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Teaching narrative structure to children with poor oral narrative skills in schools

by

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ABSTRACT

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TEACHING NARRATIVE STRUCTURE TO CHILDREN WITH POOR ORAL NARRATIVE SKILLS IN SCHOOLS

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The review discusses the importance of narrative structure for cognitive development and psychological health. Narrative structure is regarded as representing and developing internal cognitive structures, known as narrative schemas. The components of narrative schemas and thus the structure of narratives are described as a set of components collectively known as 'story grammar'. Models of the development of narrative structure are compared and contrasted and discussed in relation to additional cognitive and linguistic components required to produce a narrative. Individual differences in narrative structure are discussed in terms of their social and environmental origins; specifically due to the quality of parental co-constructed narrative conversations and socio-economic status. The relationship between narrative structure and developmental outcomes are then explored; notably reading comprehension and behavioural adjustment. A critical review of school group interventions based on the principles of narrative structure is then provided. Finally, the current literature is summarised, providing suggestions for future research.

The empirical paper evaluated the effectiveness of a published oral narrative intervention by Shanks (2001) on measures of Oral Narration and Narrative Comprehension for children aged 6-7 years with poor oral narrative skills. The intervention group (N=12) showed a significant increase in Oral Narration score between pre-test and post-test compared to a wait-list control group (N=11). Between pre-test and follow-up measures that were taken 6 weeks after the end of the intervention, no significant increases in Oral Narration were found between groups. The intervention group also showed no significant increases on Narrative Comprehension between pre-test and post-test or between pre-test and follow-up. The correlation between Oral Narration and behaviour was explored. Significant negative correlations were found between Oral Narration and teacher measures of behaviour at pre-test and follow-up, specifically regarding hyperactivity and inattention. The results question the long-term benefits of the intervention and suggestions for future research are provided.

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Declaration of Authorship

I, RACHEL LANDER, declare that the thesis entitled "Teaching Narrative Structure to Children with Poor Oral Narrative Skills In Schools" and the work presented in the thesis are both my own, and have been generated by me as the result of my own original research. I confirm that:

- this work was done wholly or mainly while in candidature for a research degree at this University;
- where any part of this thesis has previously been submitted for a degree or any other qualification at this University or any other institution, this has been clearly stated;
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- I have acknowledged all main sources of help;
- where the thesis is based on work done by myself jointly with others, I have made clear exactly what was done by others and what I have contributed myself;
- none of this work has been published before submission.

Signed: ……

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Abbreviations

ANOVA	analysis of variance
F	test statistic for ANOVA
fMRI	functional magnetic resonance imaging
M	mean
N	sample size, number of participants
p	probability, significance of test statistic
PASW	Predictive Analytics SoftWare
r	Pearson's product-moment correlation coefficient
r_s	Spearman Rank correlation coefficient
SD	standard deviation
SDQ	Strengths and Difficulties Questionnaire
t	test statistic for the t-test
TNL	Test of Narrative Language

Chapter 1: Literature Review

Why is it important to teach narrative structure to children in schools?

1.1 Introduction

Narratives are "an important instrument for making meaning that dominates most of life" (Bruner, 1990, p.97). They are a fundamental means by which we represent, interpret and understand our experiences (Preece, 1987). The ability to produce a structured narrative is therefore thought to play a significant role for cognitive development and psychological health (McKeough & Genereux, 2003; Nelson, 2007).

Narratives come in different forms; they can be expressed through play, pictures, gestures, writing or talking (Barthes & Duisit, 1975). This review focuses on oral narratives which is one of the most skilled uses of language (Preece, 1987). There are considerable variations in the definition of oral narratives. For example, they can refer to a recount of an entire life story or a specific event (Reissman, 2005). This review considers a narrative to be a single instance of talk about events that have occurred at a time other than the present, including at least two adjacent utterances on the same topic (Peterson & McCabe, 1992; Petersen, 2010). Narratives always include a character, since without this a narrative is merely a chain of events (Richert, 2006; Curenton, 2011). This review examines the literature regarding oral narratives of typically developing children.

Narrative research has extended into disciplines including linguistics, anthropology, sociology, psychology and education (McCabe, 1991). Consequently, narratives are studied in several ways; investigating narrative as an art form; a method of communicating with ourselves and others; an expression of culture; and as an important aspect of development and cognition (Mello, 2002). This review takes the latter position. It regards the importance of narratives for psychological development and cognition to lie in how the sequences of events are structured, rather than the content of the events discussed (Bruner, 1990). This review does not therefore include literature regarding an interpretation of the symbolic content of the events. The way the sequences of events are structured is referred to in this review as 'narrative structure'. This is also known in some literature as 'macrostructure' (Justice, Bowles, Pence & Goss, 2010).

Oral narratives communicate personal or fictional events to others through language (Bruner, 1986; Hicks, 1991; McCabe, 1991). Personal narratives recount an individual's knowledge and experience. In contrast, fictional stories draw on wider sources of experience and imaginative constructions and can be a retelling of a previously heard story, or the creation of a story the narrator has made up themselves

(Nelson, 2003; Reese et al., 2011; McCabe, Bliss, Barra & Bennett, 2008). Personal narratives and fictional stories are considered to be structurally and functionally related (Nelson, 2003) and are both thought to support our understanding of the world (Richert, 2006; Nelson, 2007; Bruner, 1990). Narratives and stories are terms that are used interchangeably since 'stories' can be personal and fictional (Schank & Ableson, 1995), as can 'narratives' (Bruner, 1990; Nelson, 2007; Richert, 2006; Pennebaker & Seagal, 1999). In this review, a 'narrative' refers to both fictional and personal narratives, whilst 'stories' refer to fictional narratives only.

This review examines the importance of narrative structure, suggesting that it should be taught in school. Firstly, a theoretical framework is provided in Section 1.2 to explain the importance of narrative structure for cognitive development and psychological well-being. Narrative structure is regarded as representing and developing internal cognitive structures, known as narrative schemas (Nelson, 2007; Stein & Glenn, 1979). The components of a narrative schema, known collectively as 'story grammar' (Stein & Glenn 1979) are outlined in Section 1.3. Thereafter, four models describing the development of narrative structure are compared in Section 1.4. This development is compared with a model of cognitive development and research investigating the relationship between narrative structure and cognitive and linguistic skills required to produce a narrative. Section 1.5 examines the social and environmental origins of individual differences of children's narrative structure. The association between narrative structure and the developmental outcomes of reading comprehension and behavioural adjustment are discussed in Section 1.6. Section 1.7 comprises of a critical review of group interventions designed to teach children oral narrative skills using the principles of narrative structure in schools. Finally, Section 1.8 summarises the current literature, providing suggestions for future research.

1.2 Why is Narrative Structure Important for Cognitive Development and Psychological Well-being? A Theoretical Framework

The following section outlines the theoretical framework that underpins why narratives are important for cognitive development and psychological well-being. It introduces schema theory (Bartlett, 1932) which was later developed by Schank and Abelson (1977), in addition to a recent theory of cognitive development by Nelson (2007).

1.2.1 Schema Theory

Narrative structure is regarded as representing and developing internal cognitive structures, known as narrative schemas (Nelson, 2007; Stein & Glenn, 1979). Although schemas were discussed by Piaget (1926), Bartlett's (1932) schema theory is credited as underpinning most modern schema theories (Anderson, 1977). Bartlett proposed that schemas were large units of organised, structured knowledge, operating at an unconscious level in order to support cognitive processing. He argued that a schema was an 'active organisation of past reactions and experiences which were always operating' (Bartlett, 1932, p.201), suggesting that a schema consisted of old information that had been built up from previous experience. Schemas are then used to interpret new information (Bartlett, 1932). For example, Anderson and Pearson (1988) explained that the schema for a face includes two eyes, two ears, a nose and a mouth. The schema is flexible enough that it can tolerate variation on what is considered to be a face, supporting the processing of a sketchy drawing, a cartoon or a real face, however there are limits beyond which an object is no longer seen as a face.

Schemas are also used to recall information from memory (Bartlett, 1932). For example, Bartlett noted that when recalling stories, individuals did not produce an exact reconstruction of the story. Instead they reproduced a more simplified and stereotyped version, based on prior knowledge and personal interpretation of typical stories. Bartlett proposed that this was facilitated by schemas, providing individuals with expectations of the world to make it more predictable and facilitate understanding. In other words, without schemas we would be lost in a chaotic experience (Bruner, 1990).

Bartlett (1932) proposed that schemas were generic, abstract knowledge structures which represented objects, events or situations. Schank and Ableson (1977) later proposed that a schema for understanding events involving social interactions (the definition of a narrative in this case) were particularly important for understanding the world. They proposed that the mental representation of events were 'scripts', which have since been referred to as mental event representations (Nelson, 2007) and narrative schemas (Russel & van den Broek, 1992).

Narrative schemas are thought to support our understanding of current situations, informing our behaviour by providing information about behaviour in previous situations and supporting the recall of events from memory (Abelson, 1981; Russel & van den Broek, 1992). There is an assumption that narrative schemas are cognitively represented as a sequence of actions that take place within a particular time and situation with a defined beginning and end (Nelson, 1999). People therefore

organise, comprehend, store and relate to experiences through schematic representations that take a narrative form (Nelson, 2007; Russel & van den Broek, 1992). As such, narratives are the linguistic representations of narrative schemas, reflecting internal cognitive processes and enabling us to express our knowledge of the world (Nelson, 2007; Russel & van den Broek, 1992).

In addition to narratives representing existing internal narrative schemas, narratives support the development of narrative schemas (Nelson, 2007). This view has grown in part due to the influence of constructivist and social constructivist theory that states that humans actively construct their knowledge and meaning through language (Crossley, 2000; Goncalves & Machado, 1999). It is assumed that the act of developing structured narratives which order events through time is a natural process that enables humans to make sense of experiences and themselves (Bruner, 1990; Pennebaker & Seagal, 1999; Richert, 2006). Developing a structured narrative through language is a system for organising, developing and understanding events (Pennebaker & Segal, 1999). In this way, language is not only the vehicle for representing our understanding of the world (implying that we already had the representations) but it also provides the means by which we actively develop our understanding of the world (Fivush, Haden & Reece, 2006; Nelson, 2007). Thus, a child's understanding of the world is supported by, changed, and integrated through the structure of narratives (Nelson, 2007).

1.2.2 Nelson's (2007) Model of Cognitive Development

The structure of narratives is proposed to be important for supporting cognitive development (Schank & Abelson, 1995; Nelson, 2007). This view has been captured in Nelson's (2007) model of cognitive development (see Figure 1.1). Nelson's (2007) theory states that the development of narratives is one of the central tasks of cognitive development. The model outlines six stages and whilst the interaction between biological, cultural and social influences on children's development is acknowledged, Nelson argues that language plays a central role as a catalyst for cognitive change. She states that whilst narrative schemas do not depend on language, it is through language that our understanding of the world is amplified (Nelson, 2007). Nelson proposes that children make sense of the world through their understanding of events. Events open up new ways of understanding the world and enable changes in cognitive organisation to occur. She argues that through the experience of repeated events, such as bath-time, feeding and dressing, infants develop narrative schemas. Through narrative schemas the infant develops basic knowledge of how the world works. Narrative schemas are used to

guide action and anticipate the action of others in similar routines. During infancy, Nelson suggests that these schemas are implicit and not available to consciousness or intentional recall. However, it is through language that these schemas become explicit and are further developed.

Nelson (2007) discusses many other important developments that occur as a result of the development of a structured narrative. She suggests that talking about the past with others establishes a shared reference of attention. Children also learn how to explicitly remember their past experiences. Since they cannot remember all aspects of an event they learn that their memory is a mental representation. By recalling events and listening to the events that others tell, children develop a sense of their individual perspective on the past. This establishes a sense of self through time and the development of their autobiographical memory; key elements for identity and psychological well-being. Nelson suggests that narratives facilitate the development of a shared history with others and shared meanings. Children become inducted into the 'community of minds' which is the symbolic culture within which they are raised. This enables them to participate in the discourse of their community and gain an awareness of possible experiences and knowledge to be explored.

Figure 1.1
Nelson's (2007) model of cognitive development

Level 6 Cultural – self in communities of minds
Level 5 Narrative – integrative self in other experience
Level 4 Reflective – sense of the self in time
Level 3 Cognitive – sense of the objective self and other
Level 2 Social – shared attention, shared routines
Level 1 Awareness – social figures, surroundings

In addition, Schank and Ableson (1995) also state that narratives are the fundamental constituents of human memory, knowledge and social communication. They believe that stories and methods of finding and using stories are fundamental to our cognitive functioning, and suggest that intelligence is the use of experience and the creation and telling of stories. They suggest that in order to understand intelligence, we must understand how events become narratives and how narratives are stored and retrieved. They acknowledge that there is a lack of empirical research evidence and call

for more research to be carried out, noting that there has been a lack of attention by psychologists to narrative structure.

1.2.3 Structured narratives and psychological health

Since narratives facilitate our understanding of the world, supporting the development of narratives has important consequences in supporting psychological development (Bruner, 1986; McKeough & Genereux, 2003). Pennebaker & Segal (1999) propose that the act of organizing and structuring a narrative gives a sense of predictability and control. The event can then be summarised, stored and understood more efficiently (Smyth, True & Souto, 2001). Once the event has structure and meaning, it is thought that emotional effects of events are more manageable (Pennebaker & Segal, 1999).

If a difficult event is organised into a narrative with structure, the individual is thought to experience less rumination and any difficult experiences gradually diminish from conscious thought, thereby reducing stress and improving health (Danoff-Burg, Mosher, Seawell & Agee, 2010; Pennebaker & Segal, 1999). Conversely, painful experiences that are not processed and represented in a structured narrative can contribute to an on-going experience of negative thoughts and feelings (Pennebaker & Segal, 1999). This can cause obsessional rumination that can result in psychological difficulties (e.g. post traumatic stress disorder; Smyth et al, 2001).

Indeed, it is the development of structured organized narratives that forms the basis of psychotherapy; developing a narrative that explains and organises life events causing distress (Goncalves & Machado, 1999; Pennebaker & Seagal, 1999; Russel & van den Broek, 1999). Transforming and reorganising narratives are thought to change the underlying narrative schemas; this process being the key element that underpins change in psychodynamic and cognitive therapies (Russel & van den Broek, 1999). In this way, the ability to produce a structured narrative plays an important role in the reduction of psychological difficulties (Goncalves & Machado, 1999). To date however, there has been little research investigating these claims with children.

In conclusion, narratives are important for our cognitive development and psychological well-being since they are a key tool with which individuals organise and represent their experiences and understand the world (Russel & van den Broek, 1992; Nelson, 2007).

1.3 The Components of Narrative Schema as Described by Story Grammar

Thus far, narrative schemas have been described as abstract cognitive knowledge structures that represent events (Schank & Abelson, 1977). It has been proposed that the structure of our narratives reflect and develop the structure of our narrative schemas (Nelson, 2007; Stein & Glenn, 1979). The structure of our narrative schemas and thus the structure of our narratives can be described as a set of organised components that are joined together in predictable ways (Stein & Glenn, 1979). This section examines the theories as to the components that make up a narrative schema and the relationship between those components.

