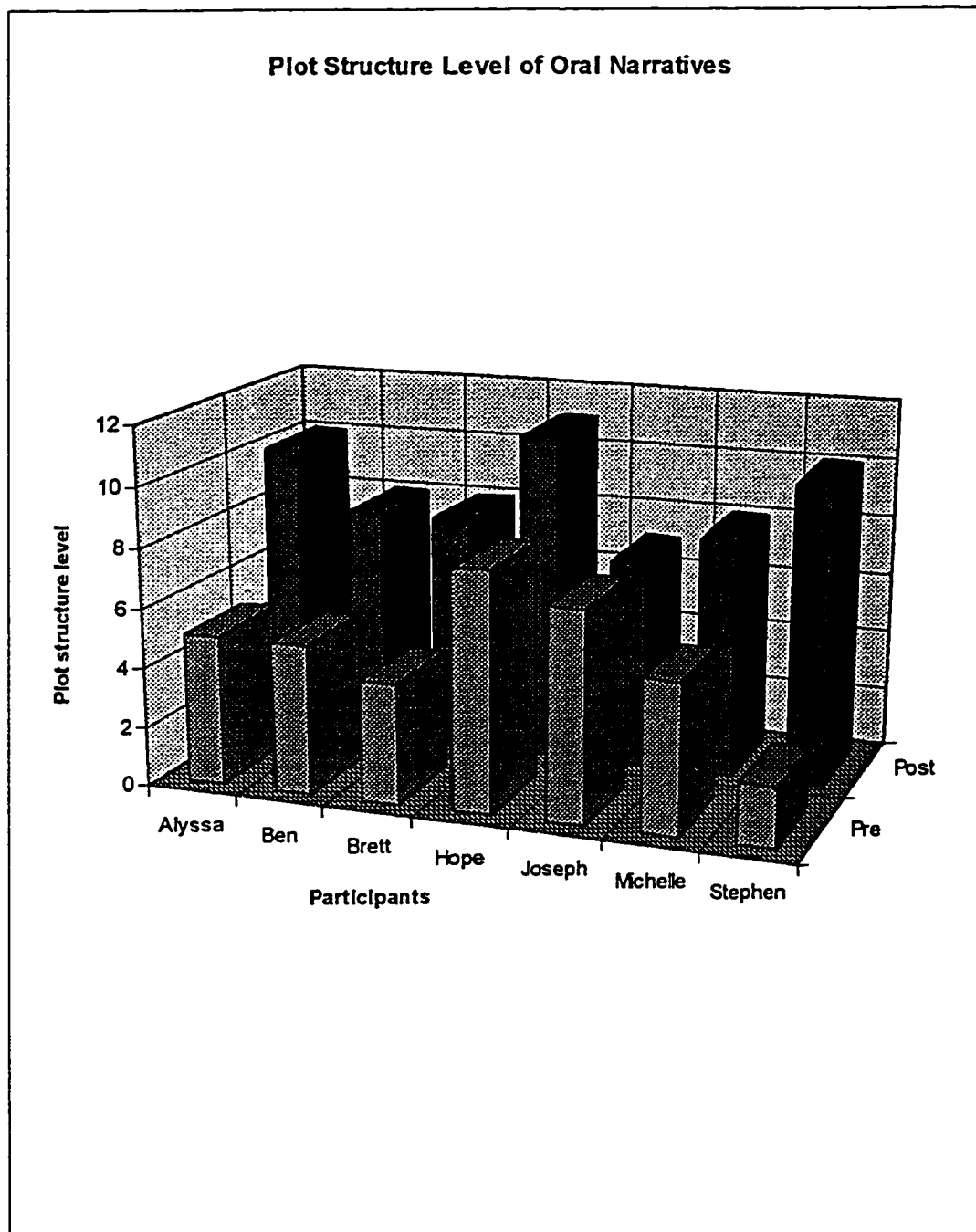


Table 22



Summary of Descriptive Analysis

The developmental instruction method using conceptual mnemonics assisted the experimental grade one class in producing more developmentally advanced oral narratives. The oral narratives produced following instruction were more advanced with respect to plot structure level. All seven students showed higher plot structural scores following narrative instruction (see Table 22).

In one case, the number of units of “breadth” a student included in her post-instruction oral narrative was lower than the number of units of “breadth” included prior to instruction (see Table 20). This decrease in the “breadth” resulted from a focus on the addition of descriptive detail and the plot structure level. The results suggest that the instruction was effective in improving the quality of students’ narrative compositions and helped them create oral narratives that were hierarchically more advanced.

Results of the detailed descriptive analysis indicate that the complexity of oral narrative produced is strongly influenced by the instructional program. It is the nature of the program that is the mitigating factor in the success of the instructional program. Specifically, the developmental program makes use of available processing capacity by employing mnemonic activities to help bridge the children in the production of oral narratives. More precisely, the use of verbal, written, and graphic mnemonics at transitional instruction points, corresponding to change in the instruction level, facilitated the childrens’ oral narrative performance.

The data here are consistent with the developmental research. While a process-oriented approach limits the level of children’s oral narrative production, a hierarchical

developmental approach maximizes the use of available working memory space. As such, the overall trends point to the importance of teaching a developmental program that utilizes a combination of mnemonic activities in coordination with developmentally ascertained changes in the concept level being instructed.

Also, a developmental instructional program necessitates the development of a scoring system that addresses and tracks the development of multiple and integrated components of narrative. Whereas McKeough's (1992) and Davis' (1994) structural scoring schemes reflect students' general understanding and production of plot, they do not adequately reflect the integration of two additional components of narrative: the use of conjunctive words to create cohesion, and the hierarchical relationships among propositions, important in creating narrative coherence. Alternately, the structural scoring scheme along with an examination of the type and frequency of use of conjunctive words, as well as a breakdown of the "breadth" and "depth" of propositional relations, more accurately depicts the development of children's oral narratives. As well, the scoring scheme tracks the development of the three components (i.e., plot structure, conjunctives, and propositional relations) and interactions with the instructional program. The analysis showed that children's production of oral narratives can be enhanced through the implementation of a developmental instruction program. The level of plot structure steadily increased, from instruction Block 1 to Block 4, with progression either declining somewhat or remaining consistent while children worked at integrating descriptive detail and, hence, adding levels of "depth". Alternately, units of "breadth" dropped during the initial production of more complex plot structures. Also, levels of "depth" decreased

while children worked at producing higher level plot structures. With respect to conjunctive word use, the production of higher level plot structures necessitates the incorporation of higher level conjunctives (i.e., “so” and “but”). In turn, these causal and adversative conjunctive words serve to signal the relationships among propositions, thereby triggering the production of more complex narrative structures.