1.3.1 Story Grammar

Much like the example of the face schema described in section 1.2, Anderson and Pearson (1988) state that it is a theoretical challenge to specify what components are abstracted and stored in any schema and what the relationship is between these components. Cognitive psychologists have attempted to describe the relationship between components that comprise a narrative schema using fictional stories (Johnson & Mandler, 1980; Stein & Glenn, 1979). The theorists called the components that are abstracted from a story and the relationship between the components 'story grammar', since they felt that it described the rules for a story much like sentence grammar provides the rules for a sentence (Mandler & Johnson, 1977). Story grammar is therefore the formal rule system that provides a description of the regular structure of a basic story (Thorndyke, 1977; Mandler & Goodman, 1981; Stein & Glenn, 1979). It is assumed that story grammar reflects the schema for a fictional story and analysing narratives using story grammar enables psychologists to understand an individual's schema for a story and therefore how they process stories (Stein & Glenn, 1979). As a result, story grammar, story schema and story structure have become terms that are somewhat interchangeable in the literature.

Various story grammars have been outlined by different researchers (Thorndyke, 1977; Mandler & Johnson, 1977; Stein & Glenn, 1979). Thorndyke (1977) proposed that the components of all stories are setting, theme, plot and resolution. Similarly, Stein and Glenn (1979) developed a story grammar that outlines a story as consisting of a setting, one or more episodes and an ending. An episode has a characteristic structure of an initiating event, an internal response, an internal plan, an attempt to reach a goal, a direct consequence and a reaction (see Table 1.1).

Table 1.1.

A story grammar example according to Stein and Glenn (1979)

Setting:	Once upon a time there was a skinny little mouse named Melvin who lived in a big red barn.
Initiating event:	One day Melvin found a box of rice crispies and realised that there was a hole in the side of the box.
Internal response:	Melvin knew how good the cereal tasted and he wanted a little bit.
Internal Plan:	He decided to get some sugar first to sweeten it up.
Attempt:	Melvin slipped through the side of the box and quickly filled his bowl.
Direct Consequence:	He ate every bit of the cereal and felt very full
Reaction:	He knew that he had eaten too much and felt very sad.

Although the specific details of story grammars differ, all are similar with regards to their basic components and the notion of an episode. However the models vary in the ways that they join episodes and the range of stories that they can describe (Johnson & Mandler, 1980). Researchers agree that a coherent structured narrative is driven by a protagonist's wish to achieve a goal and should include a formal beginning, an orientation that introduces the setting, initiating events that are goal directed actions, a resolution of the problem and a formal ending (Hudson & Shapiro, 1991).

1.3.2 The Validity of Story Grammar

The extent to which story grammar reflects the schema for a story is an important empirical question (Mandler & Goodman, 1982). In order to understand this, it is necessary to examine whether it is possible to use story grammar to make predictions about story processing. Since people may not be explicitly aware of the way in which they process stories, story schema is investigated through the automatic processes of production and comprehension of stories (Mandler & Goodman, 1982).

Empirical research suggests that narrative structure impacts the way individuals remember and understand stories (Brewer & Lichtenstein, 1980). For example, Stein and Glenn (1979) told two stories to two groups of 24 children; with a mean age of 6 years 5 months and 10 years 6 months. Children were asked to recall one story immediately and one after 24 hours. The number of different story grammar components included in their retold narratives were measured. Irrespective of age and time of recall, all children recalled the story according to the sequence of events outlined in the story grammar. The children consistently recalled the same components

of the story and the same components were recalled most often. Similar results were found with 63 participants aged 6 years, 9 years and undergraduate university students (Mandler & Johnson, 1977) and in a longitudinal study with children aged 9 years and 11 years (Fitzgerald, Spiegal & Webb, 1985). Stories that are presented in accordance with story grammar are more comprehensible than stories that are not presented in this way (Thorndyke, 1977). Also, stories presented in an order that is consistent with story grammar are recalled more effectively than stories that are presented in alternative orders (Mandler, 1978; Thorndyke, 1977).

Taken together, these results support the notion that the components in story grammar are used to process stories. Recall of information is not random and is highly consistent among individuals. Certain types of structural information are more important for processing stories than others. Furthermore, people are able to recall stories presented in a temporal order more effectively than stories presented in alternative orders (Stein & Glenn, 1979).

Despite the theoretical and empirical evidence, there are various shortcomings with story grammar research. Whilst story grammars were developed to describe the structure of fictional stories, they have subsequently been used to analyse personal narratives (e.g Stadler & Ward, 2005). The components described by story grammar concurs with aspects of personal narratives identified by linguists which detail that narratives consistently contain information regarding who, when, where and what happened (Labov & Waletzky, 1967 cited in Labov, 2006). However, research investigating the narratives of children between 4 and 8 years old suggests that the structure of personal narratives and fictional stories may differ, and that story grammar is more appropriate for analysing fictional stories (Allen, Kertoy, Sheblom & Petit, 1994). The extent to which story grammar truly represents the narrative schema of personal and fictional narratives remains unclear.

With regards to the processing of stories, whilst it is acknowledged that story grammar represents the structure of simple stories with a single protagonist, story grammar has difficulty conforming to stories that include conversation and more than one protagonist (Mandler & Johnson, 1977; Stein & Glenn, 1979). The extent to which story grammar conforms to more complex stories is therefore not clear and to this end psychologists have questioned the validity of story grammar (Black & Wilensky, 1979). However, researchers have proposed that the validity of story grammar is not the extent to which it represents our schema for complex fictional stories, but is the extent to which it represents our schema for events (Brewer & Lichtenstein, 1980; Lichtenstein &

Brewer, 1980). This supports the importance of narrative schemas described in the previous section and provides support for story grammar representing both personal and fictional narratives. The difference between the structure of a narrative representing a complex fictional narrative and a set of ordered events currently remains unclear.

It is unclear as to what extent story grammar reflects our recall of stories in natural settings. Theorists suggest that the relationship between the speaker and the listener is important (Bartlett, 1932; Bruner, 1990; Nelson, 2003) and it has been suggested that schemas are social and designed for sharing memory rather than simply to ensure individual's storage (Bruner, 1990). Despite this, research investigating story grammar has been conducted in experimental settings, asking participants to retell or make up a narrative and as such, the social dimension of telling stories is lost.

Despite these limitations, it is clear that story grammar supports the processing of narratives and is therefore functional from a psychological perspective (Stevens, Van Meter & Warcholak 2010).

1.4 The Development of Narrative Structure

The previous section demonstrated that narrative schemas are the cognitive representation of events (Nelson, 2007) which are expressed in language through narratives. Narratives comprise of a set of components known as story grammar (Stein & Glenn, 1979; Lichtenstein & Brewer, 1980). The development of Stein and Glenn's (1979) story grammar is described in a model which outlines the stages of the narrative's structural complexity (Glenn & Stein, 1980 cited in Hedberg & Westby, 1993). Several other researchers have also described models of the development of narrative structure (Applebee, 1978; Botvin & Sutton-Smith, 1977; Stadler & Ward, 2005). This section compares and contrasts the stages described in the models. It then discusses the stages of narrative structural development in relation to age. The stages of development are compared to the theoretical model of cognitive development proposed by Nelson (2007) previously described in Section 1.2. Whilst there is a lack of research investigating the relationship between narrative structure and the additional linguistic and cognitive skills required to produce a narrative, where available this research is also included. A description of the models together with the stages of each model and an example can be found in Table 1.2.

Table 1.2. The development of narrative structure

Description	Applebee (1978)	Botvin and Sutton-Smith (1977)	Glenn and Stein (1980)	Stadler and Ward (2005)	Nelson (2007)	Example
1. Unrelated words and statements	Heaps	Level 0	Isolated description	Labelling	Cognitive Consciousness	A dog. A cow. The chickens in their house. The boy with the kite.
2. List of events. No temporal or causal connections.	Sequence	Level 1	Descriptive sequence	Listing		A lion ate all the animals. It chased after the people.
3. Begin to include a central topic with character actions. Missing temporal sequencing as major events could have happened in any order	Primitive Narrative	Level 2	Action sequence	Connecting	Reflective Consciousness	The pirate wanted to find the treasure. He had a boat and he was the captain. He sailed it over the sea to a little island.
4. Statements are temporally related; however they lack a central topic or character.	Unfocussed chain					There was a dog, and then a cat came and the dog and the cat had a fight and the cat won. And then the cat saw a mouse. And the dog's owner came.
5. Correct temporal sequencing and cause and effect and attempt to answer 'when' and 'why' questions.	Focussed chain		Reactive sequence	Sequencing		The boy got stung by the bee. The bees were all around and then they left. Then the boy went inside.
Cause and effect, with goals and intentions. Planning inferred.			Abbreviated episode			A spaceship came down and landed on a house. There were some people in the house. The aliens wanted to study them. One man was taken and the spaceship was never seen again.
6. Includes developed plots with evidence of planning to reach goals	True narrative	Level 3	Complete episode	Narrating	Narrative Consciousness	There was a bear that lived in the forest. He was very hungry so he went to look for some food. He climbed a tree and he found some honey. He was very happy. He ate it all up and then he went home for a sleep.
7. Obstacles and multiple attempts to reach goal.		Level 4	Complex episode		Cultural Consciousness	For an example see Botvin & Sutton-Smith, 1977.
8. At least two episodes, the first being interrupted by the second which then resumes after it is completed.		Level 5	Embedded episode			For an example see Botvin & Sutton-Smith, 1977.
9. The beginning of the use of sub plots.		Level 6				For an example see Botvin & Sutton-Smith, 1977.
10. The main action sequence is interrupted by two or more sub sequences. Plots within plots.		Level 7				For an example see Botvin & Sutton-Smith, 1977.

1.4.1 Models of Narrative Structure Development

There are four models of the development of narrative structure (Applebee, 1978; Botvin & Sutton-Smith, 1977; Glenn & Stein, 1980 cited in Hedberg & Westby, 1993; Stadler and Ward (2005). All models describe the development of narrative structure in stages and there are considerable similarities across all models. The first stage of each of the models describes a narrative as a set of unrelated words and statements. The second stage of the models describes the narrative as a list of events, which begins to include a degree of coherence maintained by a central character, setting or topic. Although events may appear to have a sequence in time, the lack of temporal or causal links means that they may have occurred in any order. Applebee (1978) notes that although objects are beginning to be grouped together, the connections are factual and concrete between things that are similar, rather than groupings that are logical and abstract.

In the third stage of the models, narratives may begin to have a character that is situated in a point in time other than the present. The child begins to include a central topic and links characters to events. At this stage, events remain complimentary and due to shared situations rather than reflecting temporal-causal relations. Therefore there is no sense of moving through time since events could have occurred in any order. By contrast with the other models, Applebee (1978) then introduces an intermediate level of development called 'unfocussed chains'. This is the first stage of development where children are able to form a narrative with temporally related statements. Although components are in a logical sequence they lack a central topic or character. Applebee notes that this category was rare in the sample of narratives that he analysed.

Children then begin to include an initiating event and a consequence and may also have a setting and ending in their narratives; all components of Stein and Glenn's (1979) story grammar (Hedberg & Westby, 1993). Glenn and Stein (1980) label this stage 'reactive sequence', whilst Applebee (1978) calls this 'Focussed Chains' and Stadler and Ward (2005) name this 'Sequencing'. At this stage of structural development the narrative begins to be linked around a central character and includes temporal sequencing and cause and effect. Applebee notes that the character still lacks clear motivation and goals which result in a lack of clear plot and ending. Glenn and Stein (1980) then introduce a stage called 'Abbreviated episode' where narratives include characters which engage in cause-effect sequencing of actions and the story describes goals or intentions of characters, however the planning of events must be

inferred. The narrative begins to include internal responses and reactions to consequences in addition to the other story grammar components described above.

In the next stage of development, the child conveys a clear central character, a theme, connected events and a plot that results from the motivations of the main character. This stage of development corresponds to the story grammar outlined by Stein and Glenn (1979) and includes an initiating event, internal responses, attempts and consequences. Applebee (1978) notes that these narratives are held together by both abstract bonds and concrete bonds and include evidence of planning to reach goals. This is the final stage of Applebee's and Stadler and Ward's models, known respectively as 'true narrative' and 'narrating'.

Both Glenn and Stein (1980) and Botvin and Sutton-Smith (1979) then describe several further stages of narrative development. They suggest that children are able to tell narratives that contain obstacles and multiple attempts to reach a goal and include two or more action sequences. Narratives may then include two or more well developed episodes and begin to include sub-plots.

Whilst there is considerable similarity between the stages of the models they were all developed in different ways. Botvin and Sutton-Smith (1977) first proposed eight stages and investigated the validity of these stages with 220 children aged 3 to 12 years. Applebee (1978) developed his model by reanalysing narratives of 120 children aged 2 to 5 years that were collected by Pitcher and Prelinger (1963) in response to the instruction 'Tell me a story'. Glenn and Stein (1980 cited in Hedberg & Westby, 1993) proposed eight stages. It is noteworthy that their sixth stage 'complete episode' includes all of the components of Stein and Glenn's (1979) story grammar as previously described in Section 1.3. Stadler and Ward (2005) proposed five stages based on Applebee's model. They investigated the development of narrative structure with 14 children aged 3 to 5 years. Children told one original story and one retold story to a group of peers and one original story and one retold story to a researcher.

The studies did not set out to assign ages at which children reached particular stages of development and they investigated the narratives of children of different ages. However in general, research suggests that children move through the stages from 'Heaps' to 'True Narrative' between two and six years. In Applebee's (1978) study, children aged 2 years were at least at the first stage of development and able to assign labels to events, whilst 43% (the largest proportion) of children aged 2 years were at the second stage. Applebee found that 20 % of children aged 3 and 4 years continued to be at this level. Botvin and Sutton-Smith (1977) demonstrated that the majority of children

aged 3 and 4 years in their sample achieved this stage of development, however it is notable that they did not examine children younger than 3 years old. In Applebee's sample of children, one sixth of the 2 year olds, one third of 3 year olds and half of 4 and 5 year olds were able to tell narratives which included temporal sequencing with cause and effect, known as Focussed Chains.

Research demonstrates that children are able to tell a 'True Narrative' that includes all of the components of Stein and Glenn's (1979) story grammar between 3 and 6 years. In Applebee's sample, only one child out of 30 three year olds was able to achieve this stage which rose to 20% of 5 year olds. Whilst the youngest child to achieve this stage in Botvin and Sutton-Smith's (1977) study was 4 years old, the majority of 5 year olds were able to achieve this stage which was also the most achieved stage at 6 years. Recent research investigating children's ability to tell narratives between 3 and 5 years supports these claims, measuring narratives using Glenn and Stein's (1980) developmental model (Ilgaz & Aksu-Koc 2005). When asked directly to tell a fictional story, a minority of children aged 3 years were able to produce a narrative with a complete episode, this rose to 50 % of children aged 4 years and 89% of children aged 5 years (Ilgaz & Aksu-Koc, 2005).

Following this stage of narrative development, children were able to tell a more complex narrative which included obstacles and multiple attempts to reach a goal aged 8 years (Botvin & Sutton-Smith 1977). Additionally, a longitudinal study with 30 children demonstrated that children's use of more complex narratives increased between 9 and 11 years (Fitzgerald, Spiegal & Webb, 1985) whilst children age 12 years were able to produce narratives which included sub-plots (Botvin & Sutton-Smith 1977).

Taken together, the models of the development of structural complexity of children's narratives are highly comparable. In general children's narrative structural complexity increases with age and there is a more dramatic increase in development between the ages of 3 and 6 years (Applebee, 1978; Ilgaz & Aksu-Koc, 2005; Botvin & Sutton-Smith, 1977; Fitzgerald et al., 1985). The models also concur that it is difficult to assign the stages to ages for several reasons. Researchers state that the stages are not necessarily distinct and that children do not necessarily move logically from one to the next (Applebee, 1978; Stadler & Ward, 2005). The researchers also note that many stories do not fit neatly into one category and may show a different type of narrative structure in different sections of the narrative (Applebee, 1978; Ilgaz & Aksu-Koc, 2005).

Whilst the stages of the models are comparable, the method of narrative elicitation in each study varies widely. This limits the comparison of studies in order to understand the age at which children develop these skills. For example narratives can be elicited by asking children to 'make up a story' (Applebee, 1978; Botvin & Sutton-Smith, 1977) or retelling using story books (Stadler & Ward, 2005). Indeed, when given different tasks, the same children tell narratives with different stages of complexity (Stadler & Ward, 2005; Ilgaz & Aksu-Koc, 2005). For example, children aged 4 years produced more complex narratives using toys as prompts than when asked to simply produce a story (Ilgaz & Aksu-Koc, 2005).

In addition to the difficulty ascertaining the ages at which the structural stages typically develop, aspects of methodology also place further limitations on the understanding of the structural development of narratives. The difference between the structural development of personal and fictional stories remains unclear at present. Although Stadler and Ward (2005) included personal narratives in their analysis, the majority of research defined the stages of complexity in response to the children telling fictional stories (Applebee, 1978; Botvin & Sutton-Smith, 1977).Some researchers suggest that there is no relation between children's fictional story production and personal narratives (Senechal, Pagan, Lever & Ouette, 2008) and as a result development may follow a different path (Allen et. al. 1994).

The extent to which the stages of structural development reflect children's narrative development in natural settings also remains unclear. The majority of research to date involves eliciting narratives to a researcher in a formal, perhaps unnatural setting. The relationship between the teller and the listener may therefore have been lost or distorted. To try and overcome this constraint Stadler and Ward (2005) also included children's recall of a familiar story and also stories told to peers. Other researchers made attempts to be an uninformed listener, or tell stories to puppets (Allen et al., 1994), however research does not include children in natural settings. The nature of experimental tasks may also influence the nature of children's narratives by putting constraints on the narratives in terms of what the children can talk about. This may also make it difficult to understand the exact dynamics and trajectories of children's natural narrative development (Nicolopoulou, 2008). Lastly, the age of the children used in the studies also limits the understanding of the development of narrative since the majority of research investigates the development of narratives with young children. There is little research on the development of oral narratives of older children and adolescents.

Instead, researchers have focused on older children's written narrative structure skills (McKeough & Genereux, 2003).

1.4.2 The Development of Narrative Structure and Additional Cognitive and Linguistic Skills Required to Produce a Narrative

The development of narrative structure can be compared to the model of cognitive development proposed by Nelson (2007) outlined in Section 1.2. The first stage of narrative development (unrelated words and statements) resonates with the development of 'cognitive consciousness'. Nelson states that cognitive consciousness occurs during the second year when children are beginning to learn words and construct simple sentences. Nelson describes how the referential function of language is developing since children use language to label objects and actions in the present. At this stage, language is considered to be an accessory to the activity rather than an essential part (Nelson, 2007).

The second and third stages of narrative development can be compared to the beginnings of entering the stage of 'reflective consciousness' as described by Nelson (2007). At this stage of cognitive development, the child is gaining an awareness of themselves as distinct from others and developing their self awareness. They are also beginning to develop an awareness of past and future, facts and fiction. These aspects of development are marked by the children including a central character in their narrative and discussing events that are not in the present. Nelson states that during this level of cognitive development, children begin to use the representational function of language where language is used as a symbolic medium to represent things rather than merely labelling things that exist in the present (Nelson, 1998). The representational function of language is therefore particularly important for developing narratives since narratives discuss events that have previously occurred (Nelson, 1998). The extent to which cognitive development is required for the development of representational language or the extent to which the use of representational language supports an understanding of these abstract concepts is currently unclear (Nelson, 2007). The development of representational language in the development of narratives exemplifies the transition from language *and* cognition to language *in* cognition (Nelson, 1998). It is thought that the lack of abstract symbolic language at an early age restricts the description of temporal and causal sequences (Goswami, 1998). Indeed, children may use language before they have developed a full understanding of the meaning of the words (Nelson, 2007). Telling narratives may therefore be important in developing an understanding of

cognitive concepts such as time, through the use of representational language (Nelson, 2007).

The stages of narrative development between Applebee's 'Focussed chains', and 'True narrative' reflect Nelson's stage of cognitive development called 'narrative consciousness'. At this stage, children learn to differentiate the self from others and make a meaningful narrative of the remembered experience. Moreover, children begin to understand the motivations, goals, emotions and beliefs of other people (Nelson, 2007). The later stages of narrative development, where children are able to include obstacles and multiple attempts to reach goals parallels Nelson's (2007) stages of cultural consciousness where the child is a participant in the discourse of their community and demonstrates a detailed understanding of other minds and an awareness of the possible experiences and knowledge to be explored.

1.4.2.1 Empirical research.

Comparing the development of narrative structure to Nelson's (2007) theory of cognitive development suggests that the ability to produce more structurally complex narratives is related to aspects of language and cognitive ability. However, there is little empirical research to support these claims and the relationship between narrative structure and the additional skills required to produce a narrative is currently unclear. Empirical evidence suggests there are relationships between narrative structure and aspects of language skills and the understanding of how internal states are linked to behaviour which are discussed below.

Differences in narrative structure according to level of syntactic skills (the ability to put words together in a sentence) were investigated with fictional and personal narratives produced by 36 children aged 4 to 8 years (Allen et al., 1994). Children were divided into two groups; one with high and one with low syntactic skills. There was no significant difference between the groups according to the number of components of story grammar outlined by Stein and Glenn (1979). However children with high syntactic skills produced more developmentally structured narratives. It is notable that the sample comprised of children from a large age range and possible age effects were not studied.

A similar relationship was found between narrative structure and cohesive devices. Ninety-six preschoolers with an average age of 4 years 6 months and first graders with an average age of and 6 years 8 months were asked to produce fictional narratives using a set of pictures about events (Hudson & Shapiro, 1991). The children

who produced the most structured narratives, according to the authors own rating scale derived from Stein & Glenn's (1979) story grammar, contained more complex cohesive devices. Furthermore, the younger children produced less structured narratives which included less cohesive devices such as pronouns and connectives than the older children. Similarly, Cain (2003) measured the number of connectives in narratives of 38 children aged 6 to 8 years old. More complex narratives, as rated by the authors own rating scale, had a higher proportion of dependent connectives.

Whilst research has consistently found a relationship between narrative structure and aspects of language, different conclusions have been drawn with regards to the directional nature of this relationship. Allen et al. (1994) propose that higher syntactic skills supports narrative structure. Whereas, Hudson and Shapiro (1991) suggest that narrative structure supports aspects of language. They propose that whilst younger children are developing their story schema, older children who have mastered the structure of narratives can then devote more effort to establishing the cohesion of the narrative (Hudson & Shapiro, 1991). It should be noted that research to date is limited and despite these conclusions does not establish the directional nature of the relationship between narrative structure and aspects of language.

Despite the proposed importance of syntactic ability for narrative structure described above, the ability to include internal states related to the cause of behaviour in narratives is thought to make a greater contribution to the ability to produce a structured narrative, than language ability (Benson, 1997). The narratives of 34 children aged between 4 and 6 years were investigated using a wordless picture book. Children who used internal states to convey causation told narratives with more episodes, independent of their language ability (Benson, 1997). However it is notable that this study has several limitations. The overall language ability of the children was rated by the teachers as average or below average for their age and therefore may have been less accurate than a formal measure.

The ability to understand how internal states relate to behaviour is often known as theory of mind (Curenton 2004). It is widely accepted that children have acquired an understanding of theory of mind by age 5 years (Cutting & Dunn, 1999), corresponding to the age at which children are able to include internal states in their narratives. One study investigated the relationship between inclusion of internal states in narratives and an understanding of theory of mind with 72 children aged 3 to 5 years (Curenton, 2004). The study found that after controlling for age, there was a significant correlation between performance on the false belief task (a task typically used to measure theory of

mind by Wimmer & Perner, 1983) and the inclusion of plot details and internal states when retelling a narrative. Supporting the relationship between narrative and theory of mind, both have been shown to be associated with activity in similar brain areas such as the medial prefrontal cortex, bilateral temporoparietal junction and the posterior cingulated cortex as measured by fMRI (Mar, 2004).

The direction of the relationship between theory of mind and ability to include internal states in narratives is currently unclear. It is thought that the lack of ability to include internal states in narratives is related to children's difficulty explaining character's emotional responses, desires and thoughts (Curenton, 2004). However it has also been suggested that narrative structure may play an important role in children's understanding of theory of mind (Guajardo & Watson 2002; Lewis, Freeman, Hagestadt & Douglas, 1994; Riggio & Cassidy, 2009). Children aged 3 years who failed a typical false belief task were found to succeed after they narrated a picture book version of the task back to the experimenter (Lewis et al., 1994). Research also investigated the effect of an intervention during which adults read and discussed stories for 15 minutes, three times a week for 5 weeks to 26 children aged 3 and 4 years old who had low scores on a theory of mind assessment (Guajardo & Watson, 2002). Children showed significant increases on post-test theory of mind assessments whereas 28 children in a no treatment control group did not. However, it is notable that this study suffers from several limitations, since the children were engaged in discussion and questioning in addition to being read stories and the control group did not take part in an equivalent intervention. It is suggested that the structure of the child's narrative is central to performance on the false belief task since the ability to link events together supports their understanding of other's minds (Lewis et al., 1994). Furthermore, it is thought that children who repeatedly hear false beliefs in narratives may experience cognitive restructuring of their narrative schema and are subsequently able to process the narratives at a higher level of understanding (Riggio & Cassidy, 2009).

It is difficult to compare studies in order to understand the relationship between narrative structure and additional cognitive and linguistic skills. In addition to the lack of research, studies use different methodology. For example they measure different aspects of language; overall language ability (Benson, 1997), syntactic ability (Allen et al., 1994) and cohesive devices (Hudson & Shapiro, 1991; Cain, 2003). Studies ask children to perform different tasks, such as telling personal and fictional narratives (Allen et al., 1994) and retelling a wordless picture book (Benson, 1997). They also measure narrative structure differently; using their own rating scales (e,g Hudson &

Shapiro, 1991; Cain, 2003; Benson, 1997) which may also provide explanations for different results. Investigating false belief using narratives is problematic since narratives vary in levels of complexity and children process stories differently as a result (Riggio & Cassidy, 2009) thereby adding to the difficulty in comparing studies and forming firm conclusions. Despite the paucity of research, the studies highlight the complexity of skills required to produce a structured narrative and the need for further research to be conducted regarding the relationships between them.

1.4.3 Summary

This section has demonstrated that narrative structure develops in stages over the course of a child's early life; however it is difficult to define the exact ages that this occurs. Empirical research is difficult to compare, particularly with regards to the methods of eliciting narratives. Research investigating the development of narrative structure is lacking with regards to understanding the differences between the structure of personal and fictional narratives and the structure of children's narratives in natural settings. The relationship between narrative structure, additional language skills and theory of mind is clearly complex and currently remains unclear. Producing narratives requires a variety of cognitive and linguistic activities, each of which develop gradually over the preschool years. However research investigating these skills is limited and has not been addressed systematically therefore how these skills are combined is unknown (Nelson, 2007). The degree to which cognitive development supports language development or language development supports cognitive development and their relationship to narrative structure is yet to be established. Indeed these relationships may not be able to be reduced to unidirectional causal links (Lorusso et al., 2007). Further research that explores how the narrative structure is related to children's linguistic and cognitive skills is therefore required (Curenton, 2011).

1.5 Social and Environmental Origins of Individual Differences in Children's Narrative Structure

The structure of children's narratives develops over the preschool years (Applebee, 1978). However research has highlighted that there are individual differences in this development due to social and environmental factors, specifically the quality of parent's

co-constructed narrative conversations and socio-economic status, both of which are explored in the following section.

1.5.1 Parents Co-constructed Conversations

There is an assumption that parent-child conversations play an instrumental role in children's developmental processes and outcomes (Fivush et al. 2006). Vygotskian sociocultural theory provides the theoretical framework for this view (Vygotsky, 1978). The theory proposes that children begin to take part in activities that are slightly beyond their competencies and adults provide the necessary structure to enable them to complete the activity, known as scaffolding. Over time, the child begins to internalise the support that has been provided by the adult and requires less and less scaffolding until they are eventually able to complete the activity independently. In this way, language interaction is an important developmental mechanism of change (Nelson, 2007). This theoretical approach emphasises individual differences in skills and hypothesises that differences in language interactions will lead to differences in narrative structure (Peterson & McCabe, 1994).

Empirical research demonstrates that adults do provide most of the structure in early conversations about past events, although there are important differences across parents in the amount of structure that they provide (Reece & Fivush, 1993; McCabe & Peterson, 1991). 'Elaborative' parents provide more structured narrative conversations with their children by engaging them in longer discussions about events, providing elaborative descriptions and asking them more questions related to the components of story grammar for example who, what, where, why and how (Reece & Fivush, 1993). These questions require more information to be retrieved from memory and are more cognitively challenging than questions which require a yes or no answer (Haden, Ornstein, Rudek & Cameron, 2009). In comparison, 'low-elaborative' parents have shorter conversations with their children about past events, repeatedly ask the same questions, provide little information and engage in a testing and prompting interaction which places much of the burden of remembering on the child (Peterson & McCabe, 1992; Reece & Fivush, 1993).

Whilst much research has been undertaken specifically regarding parental elaboration (for a recent review see Fivush et al., 2006), of most interest to this review is the literature investigating the relationship between parental elaboration and children's narrative structure (Fivush, 1991; Haden, Haine & Fivush, 1997; Peterson & McCabe, 1992; Peterson & McCabe, 1994). Despite limited research, evidence suggests

that there is a relationship between the degree of parental structure in their co-constructed conversations about the past with their children and the structure of children's individual narratives (Fivush, 1991; Haden et al., 1997; Peterson & McCabe, 1992, Peterson & McCabe, 1994). For example, Haden et al. (1997) carried out a longitudinal study investigating 15 mother-child, father-child joint narratives and children's individual narratives when the children were 40 months and 70 months old. A hierarchical regression analysis was carried out to investigate the relative influence of parental structure at 40 months on children's individual narratives at 70 months. Parental orientating information (who, where and when) accounted for one quarter of the variance in children's orientating information in individual narratives. Furthermore, the degree to which mothers provided evaluative information in conversation predicted the degree to which children included evaluative information in their later individual narratives. Similar results were found by other researchers investigating this relationship (Fivush, 1991; Peterson & McCabe, 1992, Peterson & McCabe, 1994.