In conclusion, this descriptive method of analysis proved to be a meaningful way of tracking the progress of the children’s oral narrative productions. Whereas instructional researchers typically examine pre-and post- changes in performance, a detailed descriptive method allows for a more accurate examination of the conceptual changes that occur as a result of instruction over time. Therefore, the current procedure indicated that a hierarchical developmental instruction program allowed the students to circumvent cognitive processing demands with the help of conceptual mnemonics. The instruction program was effective as a result of the use of activities and an instructional progression that was established in previous research. In particular, the program employed a wide range of verbal, written, and graphic mnemonics.

Summary

Theory Triangulation incorporating plot, cohesion, and coherence components of narrative, derived from narrative and discourse theories, were amalgamated into the design of a narrative instructional program. The instructional program was taught to a grade one class of students in order to determine the impact of a developmental program on the production of narrative. The generated narratives were examined for plot structure, cohesion, and coherence structures, using an expanded scoring criteria that involved the

addition of narrative cohesion and coherence structure analysis. A subset of narratives were tracked at key instruction points corresponding to shifts in plot structure, and a descriptive analysis was performed to determine the interaction between the instructional program and plot structure, cohesion, and coherence components. Results of the MANOVA indicated that a significant difference existed in terms of plot structure between the stories of the control and experimental groups. Univariate ANOVAs indicated that significant differences existed between the “but”, and “so” connectives of the control and experimental groups. No significant differences were found between the “and” and “then” connectives of the control and experimental groups. Results of the descriptive analysis also indicated that the instruction program facilitated the development of the narrative components. Instructional activities targeting a specific narrative component were followed by subsequent increases in the level of use of the component. Also, the three components (i.e., plot structure, conjunctive use, and propositional relations) demonstrated interactions in terms of their development. Specifically, the coordination of narrative plot structures necessitated a temporary drop in the level of use of the other components. Following consolidation of a new structure, the other components were then reintegrated into the narrative at the new structural level. These points are further elaborated and discussed in the Chapter V.

CHAPTER V

DISCUSSION

Introduction

This final chapter summarizes the results and interprets the findings. It begins with an introduction and a brief description of the purpose and the theoretical basis of the study, highlighting the developmental trends in children's narrative development. Subsequently, the statistical and descriptive analyses that were conducted on the data are briefly presented along with a discussion of the results. The remainder of the chapter addresses educational implications, directions for future research and practice, and identifies limitations of the study. In closure, a set of brief concluding remarks are provided.

Goals

Narrative allows for an interpretation or "meaning making" of experience (Bruner, 1986). Given the central importance of narrative in creating meaning in everyday life, it is imperative that we attempt to learn as much as possible about narrative from a cognitive developmental perspective. The primary goal of this study was to compare two instructional programs: the current language arts curriculum, based on a process approach to learning, and a developmental program, aimed at providing experience and instruction in story structure and story conventions. In order to do this, the study set out to test one major hypothesis that stated that a comparison of the two instructional programs would yield significant differences, with the developmental group producing more advanced narratives (i.e., plot structure level, and conjunctive use). Also, a descriptive analysis was

performed on a subset of narratives selected at five sample times throughout the instruction. In what follows, the developmental theoretical basis for the study will be briefly presented.

Developmental Trends in Children's Narrative Development

The major prediction for the study was based on previous research regarding the development of narrative plot structure, cohesive devices, and propositional relations. Research on plot structure development, based on Case's neo-Piagetian theory of cognitive development (Case, 1992; Case et al., 1993) and McKeough's theory of plot structure and instruction (McKeough, 1992), indicates that significant developmental changes in the structural complexity of narrative occur at predictable ages. For our purposes, 6-year-old children typically demonstrate an ability to produce oral narratives that include a problem and a resolution. The research on cohesion, based on Halliday's (1978) discussion of cohesive devices, indicates that developmental changes across early and middle childhood are apparent in the frequency and type of conjunctive use. The conjunctives targeted in this study were as follows: additive ("and"), temporal ("then"), causal ("so"), and adversative ("but"). Finally, the basis for the present work dealing with development of propositional relations stemmed from Mann & Thompson's (1987) discussions of the hierarchy of propositions and their relationship to each other. In view of the research on propositional relations, two developmental indicators were identified: "breadth" and "depth". These indicators were used to track developmental changes across early and middle childhood in the production of propositional relations and coherence.

Interpretation of Results

The following discussion will attempt to clarify the instructional interactions and impact on the development of story components demonstrated in the pre-post statistical results and further demonstrated in the descriptive analysis. Case et al. (1996) postulated that schemas must first be consolidated before they are differentiated, coordinated, and elaborated. Therefore, a developmental program initially focuses on making conscious the children's existing conceptual knowledge and creating a language to facilitate discussion of that knowledge. Subsequently, instruction of new material is initiated at the next developmental level. In this manner we aim for conscious understanding of knowledge rather than just performance. The use of mnemonics facilitates the understanding of knowledge by providing an integrated visual (i.e., graphic) and verbal representation that serves to simplify and clarify the concept. In this way, meaning and cognitive structure result from both the separate and collective actions of the visual and verbal systems. Visual and verbal processes jointly determine learning and memory (Paivio, 1972). Therefore, incorporating graphics with text is one way to support, and hence improve learning.

In previous research, graphic representations of story structure at various developmental levels were used as conceptual mnemonics (i.e., aids to remembering a given story structure) to scaffold children to the next level in the developmental hierarchy. Mnemonics served to "bridge" children conceptually and support the acquisition of concepts by facilitating maximum use of children's limited yet maturing processing capacity. In keeping with the research, it was suggested that an instructional model that

makes use of these graphic conceptual mnemonics would support children in the production of developmentally advanced narratives. Mnemonics and prompts that are carefully chosen to match the developmental needs of the children serve to support and enhance the plot structure level and the use of description, cohesion, and coherence producing elements.

The goal was not to use a mnemonic as a permanent crutch but to provide a means to an end. Knowledge construction is facilitated through the use of mnemonics that supports or scaffolds new learning. As the concept is integrated into existing knowledge the mnemonic aid is gradually 'faded' out (McKeough, 1991). In other words, over time less reliance is placed on the visual mnemonic as the child is able to spontaneously utilize the cognitive structure (or concept).