Intervention studies have shown that teaching parents how to structure conversations about past events can increase children's narrative structure. Peterson, Jesso & McCabe (1999) assigned 20 preschoolers with an average age of 3 years 7 months to either an intervention or a control condition. Researchers taught mothers narrative elaboration skills using transcripts, discussions and role plays. Families were revisited every month for one year and were regularly telephoned. The control group did not receive any support. Between pre and post test, the narrative structure of the mothers in the intervention group changed significantly more than the control group, particularly regarding the number of open-ended prompts and 'wh-questions' used. Although the children's narrative structure had not improved at post test, 14 children (7 from each group) were followed up 12 months later. The children in the intervention group had significantly increased the length, amount of information and number of context-setting references in their narratives. However, the study had a low number of participants and a somewhat high amount of variability in scores, making statistical analysis difficult. The mother's narrative skills were not followed up at the end of the year and therefore it is not possible to determine whether the mother's continued to maintain their narrative elaboration skills without the intervention.

Despite these limitations, it is further suggested that teaching parent's narrative skills can increase children's narrative structure (Reece, Leyva, Sparks & Grolnick, 2010). The effects of a parental dialogic reading intervention were compared with a parental elaborative reminiscing intervention. Dialogic reading involves the adult

prompting the child with questions about the events in the book, by asking questions for example; who, where, when, what happened and why. Parents in the dialogic reading group were given five new books each month for five months. Elaborative narrative training involved similar techniques to dialogic reading however parents were encouraged to discuss real past events. Thirty-three low income parents of 4-year-olds were randomly assigned to dialogic reading, elaborative narrative training or no treatment control. Significant differences were found in the number of story grammar components included in children's individual narratives and the number of correct comprehension questions, with the elaborative group higher than the dialogic reading group. However, researchers found no significant difference between the elaborative training and the control group which therefore requires further investigation.

Taken together, these studies demonstrate that parental structure in joint conversations with their children about events influences the structure of children's independent narratives. In particular they would suggest that children whose parents provide more orientating information about who, where and when the event took place, include the same information in their own narratives. In addition, research suggests that increasing these elements in parents' co-constructed narratives can increase children's individual narrative structure over time (Peterson et al. 1999). Improving joint talk about past events may be a more effective way of increasing narrative skills than discussing fictional events in books (Reece et al., 2010) however, more research is required to investigate this further.

Existing research in this area is limited by the numbers of studies that have been carried out. Moreover, much of the research has used small samples, with many of the studies investigating less than 15 participants. In addition, there is no research investigating the effects of parental narrative structure on the narrative structure of children above 6 years old. Although research suggests that there are many individual differences in parental narrative structure (Fivush et al., 2006) these factors have not been taken into account in these studies. For example, differential effects of parental gender are not clear, since most studies are carried out with mothers and therefore the effects of fathers' narrative structure in joint conversations are uncertain.

Despite these limitations, research suggests that adults play a vital role in supporting children's narrative structure. Due to individual differences, some children may begin school with poor narrative skills. Research to investigate effective methods by which to increase narrative skills of children in school would therefore be beneficial.

1.5.2 Socio-economic Status

Research indicates that children from socio-economically disadvantaged backgrounds have poorer narrative structure than those from higher socio-economic status families (Dorado & Saywitz, 2001; Milgram, Shore & Malasky, 1971; Peterson, 1994). Peterson (1994) compared the narratives of 51 children between the ages of 3 and 4 years from three different types of homes; middle class, economically disadvantaged, economically disadvantaged and disorganised. Both groups of disadvantaged homes were on social assistance whilst the disorganised homes featured children who had been placed in foster care and where abuse and neglect had been prevalent. Personal narratives were elicited and measured for components of story grammar. Children from both groups of disadvantaged homes produced narratives that were significantly less structured and included less temporal-causal relations than the children from middle class homes. The children from disorganised homes produced the shortest narratives which included fewer events, less information and less temporal context. Whilst these children produced the poorest narratives, it is notable that it was not possible to ascertain whether they did not have the skills to do so, or whether they were reluctant to produce a narrative. Despite this, other studies have demonstrated similar results.

Milgram et al. (1971) asked 50 disadvantaged children and 49 advantaged children aged 3 to 5 years old to recall a story with pictures that had been read to them. Narratives were measured for number of words and sentences, story relevant sentences and essential themes. Disadvantaged children scored lower than the advantaged children on all measures. Finally, the narratives of 49 preschool children between 4 and 5 years old from low socio-economic status homes were compared to 50 preschool children of a similar age from middle income homes (Dorado & Saywitz, 2001). The study asked children to recall an event that they had previously taken part in and found that children from low socio-economic homes made more errors when answering open-ended who, what and where questions irrespective of their level of vocabulary.

Taken together, these studies demonstrate that young children from low socio-economic homes have poorer narrative structure than children of higher socio-economic homes. Children's narratives are shorter, include fewer events and have less structural components. Children also have more difficulty comprehending questions about narratives. These results concur with suggestions that 50% of children and young people in some socio-economically disadvantaged populations have speech and language skills that are significantly lower than other children of the same age (Bercow, 2008). Despite

these conclusions, it is important to note the paucity of research conducted in this area. Studies are difficult to compare since they use different methodology and measure different aspects of narrative skills. Research indicates that within levels of socio-economic status children's narrative skills vary (Peterson, 1994), therefore more research is required to investigate which aspects of family life influence which aspects of narrative skills. Parental co-constructed conversations previously described may be one such important factor to consider. This would give more clarity regarding individual differences in children's narrative structure and which children would benefit from intervention in school.

1.6 Narrative Structure and the Association with the Development of Reading Comprehension and Behavioural Adjustment

Research has demonstrated that there are individual differences in children's narrative structure. It is therefore important to explore the relationship between narrative structure and other developmental outcomes in order to understand the possible impact of poor narrative structure on children's outcomes. It is suggested that those children with poorer narrative skills are perceived to be less capable, both academically and socially (Bloome, Katz & Champion, 2003). The following section examines the directional nature of the relationships in order to ascertain whether poor narrative skills lead to less favourable outcomes.

1.6.1 Narrative Structure and Reading Comprehension

There is wide belief that narrative discourse serves as a major transition between oral language and literacy (Roth, Speece & Cooper, 2002). Narrative language is considered to be a literate form of language which shares several properties with written text; they are both monologue forms of language, share the same structure, use abstract language and are decontextualised (generated independently from an experience) (Roth, Speece & Cooper, 2002). It is thought that explicit awareness of narrative structure invokes schema which facilitate a meaning-based representation of written text (Cain & Oakhill, 2012).

Studies have investigated the relationship between narrative structure and concurrent reading comprehension (Cain & Oakhill, 1996; Cain, 2003). The narrative structure of 16 children aged 7 to 8 years with poor comprehension skills was compared

with 12 skilled comprehenders matched for chronological age, sight vocabulary and word reading accuracy (Cain & Oakhill, 1996). A group of 15 children aged 6 to 7 years was also included in the study. They were progressing normally with reading accuracy and reading comprehension for their age, but were matched for comprehension level to the poor comprehenders. Children told two narratives, one from a single word prompt 'Pirates' and one from a sequence of pictures. Components of story grammar such as setting information, event structure and an ending were measured. Children with poor comprehension skills told narratives with poorer structure than both the skilled comprehenders and the comprehension-age matched children. These results were later replicated with 12 skilled comprehenders and 14 less skilled comprehenders all aged 7-8 years and a group of 12 comprehension-aged matched children aged 6 to 7 years (Cain 2003). Children told three narratives using three different tasks; a single word title, a directed title and a sequence of pictures. The results were comparable, since children with poor comprehension skills told narratives with the poorest structure.

Cain and Oakhill (1996) propose that comparing the performance of less skilled comprehenders with skilled comprehenders of the same age, and comprehension-age matched younger children increases the understanding of the directional nature of the relationship between narrative structure and comprehension skill. Since the less skilled comprehenders produced less well-structured narratives than the comprehension-age matched children, it is suggested that story structure knowledge is not the result of good reading comprehension. Instead it is proposed that the lack of story structure knowledge is a possible cause of comprehension difficulties (Cain & Oakhill, 1996; Cain, 2003). In addition, in both studies the narrative structure of the poor comprehenders was increased depending on the nature of the task, to a greater degree than the other groups (Cain, 2003). As such, authors suggest that the knowledge of narrative structure influences comprehension by affecting children's ability to build a representation of a narrative. Increased task structure supports children's narrative schema by providing a framework to guide narratives and establish relations between motives, actions and goals, thereby providing support for the theoretical framework of schema theory previously described.

Studies have also investigated the relationship between narrative structure and later reading comprehension, although results are contradictory. One hundred and two children were studied aged 7 to 8 years and followed up aged 8 to 9 years and again at 10 to 11 years (Cain & Oakhill, 2012). Knowledge and use of story structure was measured using a story anagram task where components of stories required arranging

into the correct order and questions were asked about components of stories including beginnings and endings. At all ages, story structure knowledge was correlated with concurrent reading comprehension, providing additional support for the studies previously described. Furthermore, story structure at 7 to 8 years predicted reading comprehension at 8 to 9 years and 10 to 11 years, when earlier reading comprehension skill, verbal IQ and receptive vocabulary were controlled in the analysis. The authors concluded that the presence of a significant association, after controlling for earlier reading comprehension suggests a causal relation between narrative structure and later reading comprehension. However a significant limitation of the study was that the children were not asked to tell a narrative, merely to rearrange the order.

Despite this relationship, Roth et al. (2002) investigated the predictive relationship between the narrative structure of 66 children with an average age of 5 years 6 months and their reading comprehension one and two years later. Children told their favourite story which was analysed using Stein and Glenn's (1979) story grammar. Regression analysis revealed a negative relationship between narrative structure and reading comprehension. The study did not measure narrative structure at the later ages and therefore the relationship between narrative structure and concurrent reading comprehension was not investigated. The study is limited by the low number of participants since only 39 children completed the study and no other variables were controlled for in the analysis.

The predictive relationship between narrative structure and later reading comprehension is currently difficult to conclude due to limited number of studies conducted. The studies are difficult to compare due to the different ages of children, different tasks, different measurements of narrative structure and the limitations of each study. Despite these limitations, studies have consistently demonstrated a concurrent relationship between narrative structure and reading comprehension with children aged 7 to 11 years (Cain & Oakhill, 1996; Cain, 2003; Cain & Oakhill, 2012). Research suggests that factors limiting the structure of narratives are also limiting comprehension skills and that narrative schema may support reading comprehension (Cain & Oakhill, 1996; Cain, 2003), thereby providing further support for teaching narrative structure to children in schools.

1.6.2 Narrative Structure and Behavioural Adjustment

Research has also demonstrated a relationship between narrative structure and delinquent behaviour (Humber & Snow, 2001; Snow & Powell, 2005; Snow & Powell,

2008). All of the studies conducted have compared the narrative structure of male young offenders to young males who have not committed criminal offences, asking them to tell a narrative using a set of cartoon pictures (Humber & Snow, 2001; Snow & Powell, 2005; Snow & Powell, 2008). Humber and Snow (2005) compared the narrative structure of 15 offenders aged between 13 and 21 years old and 15 high school students aged between 15 and 17 years old. Significant differences were found between the narrative structures of the two groups. The young offenders were less able to tell a narrative with a logical sequential structure with significantly fewer story grammar components as defined by Stein and Glenn (1979), therefore failing to include important information. However, the study included a small sample and the young offenders had completed significantly less education than the non offenders (8.1 years compared to 9.9 years). Despite this, similar results were found in a study with an increased number of participants (30 offenders aged 13 to 19 years compared to 50 non-offenders aged 13 to 19 years) and where the offenders were on average 2 years older and who had received half a year more education (Snow & Powell, 2005). This study analysed the narrative structure in more detail and found that offenders were less likely to include the story grammar components of a plan, direct consequence and resolution. The same relationship was also replicated with 50 offenders (average age 15.8 years) and 50 non offenders (average age 14.9 years) where the difference could not be accounted for by IQ (Snow & Powell, 2008).

Research demonstrates a consistent relationship between juvenile offending and poor narrative structure since young people who displayed disengagement from school and have been involved in delinquent activities have poorer narrative structure than non offenders (Humber & Snow, 2001; Snow & Powell, 2005; Snow & Powell, 2008). It is suggested that children who have difficulty structuring a narrative may have difficulty reconstructing their experiences and sharing them with others (Humber & Snow, 2001). These difficulties may be interpreted as non-compliant behaviour and the children may be perceived as having conduct problems. These studies may provide support for the theoretical importance of narrative schema, as described in Section 1.2, for informing behaviour by providing information about previous behaviour in previous situations, supporting the recall of events from memory and enabling the expression of knowledge about the world (Abelson, 1981; Russel & van den Broek, 1992).

Despite these conclusions, it is notable that research to date has been conducted with males who are older than 13 years of age. Research is therefore required which investigates this relationship with females and younger children. In addition, co-

morbidity with other factors is high in this population and therefore it is difficult to isolate the effects of narrative structure from other factors such as drug abuse, socio-economic status and education. Furthermore, no causal inferences between narrative structure and delinquent behaviour can be drawn since studies to date are cross-sectional in design. Future longitudinal research tracking at risk children is therefore required to further investigate the relationship between narrative structure and behaviour.

1.6.3 Conclusion

Understanding the difficulties children face with language skills may give rise to more clear ideas with regards to strategies for early intervention, in order to help strengthen known protective factors and buffer known risk factors (Humber & Snow, 2001; Snow & Powell, 2005). Present research has highlighted that difficulties with narrative structure may have important implications for future educational outcomes including reading comprehension and behaviour (e.g. Cain, 2003, Humber & Snow, 2001). This is important for early intervention, policy-makers and practitioners due to the fundamental influence on the nature and amount of language produced everyday and the effects that this can have on children's lives (Snow & Powell, 2005). Indeed, teaching children narrative structure could help foster reading comprehension and support children to be able to organise their own experiences, thoughts and ideas into spoken language in order to foster pro-social relationships (Cain & Oakhill, 1996; Cain & Oakhill, 2012; Snow & Powell, 2005). Targeted interventions at an early age may therefore reduce some of the later behaviour and literacy difficulties that occur in school-aged children (Snow & Powell, 2005). As a result, more coherent evaluation of interventions 'is a strategy poised for urgent empirical investigation' (Snow & Powell 2008, p 26).

1.7 School Based Group Interventions Using the Principles of Narrative Structure

The following section reviews the empirical research evaluating interventions that have used the principles of narrative structure in order to enhance children's narrative skills, in a group setting, at school, over time. Interventions have involved children watching television programmes with a narrative structure, children being read picture books and the use of oral strategies.

1.7.1 Using Television as the Intervention Material

Research has explored whether television programmes with a narrative structure can enhance children's narrative skills. Children with an average age of 5 years 7 months watched a 30 minute television programme based on the components of story grammar, three times a week for 7 months (Uchikoshi, 2005). This was shown to enhance their narrative skills (components of structure, syntax and connectives) at a greater rate than watching a phonics programme, after controlling for classroom differences, gender and home viewing. However, follow up measures were not conducted to investigate whether these increases were maintained over time. Another study exposed 311 children aged 3 and 5 years to one of four conditions; no viewing, viewing a programme without a narrative format, viewing a programme with an embedded narrative (a story within an story) or a programme with a traditional narrative. The study concluded that children who watched one 11 minute narrative television programme, once a day for 40 days, increased story structure knowledge compared to children who watched a programme without a narrative format, or who did not watch a programme (Linebarger & Piotrowski, 2009). However these results need questioning since in the analysis combined the results of both narrative programmes, even though the group that watched the traditional narrative programme scored lowest of all conditions, including no viewing. Therefore whilst studies suggest that viewing television programmes with a narrative structure enhances children's narrative skills, there is currently insufficient evidence to support these claims.