Mnemonics were only one of the major classes of activities providing support to the children in the developmental program. Verbal and written activities were also included. The integration of the visual, verbal, and written modalities maximizes learning (Gordon et al. 1998). Therefore, in keeping with the benefits derived from the use of a variety of teaching strategies, instruction was composed of three major classes of activities including; graphic (visual), verbal, and written. Opportunities, both independent and paired, were provided for children to compose stories orally to accompany their line drawings. Also, written text was incorporated with the line drawings to link text with the graphic representations and oral productions. The integrated use of the visual and verbal (i.e., oral and written) modalities enhanced learning by allowing the children to respond to and interact with the story knowledge in different ways.

A more in-depth examination of children's performance through the descriptive analyses sheds light on the intricacies of the impact of instruction on the development of the narrative components. In what follows, variation in the children's performance will be discussed, as this is an important consideration in an examination of the instruction-development interaction. In a subsequent section, the instructional impact on the development of each of the narrative components (i.e., plot, conjunctives, and propositional relations) will be discussed.

Variation in Development of Oral Story Production

Although children performed similarly within the developmentally-based instruction context, some variations in narrative development did occur. Variation in the production of oral stories is a result of a combination of factors including: the existing level of the child's knowledge at the time of instruction, the components emphasized, and the instructional activities offered. The children began the study at various points in their development of story structure. For example, some children had already consolidated problem-resolution structure stories and were in transition towards the production of a more complex structure, including failed attempts at reaching a problem solution, whereas other children had already mastered the production of failed-attempt stories. Therefore, the starting point of the children with respect to story structure varied and hence the developmental path differed. Also a factor in the variation in oral story production was the child's emphasis on each of the story components throughout the instruction. In other words, a child may focus on one component (e.g., plot structure) to the near exclusion of another component (e.g., descriptive detail). Also, the integrated acquisition of the

components follows a typical developmental path and leads to variation in oral story production. Specifically, the pattern of acquisition, in order, is as follows: the extension of previously acquired story components, the addition of new components, and the reintegration of previous components. Finally, variation in performance results from instructional emphasis and the activities provided. The activities serve to focus the child on a targeted component, and a specific concept within that component, however, ultimately performance will depend on the child's existing knowledge level, the component the child attends to and emphasizes, and where the child is in terms of the integrated pattern of acquisition of the components.

Knowledge of the factors contributing to variation in oral story development provides a background which will facilitate understanding of the interactive effects of instruction on oral story development. With this in mind, the following section addresses the instructional impact on the development of each of the story components of plot structure, conjunctive use, and propositional relations, as evidenced in the descriptive analysis.

Plot Instruction and its Impact on Story Composition

The level of plot structure typically provided in stories progresses in complexity as follows: script-like events, problem-resolutions, inclusion of a failed attempt, and elaborated and integrated stories (McKeough, 1992). In the developmental instruction program line drawings were one of the ways children were scaffolded to a higher developmental level, that is to more complex story structures. Although, children have an intuitive knowledge of the temporal relationship of events in a story, the line drawings

served to make this knowledge explicit. Specifically, the line drawings represented the story events individually in separate frames to promote awareness of the relationships of event to event and the temporal links between them.

Initially, the line drawings were used as an instructional tool to solidify and consolidate the children's story representations making them aware of their existing story knowledge (i.e., the structural components of a story and the organization of those components). Additionally, line drawings provided the children with a language for talking about their story knowledge. Practice in oral storytelling, with the aid of line drawings, facilitated understanding of the children's current representations. The awareness of their existing story knowledge prepares the children for learning more complex story structures as the children will then be able to make conscious connections between existing knowledge and new material.

Once the children's representations of story were consolidated, the line drawings were used to promote thinking and subsequent learning of more advanced story structures. According to Vygotsky a child can be "pulled" from the actual development to his or her potential level of development. This area of potential development Vygotsky termed the zone of proximal development (ZPD). Through a process of scaffolding (Pallinscar, 1991; Wertsch, 1984), the child's development is facilitated by the teacher through instructional support. This method of instruction, therefore, increases the children's knowledge of the components, composition, and organization of a story.

The line drawings, initially used as an instructional base, are subsequently coordinated with mental state icons to facilitate the production of a higher level of plot

structure (McKeough, 1992b). Mental state icons allow the children to reflect upon and become aware of Bruner's second landscape, the landscape of consciousness (Bruner, 1990). The mental state icons used in the instruction include: thought clouds, faces representing feelings (e.g., happy, sad), and idea lightbulbs.

Thought clouds and faces were used to indicate that character's have thoughts and feelings that can be incorporated into a story. Although children realize through experiences with stories that thoughts and feelings are part of a story they may not explicitly incorporate them in their own storytelling. Thought clouds and face icons (e.g., happy and sad) are an explicit visual indicator of this abstract aspect of story and therefore, focus children's attention on character thoughts and feelings. These icons serve to scaffold and prompt the addition of thoughts and feelings into the children's renditions of story. In other words, thought clouds and faces help children to incorporate "the landscape of consciousness" (what the characters think and feel about actions and events) with the "the landscape of action" (states and events occurring in the physical world) (Bruner, 1990). Light bulb idea mental state icons were also incorporated into the line drawings to scaffold the child towards the production of a more advanced story structure (e.g., a failed attempt). The light bulb provides a concrete visual representation of the story structure at the next developmental level. The light bulbs allows the child to make a conscious link between the existing structure and the new structure at the next developmental level. Thus, the child is scaffolded to the next structural story level (e.g., from a problem-resolution story to a failed attempt story).

Conjunctive Instruction and its Impact on Story Composition

With respect to conjunctive use, children use conjunctives in systematic ways to indicate the overall structure and progression of the narratives. These conjunctions bind the structures of the narrative and are an important component in the production of cohesion and ultimately coherence (Halliday, 1978). There is a systematicity inherent in the use of conjunctive ties. In other words, there is a progression towards more intricate and complex uses of conjunctives (e.g., additive prior to causal) and ultimately more complex narratives. Specifically, according to (Fox, 1993) the acquisition and use of conjunctives follows a developmental progression. This progression hinges upon the successful consolidation of a previous level and type of conjunctive cohesive device, thereby, allowing for the acquisition and use of further conjunctive devices.

Instruction in conjunctive use integrated the visual, verbal, and written modalities. Children have an implicit awareness of the use of conjunctives in stories, however, the use of integrated instructional modalities serves to highlight the explicit meaning of the conjunctives. Making explicit the use of conjunctives serves to scaffold the children to the next developmental level of conjunctive use.

Conjunctives were instructed in coordination with plot structure instruction since the complexity of the type of conjunctive used advances along with the complexity of plot structure level. For example, the use of the adversative “but” prompts the inclusion of a failed attempt in a story and the conjunctive “so” provides a causal condition that serves to move the storyline forward in time. Conjunctives thus may facilitate the production of plot by prompting a move from the existing level of plot structure to a new more complex

level. Therefore, conjunctive instruction scaffolds the children not only in the production of more advanced conjunctives but in the production of more advanced plot structures as well.

Propositional Relations Instruction and its Impact on Story Composition

Similarly, there is a progression in the production of propositional relations in stories. Coherence is created by the organization of the information and by the development of semantic content. The use of conjunctives (i.e., temporal, additive, adversative, and causal) facilitates coherence by signaling relatedness among propositions (Halliday, 1976). Specifically, it is the relations among the primary and subsidiary propositions of a narrative that interact conceptually to provide semantic coherence. The use of propositional relations progresses developmentally from the production of fewer propositions with more basic relationships to a greater number of propositions with more complex relationships (Halliday, 1976).

The pattern of acquisition of propositional relations may be hierarchically represented in terms of the spatial concepts of “breadth” and “depth”. The more complex a narrative, the greater the “breadth” (i.e., the number of independent topic propositions) as well as the “depth” (i.e., the number of elaborative propositions, both subtopic and elaborative, measured in terms of levels and items within each level).

An increase in the “breadth” of the narrative was prompted through instruction in the use of primary propositional information, whereas, an increase in “depth” was fostered through instruction in the use of dependent propositions that served to elaborate and provide additional or subsidiary information. Instruction in the addition of primary

propositions increased the story in terms of “breadth” of propositional information, thereby, moving the event sequence along.

The child’s focus on the development of one type of propositional relation also had an effect on the development of the others. Specifically, in terms of the development of “breadth” and “depth”, this meant that a focus on producing and extending one may temporarily result in a decrease in the number of propositions in the other. For example: a shift in focus from the generation of descriptive detail and hence “depth”, to the addition of primary propositional information may result in a temporary decrease in the provision of “depth” while the child focuses on the extension of “breadth”.

Developmental changes in “breadth” and “depth” also had an impact on conjunctive use. For example: an increase in either “breadth” or “depth” resulted in an increase in the frequency and type of conjunctives used. Frequency of conjunctive use increased as the number of propositions increased and the type of conjunctive used also increased as complexity of plot increased. For example: there was an increase in the use of the adversative conjunctive “but” in coordination with an increase in the complexity of plot structure, from the production of problem-resolution stories to failed attempt stories. In this manner, there is a multiple interactive effect among the three components.

One of the instructional activities for coherence required the children to reorder events. This was an important activity in that the temporal ordering of events is a fundamental procedure in the production of a story. Reordering events necessitates that the child attend to the sequence, causing them to become consciously aware of the temporal flow of events. The identification of missing frames, also used to promote

coherence, required the children to focus on the importance of story event sequences while additionally highlighting the effects of missing pertinent information in the storyline. Knowledge of the effects of missing information prompts the conscious inclusion of information needed to understand the progression of events in a story. In this way reordering of information and identification of missing information scaffolded the production of more complex structures based on the creation of coherence in terms of temporal progression of events and inclusion of pertinent events.

Why are these Graphic Mnemonics Thought to Work?

According to Case (1991), graphic mnemonics provide a context that minimizes the load on children's working memory capacity. Therefore, graphic mnemonic instruction is effective in circumventing children's limited working memory capacity. Previous research indicated that working memory capacity would predict the level of plot structure produced in the stories (Case, 1991; McKeough, 1992), however, this was not found to be the case in this study. Possible explanations for this difference are as follows: motivation and emotional affect of the children, chosen topic and associated knowledge, use of visuals situated within the testing room, and use of previous stories and fables. The following will elaborate on each of these possible explanations.

The motivation of the child could impact upon task performance and the level of story produced. In other words, a child that does not perceive the importance of a task may not expend the necessary effort to create a story that would represent the child's current story level. Stated in terms of working memory, the child would not produce a story that is at the child's level of capability given the available memory capacity.

Second, the child's emotional affect could interact with the production of story. For instance, if the child was not feeling well or had a concern related to home life, the level of story may be affected. Again, the child would not produce a story at the level predicted by the available working memory.

Third, the chosen topic and associated knowledge is also a factor in the level of story produced. According to Hudson and Nelson (1986), if the topic of the narrative is a familiar one, the child has more general knowledge which leads to stories that are based upon distilled experiences of a particular type rather than stories that are bound to a specific incident. If a topic is chosen that has a low level of familiarity, the child may produce a story that is at a lower structural level. Therefore, the story would not be produced at a level that is equivalent to the level of story that the child is capable of producing within the available working memory space.

Fourth, the use of visual aids in the form of charts and poster illustrations situated on the walls of the testing area may also impact upon the level of story produced. For example: a picture of a dinosaur standing in the rain with an umbrella could serve to scaffold the children in the production of a more complex plot structure story. The visuals provide information and ideas that could be used within a story. This would allow the child to produce a story that exceeded working memory capacity because of visual "bridging" (McKeough, 1992b). Whereas, a story spontaneously produced without any visual prompts may be at a lower structural level.

Finally, the use of previously heard stories and fables could alter the level of story produced. Previous stories serve to provide existing memorized information that could be

incorporated into the story. Also, previous stories and fables provide a familiar structure that may be adopted (e.g., the problem solving repetitiveness, similar to a failed attempt, in Robert Munsch's stories). This may scaffold the children in the level of stories produced as the children incorporate the familiar automatized story framework.

The present study did not find a link between working memory capacity and plot structure level. Other studies, however, have showed that such a link exists (Case, 1991; McKeough, 1992). Therefore, further studies will need to be carried out to determine if a link really does exist between working memory and plot structure and what the exact nature of that link is. The following section will first address the limitations and delimitations of the study followed by the educational implications and suggestions for future research. Finally, concluding remarks will be offered.

Limitations and Delimitations

1. First, the descriptive study employed a small sample size. Future instructional studies should aim to replicate these results with larger groups of subjects.
2. A few children did not, due to shyness at the start of the study or other circumstances, or could not, due to absence, provide a story. In this case, the child's remaining data was not used. In order to decrease the number of missing stories, story-telling "practice" sessions could be implemented to increase the comfort level of the children. Also, story-telling "make-up" data sessions could be held to decrease the number of stories missing due to absence.