1.7.2 Using Books as the Intervention Material

Several interventions use books to support children's narrative skills. Dialogic reading is one intervention, where adults look at picture books with children and ask questions about the components of narrative structure; who, where, when, what happened and why. The adult expands on the child's verbalisations and gives praise. Whilst there is a large body of literature demonstrating the effects of dialogic reading on children's vocabulary (see Whitehurst et.al., 1999), few studies have investigated the effects on narrative skills, with the exception of two studies (Zevenbergen et al.,2003; Lever and Senechal, 2011). Zevenbergen et al. (2003) found that children aged 4 years 5 months to 5 years 5 months significantly increased their use of evaluative devices, internal states and use of dialogue in their narratives compared to the control group, although their use of causal statements did not significantly increase. However the intervention involved parents reading with their children at home, in addition to children

being read to in groups of three to five at least three times a week in school (Zevenbergen et al. 2003). It is therefore difficult to assess the impact that dialogic reading had in school. Indeed, the effectiveness of the intervention may rely on the two being carried out together. The effects of an 8 week dialogic reading intervention that took place solely in school was investigated with 40 children aged 5 to 6 years compared to an intervention teaching the sounds of words (phonemes) (Lever & Senechal, 2011). At post test, children in the dialogic reading intervention group included significantly more components of story grammar in their production of narratives compared to the control group. In particular they included more characters, initiating events, reactions, internal responses, and internal plans. They could also answer more questions about the narratives. There were no differences on language measures, such as number of words and mean length of utterance, indicating that differences in narrative were not due to richer language or word count.

Other interventions using books involved reading stories which adhere to a story grammar structure, encouraging children to retell the story and teaching them specific vocabulary each day using pictures and prompts for 30 minutes, three times a week for 12 weeks (Nielsen & Friesen, 2012). Fifteen kindergarten children were studied who had been identified as exhibiting the greatest language needs. Children made more gains than a no treatment control group on a standardised measure of narrative production and comprehension (The Test of Narrative Language), and also made gains in the retelling of narratives. Furthermore, children in kindergarten, first grade and primary special education were provided with explicit instruction of one story grammar component for 15 minutes a day for the entire school year (Stevens et al.,2010). A set of 110 story books were used that emphasised a particular component of story grammar. Children were read the story and asked specific questions. Children in the intervention group retold narratives with significantly more information about characters and solutions than the control group who were read the same books but were not provided with specific instruction on story grammar. However, the results for the setting, problem and attempted solution were not significantly different. When asked questions about a story, children in the intervention group were able to answer significantly more questions about all components of story grammar.

Whilst studies found gains in narrative production and narrative comprehension, results were somewhat contradictory as each study demonstrated gains in different aspects of narratives and several indicated no gains in other aspects of narratives. Differences in the nature and duration of the interventions (8 weeks to the entire school

year) and measures of narrative skills may have contributed to these differences, in addition to differences in teaching methods. It may be difficult and costly to gather the books required to teach the specific components of narrative structure in order to reproduce these interventions in schools. Furthermore, it was concluded that it was the explicit teaching of narrative structure, modelling and retelling that were the aspects of the intervention that enhanced narrative skills, rather than the books themselves, and these aspects should be focussed on during interventions to enhance narrative skills (Nielsen & Friesen, 2012). This supports research that suggests that the presence of an adult is important to developing children's narrative structure as described in section 1.4 (Fivush, 1991; Peterson & McCabe, 1992, Peterson & McCabe, 1994; Haden et al., 1997).

1.7.3 Using Oral Narratives as the Intervention Material

The positive aspects of interventions using books discussed above; such as explicit teaching, retelling, questioning and modelling are all aspects of oral narrative interventions. Oral narrative interventions involve narrative language being modelled by an adult and practiced by the children (Davies, Shanks & Davies, 2004; Spencer & Slocum, 2010; Westerveld and Gillon, 2008). Several studies have been conducted with children with specific language or learning disabilities, (see Peterson 2010 for a review), however the following section reviews interventions with children who have not been previously identified as requiring specialist language interventions.

Spencer and Slocum (2010) developed their own oral narrative intervention which involved modelling, group retelling and individual retelling with and without visual prompts. Several resources were developed; ten stories were written which included five laminated pictures corresponding to the five major story grammar components; character, problem, internal response, action and consequence; five story grammar symbols were designed to represent the story grammar components; various games were designed which required the creation of materials. The intervention aimed to increase personal narration, although narrative structure was explicitly taught through fictional retelling. Forty fictional narratives were written for the assessment based on story grammar. Personal narratives were also elicited through conversation. The intervention was evaluated with five children aged between 4 years 6 months and 5 years 1 month who were considered to be 'at risk' since they were from low socioeconomic homes and had below average performance on narrative retell and personal narrative production tasks. Three children were native English speakers.

Baseline measures were taken for a period of between 4 and 15 sessions, until measures were stable. Children participated in the narrative intervention in small groups with other children of varying narrative abilities who were not studied. Sessions lasted approximately 12 minutes and took place four times a week, varying in number for each participant between 11 and 22 sessions, however it is unclear how the number of sessions was decided. Children were required to retell a story that had been created by researchers and tell a personal narrative each day before the group. A standardised narrative retell measure was also taken two weeks after the final group. Narrative retelling skills increased for all children post intervention and scores were maintained above baseline after 2 weeks. Three children generated personal experience narratives that were more complete than at pre-intervention. Effects of the study are limited by the lack of participants, the lack of a control group, the different number of sessions experienced by each child in addition to the influence of the other children in the groups without narrative difficulties.

An alternative study investigated the effects of an intervention which taught seven story grammar components (setting, characters, problem, goal/plan, attempts, resolution and conclusion) (Westerveld & Gillon, 2008). Children were told stories with a well defined story structure. They were encouraged to identify the story grammar elements using story grammar icons, telling and re-telling stories and providing feedback to others regarding the story grammar components included in their stories. Ten children aged between 7 years 11 months and 9 years 2 months were taught in groups of two and three over twelve one-hour sessions for six weeks. Children who were identified for the intervention had poor oral narrative and comprehension skills, poor reading skills but no speech and language difficulties that were considered to require specialist intervention. One group of five children initially took part in the intervention. The children significantly increased in narrative comprehension but not narrative production (measuring components of structure, grammatical complexity and accuracy) compared to the children who had not received the intervention. The remaining 5 children then completed the intervention and the scores of all 10 children were compared to scores of an age-matched control group consisting of 10 typically developing peers with age appropriate reading and language skills. Whilst the intervention group scored lower than the control group on narrative comprehension at pre-test, the children scored significantly higher than the control group at post test. There were no significant differences in narrative retelling, however the children had increased their scores and were comparable to the control group at post test. These

results are limited due to the low number of participants and the lack of a comparable control group.

Finally, Davies et al. (2004) evaluated a published intervention by Shanks (2001), designed to teach narrative structure to children in Key Stage 1 using the questions based on story grammar components; who, where, when, what happened and why. Coloured cue cards for each key word were used to support retelling and generation of stories. Thirty-one children in Reception and Year 1 from 6 schools (mean age = 5 years 11 months), identified by class teachers as having poor narrative skills took part in 40-minute small group sessions, three times a week for eight weeks. Children's narrative skills were assessed using standardised assessments of The Bus Story narrative retell task and the Renfrew Action Picture Test (RAPT) which gives two measures, one of the quantity of information in sentences and one for the grammar of sentences. The study found significant improvements in the amount of grammar used in the children's narratives. No significant improvement was made in the quantity of information. In addition to the mixed results, this study did not use a control group and therefore it is difficult to ascertain the progress that the children may have made without the intervention. Despite these limited findings, authors concluded that the results were 'significantly strong to provide broad support for the intervention, pending further research findings' (Davies et al. 2004, p. 282).

Research is contradictory since one study found differences in narrative production (Spencer & Slocum, 2010) whereas other studies did not (Westerveld & Gillon, 2008; Davies et al. 2004). Results are difficult to compare. Studies identify children with different needs for the intervention, for example, children with reading difficulties (Westerveld & Gillon, 2008) or poor narrative skills as identified by class teachers (Davies et al 2004). Studies teach different aspects of narrative structure; five components of story grammar (Spencer & Slocum, 2010), seven components of story grammar (Westerveld and Gillon, 2008) and wh-questions (Davies et al. 2004). Differences may also be due to differences in measures of evaluation, duration of the interventions, or the varied resources used. With the exception of one study (Davies et al., 2004) the research evaluates interventions using resources that have been developed by researchers and which therefore are unavailable to teachers in schools. It is crucial that interventions are evaluated with resources that can be used in schools (Kratcockwill & Stoiber, 2000). Research to date is also limited since studies suffer from small sample sizes (Spencer & Slocum, 2010; Westerveld & Gillon, 2008) and all suffer from the lack of comparable control groups. The research conducted to date includes little

investigation of the generalisation of the effects of interventions on other skills. Only one study investigated the generalisation of skills to narrative comprehension (Westerveld & Gillon, 2008). As a result, further research investigating the effectiveness of oral narrative interventions, based on the principles of narrative structure, which can be reproduced in schools is required.

1.8 Conclusion

The ability to be able to produce a structured narrative is emerging in psychological research as significant for supporting cognitive development and psychological well-being (Nelson, 2007; Bruner, 1986). Narratives are thought to be fundamental for the development of memory, knowledge and social communication (Schank & Abelson, 1995; Nelson, 2007). In addition, narratives support our organisation and representation of experiences which lead to a greater understanding of the world and may reduce stress and improve health (Russel & van den Broek, 1992; Danoff-Burg et al., 2010). Whilst this is supported theoretically by schema theory (Bartlett, 1932; Schank & Abelson, 1977) and Nelson's (2007) model of cognitive development, more empirical research is required to investigate these claims with children.

Narratives support and develop our cognitive representations of events, which are known as narrative schemas (Russel & van den Broek, 1992; Nelson, 2007). It is proposed that the structure of our narratives reflects and develops the structure of our narrative schemas (Nelson, 2007; Stein & Glenn, 1979). The structure of narratives, and thus the structure of our narrative schemas has been described by psychologists as a set of components that have a specific order known as story grammar (Stein & Glenn, 1979; Lichtenstein & Brewer, 1980). Whilst each story grammar differs slightly, they all describe narratives as consisting of a beginning, setting, initiating events, goal directed actions and a formal ending (Hudson & Shapiro, 1991). Empirical research has shown that story grammar predicts the recall of narratives and supports comprehension (Mandler & Johnson, 1977; Stein & Glenn, 1979). However to date, it is unclear to what extent story grammar represents both personal and fictional narratives and narratives that have not been produced in experimental settings.

The development of Stein and Glenn's (1979) story grammar has been described in terms of levels of structural complexity (Glenn and Stein, 1980 cited in Hedberg & Westby, 1993). Three other models have been proposed which have been shown to be

highly comparable (Applebee, 1978; Botvin & Sutton-Smith, 1977; Stadler & Ward, 2005). Research suggests that children move through these stages between 2 and 6 years old, although it is difficult to describe exactly which age children should reach each level since the stages are not necessarily distinct and children do not necessarily move logically from one level to the next (Applebee, 1978; Stadler & Ward, 2005). Empirical research is difficult to compare since methods of eliciting narratives appear to influence results (Stadler & Ward, 2005). The differences between the development of personal and fictional narratives remains unclear, in addition the degree to which research reflects the production of narratives in non-experimental settings. Furthermore, it is clear that producing a narrative requires both language and cognitive skills (Nelson, 2007). What is not clear is the relationship between these skills, how they support the development of narratives and how narratives support the development of these skills (Lorusso et al., 2007; Curenton, 2011; Nelson, 2007).

There are individual differences in children's narrative skills (Fivush, 1991). Research to date demonstrates that the quality of parents' joint narratives with their children and family socio-economic status are two factors that are correlated with children's narrative structure. Parents who provide more information to children following the components of story grammar (e.g. who, where, when, what happened) are able to include more of the same elements in their individual narratives (Fivush, 1991). Research also demonstrates that children's narrative structure can be increased when parents increase the structure of their joint conversations (Peterson et al., 1999). In addition, children from low socio-economic homes appear to produce narratives that are shorter, include fewer events, have fewer temporal-causal relationships whilst also finding comprehending narratives more difficult than those from higher socio-economic homes (Shiro, 2003). However more research is required to substantiate these findings. In particular, research is required that includes a greater number of participants and children above 6 years old that takes into account additional variables that may influence narrative structure such as gender of parent. Furthermore, since socio-economic status is a multi-faceted construct, more research is required to identify which components of family life influence narrative skills.

Individual differences in narrative skills give rise to differences in developmental outcomes in reading comprehension and behaviour (e.g. Hudson & Shapiro, 1991; Cain, 2003; Humber & Snow, 2001). Research suggests that the ability to structure a narrative is related to reading comprehension which is a complex relationship that changes over time (Cain, 2003). The lack of story structure knowledge

may play a causal role in comprehension difficulties which is thought to be due to the lack of a schema providing a framework to guide narratives (Cain, 2003). More research is necessary to clarify these findings. In particular, research is needed that investigates the impact of early narrative structure skills before the age of 7 years on later reading comprehension. Research also demonstrates a consistent relationship between juvenile offending and poor narrative structure (Humber & Snow, 2001; Snow & Powell, 2005; Snow & Powell, 2008). At present no causal inferences can be drawn and therefore additional research, in particular longitudinal research is required to further investigate this relationship. In addition, research to date has been conducted on males over 13 years old and therefore additional research is required which investigates this relationship with females and younger children. Despite the limitations of the research, interventions that target narrative structure may reduce some of the later difficulties that children face in school (Cain & Oakhill, 1996; Snow & Powell, 2005).

There has been little research conducted evaluating the effects of group interventions that teach narrative structure in school. Interventions have taught children narrative structure using a variety of materials, notably television programmes, books, and oral strategies. Research has demonstrated that interventions based on narrative structure have been shown to have some effects on children's narrative skills, increasing aspects of narrative production and narrative comprehension. Research suggests that interventions that ask children relevant questions about the events in narratives, encourage them to retell stories and model narrative skills appear to be key aspects of the successful studies, all of which are skills that are included in oral narrative interventions. However research regarding oral narrative interventions is limited. Studies have limited participants and lack control groups and therefore provide limited conclusions as to the efficacy of the interventions. In addition only one study investigated the generalisation of skills to narrative comprehension (Westerveld & Gillon, 2008). Furthermore, research is lacking with regards to how this should be implemented in schools since only one study investigates a set of resources that can be applied in schools. As a result, the empirical paper that follows aims to further the research in this area by evaluating the effects of Shanks (2001) published intervention on children's narrative production and comprehension skills over time, using a no treatment control group.

Chapter 2: Empirical Study

Teaching narrative structure to children with poor oral narrative skills in school

2.1 Introduction

Oral narratives are linguistic descriptions of temporally ordered events that are removed from the immediate context (Petersen, 2010). They can be both personal and fictional (Bruner, 1986). Personal narratives recount an individual's knowledge and experience whilst fictional stories are imaginative (Nelson, 2003). Narratives support cognitive development and psychological well-being (Bruner, 1968; McKeough & Genereux, 2003; Nelson, 2007; Schank & Abelson, 1995). This study considers the way in which narratives are structured, rather than the specific content of the events discussed (Bruner, 1990). The structure of a narrative is thought to represent and develop internal cognitive structures known as narrative schemas (Nelson, 2007; Russel & van den Broek, 1992; Stein & Glenn, 1979). Narrative schemas enable us to organise, understand and remember events (Schank & Abelson, 1979), a view that was developed from Schema Theory (Bartlett, 1932). Oral narratives are therefore the linguistic representations of narrative schemas and as such they are important for supporting and developing our understanding the world (Bruner, 1990).