3. The results and conclusions may not necessarily be generalizable to other populations of children (i.e., gifted, attention disorders, ESL, and learning disabled). This study was limited to a narrow socio-economic range with little variation in cultural and ethnic background.
4. Within the study there was no way to control for prior experience or classroom instruction in narrative. Perhaps the provision of opportunities to practice oral storytelling prior to the study would help to ensure that all children had at least some minimal experience in this area. This would help to reduce confounds stemming from experience and practice effects.
5. There was also no way to control for amount of effort expended on the task. To compensate, future research might prompt the children to tell the best story that they know how in response to the prompt.
6. Only one oral narrative was produced for each of the pre- and post-tests. Perhaps multiple oral narratives at each of these testing times would better indicate oral narrative performance.
7. There was no control for the particular story content that was generated in response to a prompt. The choice of story content may have an effect on the production of story components.
8. The stories in the descriptive subgroup were generated in pairs, therefore, some of the children produced a story having heard the previous story. Having previously heard a narrative in response to a prompt may affect subsequent narrative performance. The children could perhaps alternate the position in which they told a narrative.

9. Additional stories were generated in the descriptive subgroup at three additional points in time. This may have resulted in those students receiving more practice in oral storytelling and may affect performance on the post-test. This could be alleviated by having the other children also tell stories in pairs at the same three points in time.
10. Separation of the story into propositional clauses can be difficult. Differences in the break down of propositions may alter the depth and breadth of the relational and conjunctive analysis of the stories.
11. The instruction of the children in the developmental program could be viewed as “teaching to the test”. This could impact the results of the comparison of the process and developmental instructional programs. Implementing a second alternative assessment of story level may alleviate the “teaching to test” effect.
12. Differences in scoring may also arise with respect to coding of the relational nature between propositions (i.e., topic, subtopic, elaborative). This could perhaps be partially alleviated through a better understanding of the exact nature of the relations and practice at application to the coding of stories. However, there will always be some inter-rater differences in coding.

Educational Implications

Despite its limitations, the results of this study have several educational implications. The first implication is that a recapitulation of the developmental sequence of the components of narrative (e.g., plot structure, conjunctive use, propositional relations) is important in instructional design.

The second implication is that instruction plays an important role in the development of conceptual knowledge. One explanation for this is that an understanding of the students' existing conceptual knowledge of narrative enables educators to directly target and facilitate the development of the central conceptual structures of narrative.

Thirdly, a knowledge of the typical developmental sequence appears to enable educators to promote conceptual change through recapitulation of the developmental progression. One possible factor that facilitates development is the use of a conceptual mnemonic (Case, 1985; McKeough, 1992b). Another factor that may impact development is the combined use of three major classes of activities (i.e., graphic, verbal, and written activities) as they provide integrated practice of the narrative components using both visual and verbal learning processes (Gordon et al., 1998). The combined use of graphic, verbal, and written activities utilizes various modes of learning while maximizing memory constraints.

Fourthly, teachers may further facilitate narrative development by highlighting the underlying story structures and using appropriate instructional activities to compliment and foster the targeted components. The outcome is an enhancement of the development of childrens' oral narrative productions.

Fifthly, activities should be chosen that foster the development of the oral narrative components. These activities need to be presented at appropriate instructional points corresponding with conceptual knowledge shifts. A carefully designed presentation of

activities will serve to promote development to a more complex level of use by building on children's existing knowledge through cognitive scaffolding activities.

Finally, the above model may be useful as a diagnostic tool of narrative development. The model may be used in the analysis of narrative production to ascertain the child's learning needs in the areas of plot structure, conjunctive use, and propositional relations.

Suggestions for Future Research

The present study implemented and assessed the effectiveness of a narrative instructional model based on knowledge of the development of plot structure, conjunctive use (i.e., cohesion), and propositional relations (i.e., coherence).

One suggestion for future research would be the application of the developmental instruction model to the instruction of other groups of children (i.e., verbally talented and learning disabled).

Research may also extend the analysis of propositional relations to include those relations that are removed beyond adjacent relationships. The distance or span and the direction of relationships and the development of these relations may be of interest.

Additionally, research may extend the "breadth" and "depth" analysis to oral stories produced by English as second language (ESL) students. It would be of interest to identify differences in the integrated development of conjunctives, propositional relations and plot structure in these students. Subsequently an instructional program may be designed that better targets the narrative developmental needs of ESL students.

Future research should also look at the relationship of working memory to the level of children's narrative conceptual development as the results of this study did not confirm the relationship hypothesized by the theory.

Also, an extension of the developmental program to instruct narrative to both younger and older age groups would be of interest. Longitudinal studies could also be done to track the developmental progression of narrative and the interactive effects of the instructional program.

Conclusions

The purpose of this study was to evaluate the effectiveness of a developmental narrative instructional program with grade one children in comparison to a process-based approach. The current study was based on developmental theory and knowledge of instructional methods. As was the case with the development of the original scoring systems (McKeough, 1991, 1992; Davis, 1994) the current system stemmed from neo-Piagetian theory (Case, 1985, 1992). The research and questions that prompted this study (see Chapter II) suggested that the use of a developmentally based instruction model versus a process-oriented approach would result in an increase in the level of complexity of the children's oral narrative productions.

To measure the effectiveness of the instruction programs the research objectives need to be revisited. As expected, both research hypotheses were supported. Children in the developmental instruction group generally produced oral narratives that were more complex with regards to plot structure level and the use of conjunctive words, than those produced in the process instruction group. Additionally, the seven children, who were

part of the descriptive analyses, also evidenced instruction related changes in the level of narrative produced as measured by a combination of analyses including; plot structure level, conjunctive use, and the hierarchy of the relationships among propositions.

Overall, the results of the quantitative and descriptive analyses suggest that children produced more developmentally advanced oral stories following developmental instruction. That is, the developmental program facilitated the production of a higher level of plot structure, conjunctives, and propositional relations in oral narratives. The following presents the major considerations underlying the impact of the developmental instruction program on the production of more advanced stories including: the use of multiple modalities and scaffolding, graphic mnemonics, the timing of instruction, and the inter-related and facilitative aspects of the development of the three instructed story components.

The combined use of the visual, verbal, and written instructional activities served to promote the production of more advanced narrative components (i.e., plot structure, conjunctives, and propositional relations). The use of the three modalities of instruction serve to enhance the opportunities for exploring “text” in a variety of ways. This exploration of multiple forms of text scaffolds learning by directing the child’s attention to the pertinent aspects of story and making them concrete and explicit.

Mnemonics and prompts were chosen to match the developmental needs of the children in order to support and enhance the plot structure level and the use of description, cohesion, and coherence producing elements. Mnemonic supports, or graphics, serve to highlight the instructed components of story and help the child to be successful in the

production of a story at a more complex level. Initially, mnemonics brings into consciousness the child's existing story structure. Subsequently, mnemonics serve to "bridge" learning by providing a part of the more complex structure to be learned and supporting the child in providing the other parts of the new structure. Finally, after practice and consolidation of the new level, the mnemonic "bridge" is gradually removed allowing the child to produce the story unaided.