Narrative schemas have been described by psychologists as consisting of various components, known collectively as 'story grammar' (Mandler and Johnson, 1977; Stein & Glenn, 1979). Whilst various story grammars have been proposed, they are all similar with regards to the components they describe. Stein and Glenn's (1979) story grammar describes a narrative schema as consisting of a setting, one or more episodes and an ending. The setting includes information about who is in the narrative and where it takes place. An episode includes the description of a problem and how it was resolved. The ending brings the story to a conclusion. The extent to which story grammar reflects the story schema was investigated through the production and comprehension of fictional stories (Mandler & Goodman, 1982; Stein & Glenn, 1979). Stories are consistently recalled according to the components outlined in the story grammars (Mandler & Johnson, 1977; Stein & Glenn, 1979). In addition, stories presented in the form of a story grammar are more comprehensible than stories that have had the order of the components changed (Thorndyke, 1977; Stein & Glenn, 1979). The components described in the story grammar are therefore considered to be important in the processing of narratives and our understanding of events (Brewer & Lichtenstein, 1980; Stein & Glenn, 1979).

The ability to produce a structured narrative develops over the course of a child's early life (Applebee, 1978; Botvin & Sutton-Smith, 1977; Glenn & Stein, 1980;

Stadler & Ward, 2005). Research discusses the development of narrative structure between the ages of 2 and 6 years (Applebee, 1978). Developmental models of narrative structure propose that children move through a series of stages from a set of unrelated words and statements to a narrative that conveys a clear central character, a theme, connected events and a plot that results from the motivations of the main character (Glenn & Stein, 1980). Narratives at this stage include the components described by story grammar (Glenn & Stein, 1979).

Producing a structured narrative requires a variety of complex cognitive and linguistic skills such as an awareness of temporal-causal relationships, an understanding of how the story character's internal states are linked to their behaviour and linguistic features required to establish cohesion (Cain, 2003; Nelson, 2007; Mar, 2004). Whilst the relationships between these skills are currently unclear, learning to tell a narrative may be important in developing these skills (Nelson, 2007; Cain, 2003).

Some children have more difficulties structuring narratives than others (Dorado & Saywitz, 2001). Research conducted to date has demonstrated that differences in children's narrative structure may be due to parents' narrative structuring in joint conversations with their children about events (Fivush, 1991). Preschool children whose parents use more orientating information (information about who, where and when) in jointly constructed conversations include more of this information in their individual narratives (Fivush, 1991; Peterson & McCabe, 1991; Peterson & McCabe, 1994; Haden et al. 1997). Furthermore, teaching parents how to structure conversations about past events can enhance the quality of preschool children's narrative structure (Peterson et al.,1999; Reece et al., 2010). In addition, research indicates that preschool children from socioeconomically disadvantaged backgrounds have poorer narrative structure than those from higher socio-economic families (Dorado & Saywitz, 2001). Narratives of these children appear to be shorter, include fewer events and have fewer temporal-causal connections (Milgram et al., 1971). Children from low socio-economic communities also made more errors when answering open-ended questions about who, what and where, when recalling a narrative (Dorado & Saywitz, 2001). Once children with poor narrative structure attend school, it may be necessary to support and enhance these skills by providing them with an intervention to teach narrative structure.

Supporting narrative skills may be important for a number of developmental outcomes (Hudson & Shapiro, 1991; Cain, 2003; Humber & Snow, 2001). The ability to produce a structured narrative is correlated with concurrent reading comprehension aged 7 to 10 years, after controlling for phonological skills, vocabulary, word reading and

verbal ability (Oakhill & Cain, 2012). The study also found that good narrative structure skills at 7 years significantly predicts good reading comprehension at 10 years after controlling for earlier reading comprehension skills, verbal IQ, receptive vocabulary and word reading. Findings suggest a causal relationship between narrative structure and reading comprehension (Oakhill & Cain, 2012). Accordingly, it has been argued that better knowledge of narrative structure influences reading comprehension by means of supporting a child's ability to build an internal representation of a narrative (Cain, 2003; Oakhill & Cain 2012).

Individual differences in narrative structure are also correlated with behaviour (Humber & Snow, 2001; Snow & Powell, 2005; Snow & Powell, 2008). Adolescents aged 13 to 19 years old who have had a history of delinquent behaviour have poorer narrative structure than adolescents who have not committed criminal offences (Humber & Snow, 2001; Snow & Powell, 2005; Snow & Powell, 2008). However the direction of the effect is unclear. It is argued that individuals who have difficulty forming a structured narrative have difficulty reconstructing their experiences and sharing them with others (Humber & Snow, 2001). This provides further evidence to suggest that narrative structure should be taught in schools. However, to date no research has investigated the relationship between narrative structure and behaviour in young children.

In conclusion, narrative structure plays a key part in our lives and is considered to be important for a variety of other skills (Nelson 2007; Schank & Abelson 1995). Some children have poorer narrative structure than others (Dorado & &Saywitz, 2001). Research has demonstrated relationships between differences in narrative structure and reading comprehension and behaviour (Humber & Snow, 2001; Snow & Powell, 2005). It is therefore important to implement interventions to support children's narrative structure in school at an early age.

2.1.1 School Based Group Interventions Using the Principles of Narrative Structure

Evidence suggests that simply exposing children to narratives, or encouraging parents to discuss narratives with their children may not be sufficient to enhance narrative structure and instead children may require additional instruction (Beck & Clarke Stewart, 1998). Studies have investigated the effects of interventions in schools that use the principles of narrative structure based on the use of books (Lever &

Senechal, 2011; Zevenbergen et al., 2003; Stevens et al 2010) and television, (Linebarger & Piotrowski, 2009; Uchikoski, 2005). Narrative structure can also be taught through oral narrative interventions where skills are modelled by a practitioner and practiced by participants (Davies et al., 2004; Spencer & Slocum, 2010; Westerveld & Gillon, 2008). Research suggests that the key aspects of successful narrative interventions include the presence of an adult modelling narrative skills, encouraging children to retell stories and answer questions about them (Nielsen & Friesen, 2012). These are all aspects of oral narrative interventions, however to date, there is little research regarding their effectiveness with children who have not been previously identified as having language or learning difficulties (Westerveld & Gillon, 2008; Spencer & Slocum, 2010; Davies et al.,2004).

Westerveld and Gillon (2008) evaluated an intervention programme with children aged between 7 years 11 months and 9 years 2 months who had poor narrative production and comprehension skills, poor reading skills but no speech and language difficulties that were considered to require specialist intervention (Westerveld & Gillon, 2008). One group of five children initially took part in the intervention. This introduced story grammar elements with a group of two and three children during twelve one-hour sessions over six weeks. The children significantly increased in narrative comprehension but not narrative production compared to the other five children who had not received the intervention. These remaining five children then completed the intervention and the scores of all ten children were compared to scores of ten children without narrative and reading difficulties who had not received the intervention. Whilst the intervention group scored lower than the control group on narrative comprehension at pre-test, the children scored significantly higher than the control group at post test. There were no significant differences in narrative retelling between the intervention and control group, however the children had increased their scores and were comparable to the control group at post test. There are limitations to this study since the sample is small and a comparable control group was not used.

A further study investigated the effects of an oral narrative intervention on five preschool children who were ‘at risk’ since they had below average performance on narrative retell and personal narrative production tasks (Spencer & Slocum 2010). Only three children were native English speakers. The children then participated in activities developed by the researcher in small groups with other children of varying narrative abilities. The sessions lasted approximately 12 minutes and took place four times a week, varying in number for each participant between 11 and 22 sessions. The children

being studied were required to retell a story and tell a personal narrative each day before the group. A standardised narrative retell measure was used two weeks after the final session. Narrative retelling skills increased for all five children post intervention and scores were shown to be maintained above baseline after two weeks. Three children generated personal experience narratives that were more complex than at pre-intervention. Unfortunately due to the limited number of participants and lack of control group, the conclusions of this study should be considered with caution.

Despite the limitations of the studies, both Westerveld and Gillon, (2008) and Spencer and Slocum (2010) suggest beneficial effects of oral narrative interventions. However, it is important that research evaluating interventions is carried out with the same methods that are used in practice (Kratcockwill & Stoiber, 2000; Petersen et al., 2010). Both studies developed their own resources to teach narrative structure and therefore reproducing these materials in order to replicate the intervention to teach narrative structure in schools is not possible. Further investigations are required that identify efficient, cost-effective, and replicable procedures that can be used to enhance children's narrative skills in schools (Peterson, 2010; Spencer & Slocum, 2010).

One programme that has been published, and therefore is able to be reproduced in schools has been developed by Shanks (2001). The focus of the intervention is to teach narrative structure using the questions who, where, when, what happened and why. It is designed for children in Key Stage 1 and is currently available commercially. Davies, Shanks and Davies (2004) evaluated the intervention with 31 children in Reception and Year 1 from 6 schools (mean age = 5 years 11 months) with poor narrative skills as identified by class teachers. The children participated in 40-minute small group sessions, 3 times a week for eight weeks. One session was run by a speech and language therapist and subsequent sessions were run by a teaching assistant. Children's narrative skills were assessed using standardised assessments of The Bus Story narrative retell task and the Renfrew Action Picture Test (RAPT) which gives two measures, one of the quantity of information in sentences and one for the grammar of sentences. There was no significant improvement on the Bus Story narrative measure. Significant differences were found between pre- and post intervention scores for RAPT information and grammar. However, since these scores were not compared with those from a control group, it is difficult to ascertain the progress that the children may have made without the intervention. Despite these limited findings, the authors still concluded that the results were 'significantly strong to provide broad support for the intervention, pending further research findings' (Davies, Shanks & Davies, 2004, p.

282). To date, it appears that there have not been any other studies published which investigate this intervention.

2.1.2 Current Study

To extend the previous research by Davies et al. (2004), the present study uses a passive waitlist control group to investigate the effects of the Shanks (2001) published intervention on children's oral narrative skills. To extend the evidence base for the intervention a sample of children in Year 2 were identified to take part in the intervention. In addition to improving narrative production or retelling, it would be anticipated that providing specific training which improves children's understanding of narrative structure would generalise to improvements in narrative comprehension (Stein & Glenn, 1979; Cain & Oakhill, 2012; Westerveld & Gillon, 2008). As a result, the present study adds to the research by measuring the effects of the intervention on narrative comprehension skills. Furthermore, the present study extends the literature by investigating whether any difference in narrative production and comprehension skills are maintained 6 weeks after the intervention. In addition, since previous research has found correlations between juvenile delinquency and poor narrative skills (Humber & Snow, 2001; Snow & Powell, 2005; Snow & Powell, 2008) the present study also investigates the correlation between narrative skills and both teacher and parent ratings of behaviour.

2.1.3 Research Hypotheses

1. Children in the intervention group will make greater improvement in narrative production skills compared to the passive waitlist control.
2. Children in the intervention group will make greater improvement in narrative comprehension skills compared to the passive waitlist control.
3. Differences between the intervention and control group (for narrative production and narrative comprehension) will remain significant 6 weeks following the intervention.
4. There will be a negative correlation between children's narrative production skills and teacher and parent rated behaviour problems.

2.2 Method

2.2.1 Design

A mixed within-between design was used. An intervention group took part in a six week oral narrative intervention, whilst a wait-list control group did not receive any intervention and took part in regular school activities. There were two independent variables. The between-subjects variable was group, with two levels (intervention and control). The within-subjects variable was time, with three levels (pre-test, post-test and follow-up). Follow-up measures were taken six weeks after the final oral narrative group. Dependent variables of narrative production, narrative comprehension and behaviour problems were measured at each time point. The control group received the intervention after the present study had been completed to ensure fairness among students.

2.2.2 Participants

Twenty-four participants were recruited; 12 in the intervention group (consisting of 2 groups of 6 children) and 12 in the control group (consisting of 2 groups of 6 children). Each group of six children were recruited from a different school, therefore four schools participated in the study.

The recruitment process involved the following step-by-step approach. First, opt out parental consent letters were sent to parents of all pupils in Year 2 (N=116) at four schools situated in the south of England (See Appendix A). This informed parents of the initial screening process and gave them the opportunity to withdraw their child from this process.

Second, initial screening involved class teachers identifying a maximum of 10 children who they felt had poor oral narrative skills. Teachers were asked to identify children who they felt were underachieving in their speaking and listening skills using end of Year 1 data and their own judgement regarding the children's ability to use language to describe, explain and convey events. The children were achieving below a National Curriculum Level 2 and were unable to "show awareness of the needs of the listener by including relevant detail" (Department for Education, 2012a). Previous research suggests that teachers are able to identify children with appropriately poor narrative skills who would be identified by standardised assessments (Davies et al., 2004). Children were excluded from the study if they had diagnosable impairments or disorders (as evidenced by school Special Educational Needs records) or who were

currently accessing support from the Speech and Language Service. In total, 34 pupils were initially identified as potential participants for the study.

Third, the narrative skills of 34 identified pupils were individually assessed using the Test of Narrative Language (TNL) (Gillam & Pearson 2004) in a quiet room in school. Assessments were scored and six children from each school (N= 24) scoring lowest on the Oral Narration subscale of the TNL were invited to participate in the narrative group. Only the Oral Narration scale of the TNL was used to identify participants. This was to ensure a greater similarity of needs within the groups with regards to the children's expressive narrative skills. Children would have been excluded from the study if they had scored a standard score of 10 or above, since this is regarded as an average score for the child's age.

Fourth, parents of the identified children were written to informing them that their child had been chosen for the oral narrative intervention. Parents were asked for active consent for their child to take part. A different letter was written according to whether the child attended an intervention (Appendix B) or a wait-list control school (Appendix C), since the wait-list control school would receive the intervention at a later date. Parents were also sent an information sheet (See Appendix D for intervention group and Appendix E for control group) and a Strengths and Difficulties Questionnaire (SDQ) to complete and return. All parents gave consent for their child to take part.

At the start of the intervention, 24 children took part in the study; 12 in the intervention group and 12 in the control group. Groups were broadly matched on age and oral narrative ability using the Oral Narration scale of the TNL (see Table 2.1 for descriptives). Given existing school and classroom structures, random assignment by individual student was not possible. However, between group analysis confirmed that there were no significant differences between the groups for age, Oral Narration, parent total SDQ score and teacher total SDQ scores (in all cases $p > .3$) (See Table 2.2). The intervention group consisted of eight boys and four girls whereas the control group consisted of six girls and six boys. Three children in the intervention group spoke English as an additional language, as evidenced by school records.

Table 2.1

Means and standard deviations of pupils' age and Oral Narration score for the intervention and control group

	Intervention			Control		
	M	(SD)	Range	M	(SD)	Range
Age (Months)	77.9	3.18	10	78.75	2.93	9
Oral Narration (Raw score)	22.7	4.24	12	21.5	4.57	13
Oral Narration (Standard score)	6.54	1.03	3	6.00	1.26	3

Note. M = mean; SD = standard deviation. Oral Narration was measured using the Test of Narrative Language (Gillam & Pearson, 2004).