Also an important consideration is the timing of the instruction of the components. The narrative components were instructed at times that corresponded with the developmental sequence of acquisition. Based on the research, each of the components were taught in order of their natural developmental sequence. This seemed appropriate since the aim was not to alter the developmental path of the components but to facilitate an advancement in the complexity of use of the components. The order of presentation of the instructional activities had an impact upon the development of the narrative components. The order of presentation of the components (i.e., plot structure, descriptive detail, and conjunctive use) was from least complex to most complex. The primary instructional consideration was the consolidation of plot structure. Following successful consolidation at each successive plot structure level instruction targeted the addition of descriptive detail and conjunctives. The study indicated that the children evidenced advances in the use of descriptive detail and conjunctives subsequent to instruction. Instruction in the above components also resulted in more complex propositional relations (i.e., "breadth" and "depth").

An examination of the descriptive data revealed that the three story components (i.e., plot structure, conjunctives, and propositional relations) are inter-related and facilitative in their development. To illustrate, upon successful consolidation of an existing plot structure there is an inter-related progression in development as the child builds on the existing plot structure by filling it out in terms of cohesion (i.e., conjunctives) and coherence (i.e., propositional relations). It is postulated that as the child develops to each subsequent level of plot structure, the child's use of conjunctives and propositional relations is initially weak. Through the use of mnemonic bridging and scaffolding at the newly acquired stage the previous conjunctives are re-integration at the new level. This reintegration of the conjunctives unites the story and provides cohesion, as well as fosters the production of more complex propositional relationships. In other words, a focus on one of the components necessitates a temporary neglect of the other components. This may result in a component either remaining at the current level of production or in a temporary decrease in the level of use of a component (e.g., a focus on increasing the level of plot structure may result in a decrease in the number and type of conjunctives used and perhaps also in the use of descriptive elaborative and subtopic propositions). The facilitative aspect of the development of the three components is explained in terms of the role that each plays in fostering the production of more complex uses of the other. Specifically, the use of more advanced conjunctives triggers the production of more complex plot structures (e.g., the adversative conjunctive "but" fosters the production of a failed attempt plot structure). Similarly, more advanced plot structures and conjunctives facilitate the use of a greater number of propositions in terms of "breadth" (i.e., primary

independent propositions) and also in terms of “depth” (dependent propositions in the form of subtopic and elaborative descriptive detail).

The results of this study indicate that the role of the educator is first to diagnose students’ current level of understanding in the narrative domain and to then provide instructional activities that meet the educational needs of the children. Activities should include a multitude of conceptual supports (i.e., graphic, verbal, and written) that target the child’s current instructional level with the aim of facilitating consolidation of knowledge and subsequent “bridging” to the next level of complexity.

In closing, narrative was chosen as a topic of study because of its importance in day to day life. Indeed, narrative thought is central to human functioning (Bruner, 1986; Polkinghorne, 1988). Therefore, because of the central importance of narrative, this study has addressed some of the developmental components of narrative and designed an accompanying instructional program. Although there are many other components of narrative that could be examined, each study brings us one step closer to a more comprehensive understanding of the conceptual development of oral narrative and subsequently how to best facilitate that development through a carefully designed instructional program.

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Consent Form

Dear Parent(s) or Guardian(s):

over the last several years we have been studying the ways in which students' narrative compositions improve throughout the grades. Currently, we are analyzing the compositions of talented writers in an effort to determine the dimensions along which they develop. We are requesting that your child take part in our study.

Participants will be seen both individually and in groups and asked to tell stories in a series of 3 sessions. The sessions will be 30 to 40 minutes in duration and held over a 3 week period. The orally produced stories will be tape recorded. Students may withdraw from the study at any time, if they so wish. All sessions will be conducted during class time by a researcher. The researcher can be contacted at (telephone number and name) for further information.

If you are willing to have your child participate n the study, Please sign below and return the form to the classroom teacher.

Thank you for considering our request.

sincerely,

Lynn Davis

Story Composition Study

I agree to permit my child _____ to take part in the story composition study conducted by Ms. Davis. I understand that my child will participate in an assessment of his or her story composition ability and that the assessment will be conducted during class time for 3 - 30 to 40 minute sessions over a 3 week period. I understand that the researcher will work with my child both individually and in a group setting. I understand that my child's orally produced stories will be audio taped and that all identification will be removed. Finally, I understand that my child may withdraw from the study, at any time without penalty.

Date: _____

Signature of parent (Guardian): _____

Consent for teachers:

Story Composition Study

I understand the involvement being requested of me in this study and I agree to participate. I have been offered a copy of the research proposal and its details have been explained to my satisfaction.

Date: _____

Signature of teacher: _____

Appendix A

Davis' Structural Scoring Scheme (1994)

Low Level 1

Story Example:

"Once I went to birthday party and that was um..I went on the best plane that was..that was leading the way of all the planes and thats the Toronto ones and then, you know what? we just got there from London and then we went. This is true. And a jelly beans and smarties and that's the end of the story. And I have something to add. I have fifty-six things to add to my story. And they went "booooh!" and cause he wasn't watching out for a hole anyway, anyway "Yaaaaaah" and went "Dooooogh" right on his head.

As can be seen, this story is composed of a series of occurrences and experiences (e.g., a birthday party, a plane ride, jelly beans and smarties, and the hole). However, the linkages between the experiences (birthday party, plane trip, jelly beans and smarties and the hole) are neither explicit nor socially evident (i.e., they do not seem to be based on a discernible social script).

Average (Level 1)

Story Example:

"Once when I went to swimming and I got to play with the rainbow bars and you put them under your armpit. Someone lost one so I put, I got two to float on the water."

The linkages within the story are socially known. The listener is able to understand the connections between swimming, rainbow bars (which are long styrofoam tubes), and floating. Even if unaware of the nature of rainbow bars, the listener is able to understand the story progression by inferring.

High (Level 1)

Story Example:

"Once upon a time, there was a little lamb that was as soft as a little cloud as soft as a little cloud. And then a wolf came along and he scared it away."

The above story contains descriptive adjectives which provide the story with rich detail (e.g., 'a little lamb was as soft as a little cloud as soft as a little cloud').

Low Level 2

Story Example: 4 year-old

"Once I, we have, uum. uum. Oh dear I have to think. I can't remember, I can't remember. I have a special story I wanted to tell you but I can't remember what it was called. Once there was a little girl, walking down the street and she met, and she met a mean person and it was a witch. She said...and it went...and she went and she screamed really loud and she went down back to her house. And there she was nice and safe with her mom."

The above story is in a distinct problem-resolution format. Although the linkages between the events in the problem script clear, the linkage between meeting the witch and being safe at home is poorly explained.

Average Level 2

Story Example:

"I broke, I fell off a cupboard and I landed on my wrist and then I had to go to the..and at the end of the day I went to the doctors and they wrapped warm water on my arm and then it hardened and then I had to put it around my neck and then we went to the car and when I got to the car it was already dried and then when we got home and then my sister signed it."

The story contains a problem (i.e., breaking ones wrist) which is resolved by going to the doctor's office and getting a cast. The links between the accident, the doctors visit and the cast are explicit and clear.

High Level 2

Story Example:

"One day there was a little boy and he was scared at night because he saw shadows on the wall and they had green eyes and one had one green eye and one black eye and his nose was round and it was dark and red and his hair was yellow and blue and when he woke up it wasn't a shadow it was real. It was a big ugly, stinky, slimy bug and the other day he came out. This little bug came out and he said, "Little boy don't be afraid of me, I'm just a lost little bug."

In this particular problem-resolution story, the child has used descriptive adjectives and phrases to provide rich detail (e.g., "it was a big, ugly, stinky, slimmy bug").

Low Level 3

Story Example:

"Once upon a time there was a little sheep who lived in a meadow and there was a wolf who lived in a forest. Now that wolf climbed up a, there was one coconut tree near the meadow and he chopped down the coconut tree and made him look like a coconut, like a dead coconut tree, and when the lamb came near he he he tested the tree to see if it was a real tree and he actually kicked it with his hind, kicked the wolf in the rear with his hind legs. And then the wolf fell down and then when he was just waking up a little boy came along and called and he looked at the wolf and bounced on his stomach and then runned away and when he was getting up the sheep threw one billion, two hundred and fifty or actually infinity coconuts all over him until he was nothing but a coconut tree."

In the above story, involving three problem-resolution structures (i.e., the wolf trying to hide from the sheep by turning himself into a coconut tree), the boy and the sheep, and the two problem-resolution pairs are unclear. The connections are either not stated or are inexplicitly stated.

Average Level 3

Story Example:

"A long long time ago there was a...uum...wagon. He had no wheels, so nobody used him. His other friends had wheels. He asked his friends, "How do I get wheels?" They said, "Well you just have to go to a store and buy them. So he went to a store and they said, "No we don't have anymore wheels." So he went back and said..he went to the wizzard and then he said, "how do you get wheels?" And he said, "I made a magic potion to make them, so if you..it takes a week to work, if you drink it. So he drank it and in a week he had wheels, but not the right kind. So he went back to the wizzard and said, "I don't have the right kind of wheels." and he said, "Well I have another potion, so he went back to get it. He.. he..There was another week done and it still wasn't the same. So, he went back to the wizzard and said, "I don't have them, I'm going to the fairy." So, the fairy pumped up wheels and he lived happily ever after."

In this story, the linkages are explicitly stated. It is clear how the problem of not having any wheels is connected to each of the three failed attempts to acquire wheels and ultimately to the successful procurement of wheels (resolution).

High Level 3

Story Example:

"This guy called Tim. He's called Tim the horse and Tim wanted to be out. He was a wooden horse but he wanted to be a real horse and so so one day Tim, that was the old shoe maker, ran away to the shoe maker and asked could he become a real horse in the cave of wonders, like in Aladdin. And he they both didn't know where the cave of wonders was, so they set off and walked for a long time and they got to, where was it that Aladdin went? Agrabah and Agrabah and then they found a fly. Two pieces of a fly, of a gold fly, and they they put it together and they ran after the tail and then they ran to a lump of dirt and then it turned into dirt with big eyes and then they came to a dog and then they rode a horse, it was wooden, and he galloped like this, "wack-a-dee", "wack-a-dee", "wack-a-dee", "wack-a-dee", "wack-a-dee" because he was an old wooden horse and when he went squeak along the path, "squeak", "squeak", "squeak", "squeak" and until he got to a big stairs up to a heap and he went "wap-a-lee", wap-a-lee", over the stones that went through water and between and then he got to a...and he galloped up the stairs "wack-a-lee", wack-a-lee", "wack-a-lee" until he broke the lamp and broke a spell that had something written on it and then out came a genie and granted him his first wish. His first wish was to be a new horse. His second wish was to be a beautiful white one and the third wish was to be magical and that's the end of the story."

In the above story, containing failed attempts, rich detail is provided through the use of descriptive adjectives, adverbs and phrases (e.g., "he was an old wooden horse and when he went squeak along the path, "squeak", "squeak", "squeak", "squeak" and until he got to a big stairs up to a heap")

Low Level 4

Story Example:

"Once there was a little girl whose name was Lynn and she went for a walk and she saw a kitten which she very always wanted. She took it home and it grew and it grew

and it grew and it grew until it was a tiger. She had to throw it out of her house, but then it came back and it was so nice she even didn't eat. Told her, "I don't want anything to eat" and then he kept getting skinny and skinny; fat and fat; skinny and skinny and fat and fat, so he could stay alive forever and ever and he stayed, lived forever and ever and then once he had to die. He went up to heaven and the girl died too and then a friend of hers came and...but she thought her was dead and her name was Tara and then she came and she went to the house and she saw her sitting there. She was really fainted. She wasn't dead and then they played together and Tara, um Lynn kept playing and playing and playing until they both died and went up to heaven and they were the same age. They were ninety-nine and ninety-nine, and they went up to heaven and died and they were with God and then they still played and played and played with the angels and played with everybody there and they were so nice that God had to give them a chance that they would be an angel and then Tara went to angel and they went down and in the night and they protected all kids and the parents that slept at night. The end."

In the above story there are several linkages that are either unstated or inexplicit. The linkage between the problem-resolution of the tiger's growth and not eating and living forever is unclear. The linkage between the problem-resolution of the death of the girls and transformation to angels is also inexplicit. Finally, the linkages between the integration of the tiger problem-resolution with the problem-resolution involving the girls is not stated.

Appendix B

The Opposites Task (Case and Kurland, 1977)

"I'm going to tell you some opposites"

1. Big is the opposite of small.
What's the opposite of small?
2. Up is the opposite of down.
What's the opposite of down?
3. Good is the opposite of bad.
What is the opposite of bad?
4. Right is the opposite of left.*
What is the opposite of left?
5. Wet is the opposite of dry.
What is the opposite of dry?
6. Tall is the opposite of short.
What is the opposite of short?
7. Hot is the opposite of cold.
What is the opposite of cold?
8. Love is the opposite of hate.
What is the opposite of hate?
9. Fat is the opposite of thin.
What is the opposite of thin?