Table 2.2

Significance values for Independent Samples T-Test investigating differences between Intervention and Control Groups at Pre-test for Age, Oral Narration, Narrative Comprehension, Total SDQ (Parent) and Total SDQ (Teacher).

Scale	Mean Difference	Standard Error Difference	T-Test	Exact Sig. (2-tailed)
Age	-.538	1.27	-.424	.676
Oral Narration	1.27	188	.677	.506
Narrative Comprehension	2.09	1.81	1.15	.262
Total SDQ (Parent)	1.82	2.32	.785	.443
Total SDQ (Teacher)	-.750	2.86	-.262	.796

Note: Significant values < .05 in boldface.

2.2.3 Pre-test, Post-test and Follow-up Measures

The Test of Narrative Language. Narrative skills were measured before the intervention (pre-test), after the intervention (post-test) and at follow-up 6 weeks later using the TNL (Gillam & Pearson, 2004). The TNL is an individually administered, standardised assessment of production and comprehension of children's oral narratives aged 5 to 12 years. The Oral Narration subscale measures the ability to combine words and sentences into stories that contain characters who engage in goal-directed actions that are related to events, consequences and resolutions based on Stein and Glenn's (1979) story grammar. It also measures the child's use of proper nouns, action verbs, temporal adverbs and causal adverbs. The Narrative Comprehension subscale measures the ability to recall and understand information in stories produced by others. The test is Americanised therefore American words were changed to the English equivalent whilst the meaning remained the same, for example 'dollars' was changed to 'pounds'.

The Oral Narration subscale and the Narrative Comprehension subscale each comprise of three tasks (See Appendix F for more information). This is supported by

research that shows task related factors influence narrative abilities and therefore children's narrative language ability cannot be assessed using a single task (Merritt & Liles, 1989; Shiro, 2003; Westerveld & Gillon, 2008). The same set of tasks were used at pre-test, post-test and follow-up. Gillam and Pearson (2004) state that the TNL is designed to document progress in narrative language as a result of a language intervention. Test-retest reliability coefficients for the Oral Narration and Narrative Comprehension subtests are high; .82 and .85 respectively (Gillam & Pearson, 2004). Content validity was demonstrated by high correlations between TNL scores and language sample analyses (Petersen, Gillam, & Gillam, 2008).

Total scores on the three oral narration tasks provide an overall raw score for the Oral Narration subscale. Likewise, total scores on the three narrative comprehension tasks provide an overall raw score for the Narrative Comprehension subscale. All statistical analyses have been conducted on the raw scores. The raw scores for each subscale (Oral Narration and Narrative Comprehension) can be converted into standard scores. The TNL was standardised on a sample of 1,059 children from 20 States in the United States of America between 2001 and 2002. The characteristics of the normative sample reflected those of the general population of the USA regarding geographic area, gender, race, ethnicity and family income. This sample produced norms indicating whether an individual's standard subscale score was high or low. A subscale standard score has a mean of 10 and a standard deviation of 3. A score of 8-12 is noted to be average, 6-7 is below average and 13-14 is above average. Standard scores have been used for descriptive purposes only.

The same examiner (the researcher) was used for all assessments which took place in a quiet room at a desk. The assessments were audiotaped using an Olympus Digital Voice Recorder WS-750M enabling scoring to be carried out at a later date. During each assessment, the examiner explained to the children that they had been chosen to tell some stories and asked for their verbal consent to take part (See Appendix G). All children took the assessment continuously with no rest breaks. The examiner was conscious not to give any prompts to the children, although praise and encouragement was used for example 'you're doing really well' and 'that was a great story, well done.'

Strengths and Difficulties Questionnaire. The Strengths and Difficulties Questionnaire (SDQ) is a brief behavioural questionnaire for children aged 3 to 16 years. It includes 25 items that can be completed by both parents and teachers (Goodman, 1997). The SDQ consists of 5 scales; (a) emotional symptoms, (b) conduct problems, (c)

hyperactivity and inattention, (d) peer relationship problems and (e) pro-social behaviour. The SDQ is scored using a 3-point likert scale; 'not true'(0-points), 'sometimes true' (1-point), and 'certainly true' (2-points). Several of the items are reverse-scored. Each subscale consists of 5 items. A total subscale score of between 0 and 10 is generated by summing the scores in the scale. Scales a to d can be added together to provide a total difficulties score of between 0 and 40. The SDQ can be used to evaluate the outcome of specific interventions and has been shown to be sensitive to treatment effects (Goodman, 2001). Several studies have investigated the psychometric properties of the SDQ (Goodman 2001; Mellor 2004) and have found them to have satisfactory reliability and validity. Internal reliability coefficients for each subscale and total behaviour problems score was found to be <.67 and inter-rater reliability between parent and teacher was found to be significant (all p <.01) as were test-re-test correlations (Mellor, 2004).

2.2.4 Intervention

The intervention group participated in an oral narrative intervention, taught using the published resources by Shanks (2001) once weekly for 6 weeks during a 40 minute session. Two groups were run, each consisting of 6 children. The groups were held on consecutive weeks except one week that was missed due to a school holiday.

The intervention supports children to recognize components of narrative structure, building on questions; who, where, when, what happened, why and an ending. The materials outline each session, providing activities and supporting resources. There is a general introductory session in week 1 followed by five subsequent sessions which build on each part of the narrative. The intervention enables the children to focus on each question for longer than they would in a mainstream classroom and develops their understanding and use of each question in a range of formats such as re-telling and generating stories (Davies et al., 2004) (See Appendix H for example session). The researcher ran both groups and followed the same format and set of activities in each. Lesson plans were consulted throughout the session and checked at the end of each session to ensure the same activities were covered in both small groups thereby increasing fidelity.

The Shanks (2001) intervention is designed to be delivered by teachers or teaching assistants with no prior training. Both intervention groups were delivered by the same researcher who had an understanding of the narrative approach by observing

narrative interventions run by other professionals, attending a narrative course and carrying out background reading.

2.2.5 Procedure

Ethical approval was obtained from the University of Southampton School of Psychology Ethics committee and Research Governance Office before commencing research (Submission Number 665) (See Appendix I) .

Since narrative skills are correlated with socioeconomic status (Noel, Peterson & Jesso, 2008), four schools were identified to take part in the study using the School Level Deprivation Indicator (Department for Education, 2012b) which uses Tax Credit Data to reflect the socioeconomic circumstances of the children in each school. All schools recruited had a deprivation indicator level of between 40 and 52%. The national average is 49.6% (Department for Education, 2012b).

Schools were approached, initially by telephone or email through the main gate keeper (the Head Teacher in most cases). They were asked if they would like to take part in a study investigating the effects of an intervention designed to teach children oral narrative skills. The researcher also made sure that the school was not currently using the intervention. The researcher personally met with each Head Teacher to explain the nature of the study, consent and timescales and gained their written consent (See Appendix J). The two schools recruited first were chosen to receive the intervention first. The other two schools would act as the wait-list control group. The children in the wait-list control group took part in normal classroom activities and received the intervention after the follow-up measures had been taken.

Having identified suitable participants for the study and gained parental consent and parent SDQs as detailed above, the class teachers completed SDQs for each child. The researcher then ran the narrative intervention in two schools. The children participating in the groups were told that they had been chosen to take part and asked each week if they would like to participate (see Appendix G). Throughout the 6 weeks of the intervention, none of the children chose not to participate.

Groups were run at the same time each week for 6 weeks in a quiet space in school. At the end of each group the children received a sticker for their participation. When all six sessions had been run, the children were given a short debrief (see Appendix G) and a certificate. Having completed the intervention, parents were written to with information about the group and the performance of their child (see Appendix K).

Post measures were administered to the intervention group one week after the final session and follow-up measures were administered after a further 6 weeks. Post measures were administered to the control group at equivalent timescales. All measures (Oral Narration, Narrative Comprehension and SDQ) were taken at all time points.

2.2.6 Data Analysis

Participants in the intervention group were required to complete five of six groups to be included in further analyses. All children met this expectation. One child in the intervention group failed to gain a score on the Oral Narrative post-test as he requested to re-join his class during the assessment. He was therefore was not included in any analyses regarding Oral Narration. One participant in the control group left the study due to moving schools and therefore was not included in any further analyses.

Each task of the TNL was scored. Scores from the three oral narration tasks were summed to provide a total raw score for the Oral Narration subscale. Scores from the three narrative comprehension tasks were summed to provide a total raw score for the Narrative Comprehension subscale. A standard subscale score for Oral Narration and Narrative Comprehension was also calculated using the TNL Manual (Gillam and Pearson, 2004). The SDQ data were scored online (Youth in Mind 2012). A total SDQ score was calculated by summing the scores of 4 of the subscales; emotional symptoms, conduct problems, hyperactivity and inattention and peer relationship problems.
All analyses were performed using PASW version 18. Initial analyses of the data set were performed to provide descriptive statistics for the current sample using the standard subscale scores. Parametric assumptions of the raw subscale scores were conducted to establish whether the data were normally distributed. The values of skewness and kurtosis were converted to *z* scores as recommended by Field (2009), *z* scores > 1.96 are significant at $p<.05$ level. Kolmogorov-Smirnov Tests (K-S Test) were also performed to investigate whether the distribution of pre-test scores significantly differed from a normal distribution. Scores >.05 are not significantly different from a normal distribution. Homogeneity of Variance was calculated using Levene's test where scores > .05 are not significantly different from each other.

Independent samples T-Tests were carried out to check for any significant differences between the intervention and control group at pre-test. A series of mixed ANOVAs were performed to investigate any differences between the intervention and control group over time for the dependent variables of Oral Narration and Narrative Comprehension. Where an interaction effect was found, simple first contrasts were

performed since specific hypotheses were being tested, in order to reduce Type I error (incorrectly identifying a significant correlation). Effect sizes, r, were also calculated where .10 is considered to be small, .30 moderate and .50 is large (Cohen, 1992).

Spearman Rank correlations were used to examine the associations between the dependent variables at pre-test. These were then replicated at post-test and follow-up. Spearman Rank correlation coefficients, $r_{s,}$ produce an effect size which lies between -1 and +1 and indicate whether variables are positively or negatively related. An effect size of .10 is considered to be small, .30 moderate and .50 is large (Cohen, 1992). Calculating multiple correlations can increase Type 1 error. It is sometimes suggested that Bonferroni correction should be applied to the alpha level to reduce this error (for example Curtin & Schulz, 1999), however Bland and Altman (1999) state that this is not necessary in studies with small sample sizes since this can increase the risk of Type 2 error (incorrectly identifying a non-significant correlation). Since the present study has a small sample size the statistical correction was not applied.

2.3 Results

2.3.1 Descriptive Statistics

Oral Narration. Table 2.3 shows descriptive statistics for the Oral Narration subscale scores for the intervention and control groups at pre-test, post-test and follow-up. Normative data are available (Gillam & Pearson, 2004) which illustrate whether a subscale standard score is in the 'low average' (7 and below), 'average' (8-12) or 'above average' range (12 and above). The Oral Narration standard scores at pre-test for the intervention group and the control group were in the 'low average' range. At post-test and follow-up, the Oral Narration standard scores for intervention and control group were in the 'average' range.

N*arrative Comprehension.* Table 2.3 shows the descriptive statistics for the Narrative Comprehension subscale for the intervention and control groups at pre-test, post-test and follow-up. The narrative comprehension standard scores at pre-test for the intervention and control group were in the 'average' range. Scores remained in the 'average' range for both groups at post-test and follow-up.

SDQ Teacher. Table 2.3 shows the descriptive statistics for the SDQ teacher scores for intervention and control at pre-test, post-test and follow-up. Scores for the total SDQ scale were out of 40. Normative data are available (Youth in Mind, 2012), which illustrate whether a score is at 'normal' (0-11), 'borderline' (12-15), or 'abnormal' (16-40). The intervention group scored in the 'normal' range at pre-test as did the control group. Scores remained in the normal range for both intervention and control at post-test and follow-up.

SDQ Parent. Table 2.3 shows the descriptive statistics for the SDQ parent scores for intervention and control at pre-test, post-test and follow-up. 9 parents of children in the intervention group returned the pre-test SDQ compared to 11 in the control group. This decreased to 7 parents returning the post-test SDQ from the intervention group compared to 6 in the control. At follow-up, 6 parents in the intervention group returned the questionnaire compared to 4 in the control group. Unfortunately, only 5 parents in the intervention group and 3 parents in the control group completed all three SDQ questionnaires. All scores were in the 'normal' range at all three time points.

Table 2.3.
Means, standard deviation and number of participants for dependent variables at pre-test, post-test and follow-up depending on group.

	Time								
	Pre-test			Post-test			Follow-up		
Dependant Variable	Mean	SD	N	Mean	SD	N	Mean	SD	N
Oral Narration Raw Scores									
Intervention	22.7	4.24	11	40.3	6.37	11	38.2	5.08	11
Control	21.5	4.57	11	32.7	6.51	11	33.4	4.48	11
Oral Narration Standard Scores									
Intervention	6.54	1.03	11	10.9	1.64	11	10.3	1.10	11
Control	6.00	1.26	11	8.90	1.70	11	9.18	1.66	11
Narrative Comprehension Raw Scores									
Intervention	23.0	3.79	12	31.0	3.33	12	28.2	3.59	12
Control	20.9	4.88	11	26.1	3.56	12	25.6	3.47	11
Narrative Comprehension Standard Scores									
Intervention	8.75	1.42	12	13.5	2.77	12	11.4	2.31	12
Control	8.18	1.99	11	10.3	1.74	11	9.73	1.79	11
Parent SDQ Total score									
Intervention	7.60	4.45	5	6.60	3.85	5	5.80	4.27	5
Control	3.67	.577	3	3.66	.577	3	3.67	.577	3
Teacher SDQ Total score									
Intervention	8.25	6.81	12	7.50	6.97	12	7.25	7.02	12
Control	9.00	6.99	11	8.55	6.82	11	8.45	6.88	11

Note: SD = standard deviations, N= Number of participants. Data excluded listwise.

2.3.2 Hypothesis 1 and 3 – *The children in the intervention group will make significantly more improvement in narrative production compared to the passive waitlist control. The differences in scores will remain significant 6 weeks following the intervention.*

A mixed ANOVA was conducted where time (pre-test/post-test/follow-up) was the within subjects factor, group (intervention versus control) was the between subjects factor and total raw scores of oral narration was the dependent variable (shown in Table 2.3). A significant main effect of group (F (1, 20) =6.25, p = .021) indicated that there was a significant difference between the overall oral narration scores for the intervention and control group. There was also a significant main effect for time for the dependent variable of Oral Narration, (F (2, 40) 98.8, p=.00). Of most interest in this research design, is the significant interaction found between group and time (F (2, 40) 3.71, p=.033) which is illustrated in Figure 2.1. To break down this interaction further, simple first repeated contrasts were performed comparing the Oral Narration scores of the intervention and control group with the time of testing. Simple first contrasts revealed that there was a significant difference between the Oral Narration scores of the intervention and control group between pre-test and post-test, (F (1, 20) 6.356, p=.020, r=0.49), however there was no significant difference between the Oral Narration scores of the intervention and control group between pre-test and follow-up, (F (1, 20) 3.09, p=.094, r=0.37). This means that there was a significant increase in the Oral Narration scores of the intervention compared to the control group between pre-test to post-test. However, when the follow-up scores were taken 6 weeks later this significant effect was not maintained. Figure 2.1 shows that the oral narrative skills of the intervention group increased between pre-test and post-test but decreased between post-test and follow-up. In contrast, the oral narrative skills of the control group increased between pre-test and post-test and increased slightly between post-test and follow-up.