* When this word appeared in the test subjects were given credit if they gave "wrong" as the opposite of right.

"Now you tell me some"

Level I

big
up
tall
good
right

Level II

hot - fat
good - wet
up - love
right - big
good - fat

Level III

up - wet - good
hot - up - big
fat - right - wet
good - up - big
tall - hot - love

Level IV

love - tall - right - fat
wet - big - good - right
hot - up - fat - tall
big - right - wet - love
up - good - wet - tall

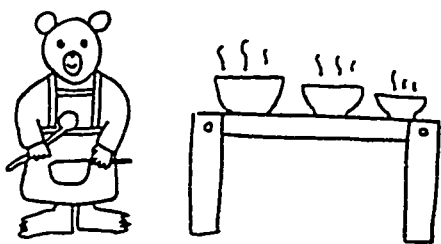

Level V

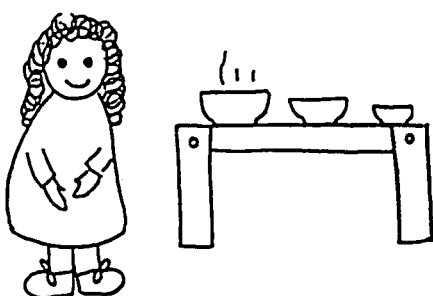
right - wet - fat - good - love
tall - up - good - right - hot
tall - hot - up - good - big
up - love - right - fat - hot
big - right - love - wet - good

Appendix C

"Goldilocks and the Three Little Bears"


From the Files of W. Gray (Teacher of the Comparison Group)

<p>1</p> <p>Once upon a time there were three bears who lived in a cottage in the woods. There was a great big Father Bear, a middle-sized Mother Bear and a wee little Baby Bear.</p>	<p>2</p>  <hr/> <hr/> <hr/> <hr/> 
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<p>3</p> <p>A little girl called Goldilocks was walking in the woods. She saw the cottage and knocked on the door. No one was home so she opened the door and went inside.</p>	<p>4</p>  <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
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Appendix C (continued)

"Goldilocks and the Three Little Bears"

<p>5</p> <p>Goldilocks sat in Father Bear's chair. It was too hard. She sat in Mother Bear's chair. It was too soft. Then she sat in Baby Bear's chair. It was just right! But oh dear, it broke!</p>	<p>6</p>  <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
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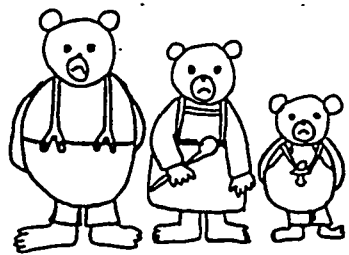

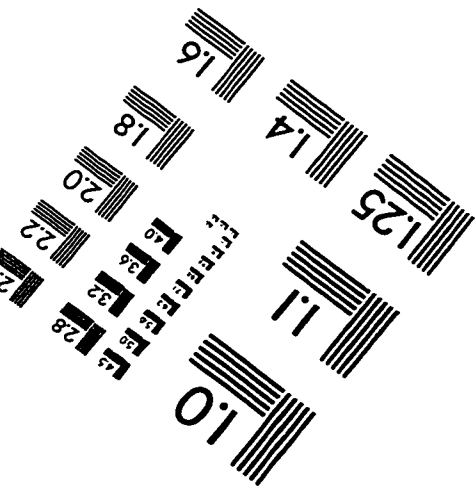
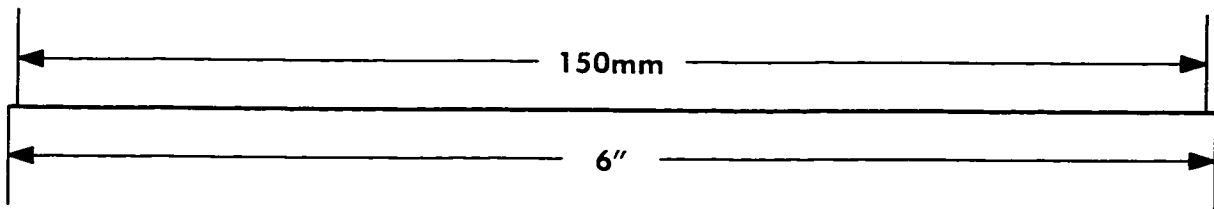
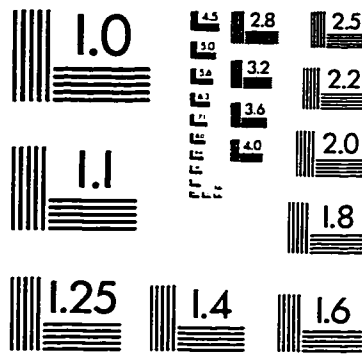
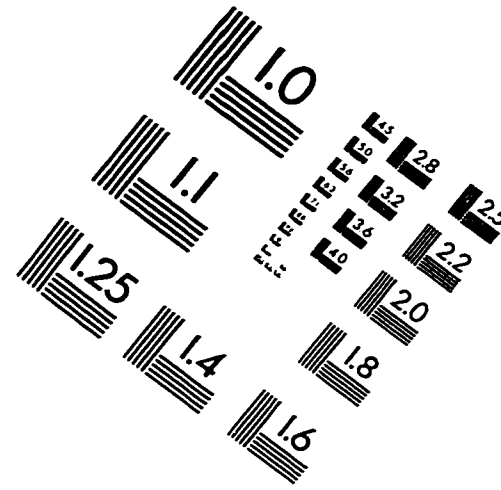
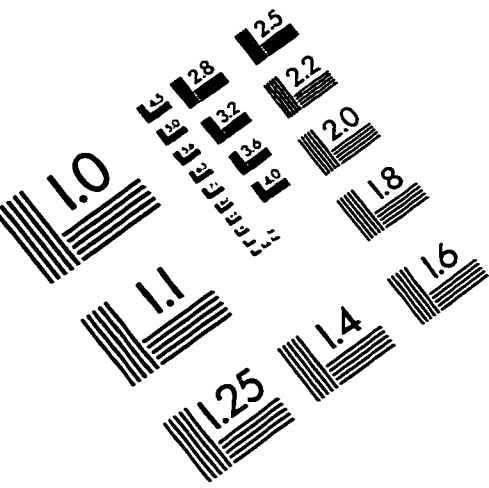
<p>7</p> <p>When the three bears came home they saw that someone was in their cottage. Who had been eating their porridge and sitting in their chairs? Then they saw Goldilocks asleep in Baby Bear's bed.</p>	<p>8</p>   <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
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IMAGE EVALUATION TEST TARGET (QA-3)



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