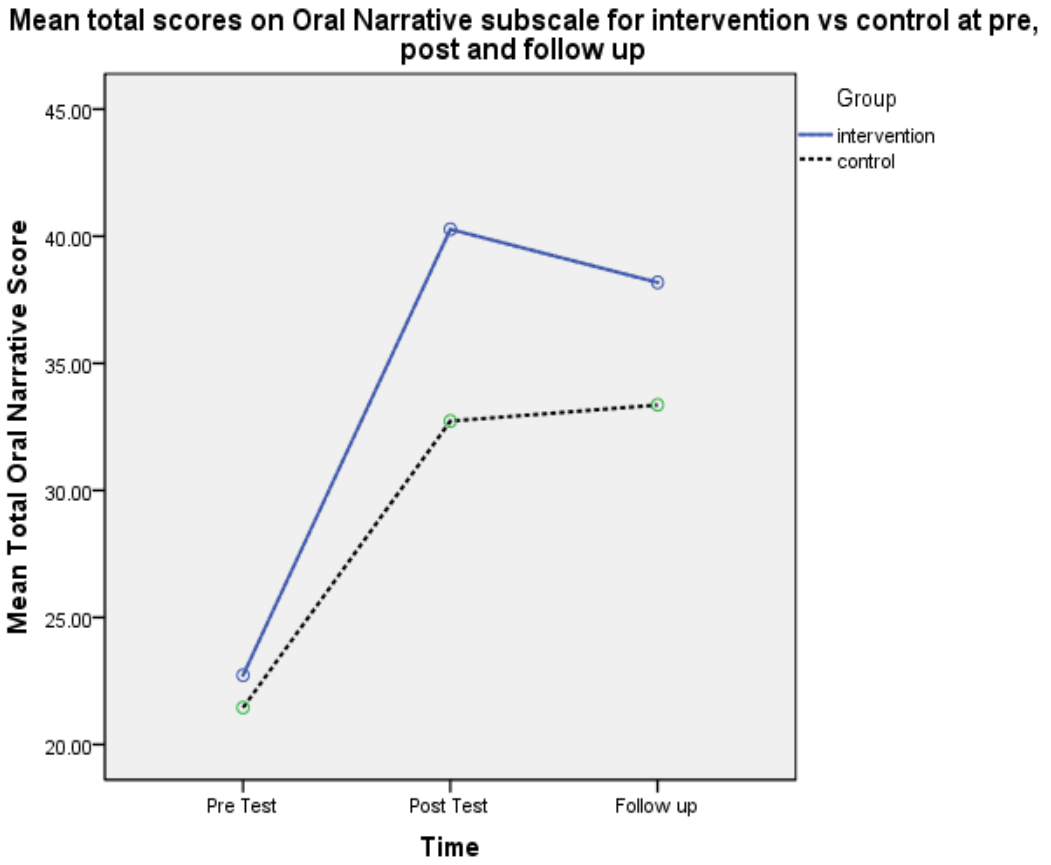

Figure 2.1 Mean total scores on the Oral Narrative Subscale for Intervention versus Control at Pre-test, Post-test and Follow-up.

2.3.3 Hypothesis 2 and 3 – *The children in the intervention group will make significantly more improvement in narrative comprehension compared to the passive waitlist control. The differences in scores will remain significant 6 weeks following the intervention.*

A mixed ANOVA was conducted where time (pre-test/post-test/follow-up) was the within subjects factor, group (intervention versus control) was the between subjects factor and total raw score of Narrative Comprehension was the dependent variable (shown in Table 2.3). There was a significant overall main effect for time, (F (2, 42) = 37.414 p =.000). Repeated first contrasts revealed that there was a significant difference between pre-test and post-test, (F(1, 21) = 55.455, p=.000, r= .852) and between pre-test and follow-up (F(1, 21)= 42.462, p= .000, r= .82). The Narrative Comprehension scores of all children therefore increased significantly between pre-test and post-test and

between pre-test and follow-up test. There was a significant difference in the overall scores of Narrative Comprehension between the intervention and control group, (F (1, 21) =6.034, p=.023, r = .481), however, this could not be explained through a significant interaction effect between time and group (F (2, 42) 1.827, p=.173).

2.3.4 Hypothesis 4 - *There will be a negative correlation between narrative production and behaviour problems in class and at home.*

Correlations were carried out to investigate any relationships between measures of behaviour problems and Oral Narration. Parametric assumptions of the data were checked using the total data set (shown in Table 2.4) as advised by Field (2009) and were found to be not normally distributed. Since parametric assumptions were not met, Spearman Rank correlations were used to explore any correlations between the data. A 1-tailed test was used due to the directional hypothesis. Data were excluded pairwise to enable the maximum amount of data to be analysed.

Regarding correlations between teacher rating of behaviour problems and Oral Narration at pre-test, there was a significant negative correlation between Oral Narration and Teacher rated total SDQ score (r_s = -.419, p= .021) and teacher rated hyperactivity and inattention score (r_s = -.392, p< .05). At follow-up, there was a significant negative correlation between Oral Narration and teacher rated total SDQ score (r_s= -.515, p=.006), teacher rated hyperactivity and inattention score (r_s= -.394,p=.032) and a positive correlation between Oral Narration and teacher rated pro-social behaviour score (r_s= .520, p=.005).

Exploratory analyses were conducted regarding correlations between parent rating of behaviour problems and Oral Narration. At post test, there was a significant negative correlation between Oral Narration and parent rated emotional symptoms (r_s= -.602, p=.019).

Table 2.4

Means, standard deviation and number of participants for dependent variables at pre-test, post-test and follow-up for both groups.

	Time								
	Pre-test			Post-test			Follow-up		
Dependant Variable	Mean	SD	N	Mean	SD	N	Mean	SD	N
Oral Narration Raw Score	22.2	4.30	24	36.5	7.38	22	35.7	5.17	23
Parent SDQ									
Total score	8.35	4.88	20	7.07	3.99	13	6.10	4.89	10
Emotional symptoms	2.00	1.72	20	1.92	1.38	13	1.50	1.27	10
Conduct problems	1.55	1.57	20	1.31	1.55	13	1.30	1.64	10
Hyperactivity and Inattention	3.40	2.39	20	2.85	2.41	13	2.10	2.33	10
Peer Relationship Problems	1.40	1.76	20	1.00	1.00	13	1.20	1.40	10
Pro-social behaviour	7.15	2.18	20	7.62	1.71	13	8.00	1.83	10
Teacher SDQ Total									
Total Score	8.71	6.58	24	8.00	6.76	23	7.83	6.82	23
Emotional symptoms	1.58	1.89	23	1.48	1.90	23	1.39	1.95	23
Conduct problems	1.46	1.86	23	1.26	1.76	23	1.22	1.70	23
Hyperactivity and Inattention	3.79	2.78	23	3.60	2.68	23	3.57	2.68	23
Peer Relationship Problems	1.88	2.15	23	1.65	2.21	23	1.65	2.20	23
Pro-social behaviour	6.42	2.83	23	6.61	2.82	23	6.61	2.82	23

Note: SD = standard deviations, N= Number of participants

2. 4 Discussion

The present study used an oral narrative intervention to teach aspects of narrative structure in school; who, when, where, what happened and an ending. Results showed that between pre-test and post-test the Oral Narration (measuring narrative production) scores for the intervention group increased significantly relative to the control group. However, between pre-test and follow-up there was no longer a significant increase in Oral Narration relative to the control group. In addition, the Narrative Comprehension scores for the intervention group did not increase significantly relative to the control group between both pre-test and post-test, and pre-test and follow-up.

Considering the scores of the data across both groups, the Narrative Comprehension scores significantly increased between pre-test and post-test test and also between pre-test and follow-up. The teacher SDQ scores decreased significantly between pre-test and post-test and also between pre-test and follow-up. Investigating the correlation between narrative production and behaviour problems, at pre-test and follow-up a significant negative correlation was found between Oral Narration and Teacher rated total SDQ score and teacher rated hyperactivity and inattention score. At post test, there was a significant negative correlation between Oral Narration and parent rated emotional symptoms. At follow-up, there was a positive correlation between Oral Narration and teacher rated pro-social behaviour.

Due to the lack of long term effects in significantly increasing Oral Narration and Narrative Comprehension relative to the control group, the present research questions the benefits of implementing the intervention. This concurs with the results by previous studies that have investigated the effects of oral narrative interventions. Davies et al. (2004) took post measures three months after the intervention had ended and found no significant differences in the amount of information included in the children's narratives. Furthermore, Westerveld and Gillon (2008) found no significant increases in children's narrative production after a six week oral narrative intervention.

The Shanks (2001) narrative intervention used in the present study aimed to teach aspects of narrative structure based on Stein and Glenn's (1979) story grammar. Whilst the components of story grammar are important in the production of narratives, other cognitive and linguistic skills are required including temporal-causal relationships, an understanding of how the story character's internal states are linked to their behaviour and linguistic features required to establish cohesion (Cain, 2003; Nelson,

2007; Mar, 2004). Although the relationship between these skills and story grammar is still unclear, the absence of a significantly enduring long-term effect, following an intervention that targeted story grammar specifically, may indicate that other skills are likely to be important to narrative production.

The Oral Narration and Narrative Comprehension scores of the control group increased between pre-test and follow-up in a similar way to the scores of the intervention group, a finding for which there are a number of alternative suggestions. Firstly, the narrative skills of children aged between 6 and 7 years old may be continuing to develop. Whilst empirical research suggests that children of six years are able to form a narrative with an episodic structure (Applebee, 1979; Ilgaz & Aksu-Koc 2005), there is a lack of empirical evidence that would help to identify the normative developmental changes of children's narrative structure over six years of age. It is therefore unclear what the expected increases in narrative skills would be normally.

Secondly, methodological limitations may account for the increase in scores of the control group over time. For example, practice effects at post-test may have resulted in the children remembering the assessment material and producing better stories, thereby increasing their score. Furthermore, since the children were not randomly allocated to the groups, the children in the control group may have increased their scores due to classroom differences. The children in the control group may have been learning about narratives in class which increased their skills in comparison to the intervention group.

Thirdly, these results may reflect difficulties in measuring narrative skills. Although the children were identified as having poor narrative skills at pre-test, baseline assessments may have underestimated the children's competence. Children may have had better narrative skills, which were more reliably represented at post test once the children became more familiar with the researcher and the assessment, thereby accounting for the increase in scores. Indeed, Pena et al. (2006) found that narrative assessments at post-test were more stable and accurate than those taken at pre-test.

The present study investigated the generalisation of oral narrative skills to narrative comprehension skills. Previous research has shown that children's knowledge of narrative structure is related to their ability to comprehend new stories (Stein & Glenn 1979). Furthermore, teaching narrative structure has been shown to increase narrative comprehension skills (Westerveld & Gillon 2008). The current study did not find any significantly different gains in narrative comprehension due to the intervention, compared to the control group. One possible explanation for the lack of significant

effects is that the children in the current study were already in the 'average' range at pre-test and therefore any possible effects of the intervention may have been reduced. Since the children in the study by Westerveld & Gillon (2008) had poor narrative comprehension skills, it is possible that children need to have a certain lack of skill in order to benefit from the intervention.

The present study also investigated the correlation between Oral Narration and behaviour problems in children. Conducting analyses of the entire sample, significant negative correlations were found between teacher ratings of total behaviour problems and oral narration at pre-test and follow-up. Whilst it is not possible to indicate the causality of this finding, it is consistent with previous research reporting that poorer narrative structure skills are associated with behaviour problems (Snow & Powell, 2005; Humber & Snow, 2001). Examining different domains of behaviour problems, significant correlations were found with the sub-scale of hyperactivity and inattention. This finding is consistent with research suggesting that children with Attention Deficit Hyperactivity Disorder (ADHD) have more difficulty structuring a narrative than children without ADHD (Renz et al. 2006; Flory et al. 2006). Future research should address these associations to examine the direction of the effect.

2.4.1 Limitations

The present study suffers from a number of limitations which are necessary to take into consideration when interpreting the findings.

2.4.1.1 Allocation of groups.

Due to the limitations of the existing class structure it was not possible to randomly allocate participants to groups. The control group consisted of two small groups of children from an existing class at two different schools. The intervention group also consisted of two small groups from an existing class at two different schools. This makes it likely that all small groups had different experiences as a class, for example their class teaching. Furthermore there are many other confounding variables that affect children's narrative skills that may have been present at a group level and it is not possible to know how these affected results. For example previous research has found that parental influence and socioeconomic status has a long term effect on the development of children's narrative structure skills (Haden et al., 1997; Peterson & McCabe, 1992; Peterson, 1994). To reduce the impact of this, efforts were made to

include schools with similar levels of deprivation. There were also no significant differences in the dependent variable scores at pre-test, suggesting that the differences between the groups had been minimised.

Despite the addition of the control group, these children were not subject to any intervention. Accordingly, differences in results may reflect the increased rapport with the researcher or the effects of being in a small group over an extended period of time, rather than reflecting effects due to the specific narrative intervention. Heinsman and Shadish (1996) note that passive control groups yield larger effect sizes than active control groups who receive an alternative intervention, since there is a greater difference in experience between the groups. This could therefore explain the significant difference in Oral Narrative scores of the intervention group between pre-test and post-test relative to the control group.

The present study is also limited by low power since it employed a small sample size. This increases the likelihood of making a Type II error and accepting the null hypothesis when it is false. A larger sample would have increased the power to pick up any changes in the results.

2.4.1.2 Assessment of narrative skills.

Within the current design, it is not clear whether children's performance on narrative assessments reflect their competence in narrative skills. The use of standardised assessments to measure narratives may influence children's performance by constraining what they can talk about. It may therefore be difficult to distinguish children's competence in narrative skills from their motivation to produce a narrative or their understanding of the narrative that they have been required to produce in the assessment. Indeed, Nicolopoulou (2008) suggests that the narrative skills portrayed by specific narrative measures may not reflect the exact dynamics and trajectories of children's natural narrative skills. Furthermore, the relationship between the speaker and the listener is important when telling narratives (Bruner, 1990; Nelson, 2003). Since the researcher was unfamiliar to the children this may have affected their performance at pre-test. As this research aimed to identify children with poor narrative skills they may have been incorrectly identified at pre-test.

The measure used to assess narrative production may have limited the results of the current study. Whilst based on story grammar as described by Stein and Glenn (1979), the assessment also included the measurement of additional skills required to produce a structured narrative, such as additional linguistic skills. It is therefore possible

that children may have been identified for the study who had an awareness of narrative structure, however they lacked other skills which resulted in them having poor narrative skills overall. Teaching narrative structure to these children may not have resulted in an increase in narrative skills since they had difficulties in other areas. Any increase in understanding of narrative structure may have been lost in a general measure of narrative skills, thereby reducing the apparent effects of the study.

Practice-effects may also have limited the results of the present study. One aim of the study was to investigate the maintenance of any effects six weeks after the intervention. It was therefore necessary to administer the narrative measure on three occasions. Regarding the data as a whole, there was a significant effect of time on the oral narrative and narrative comprehension scores. Despite the high test-retest reliability of the narrative measure, this increase may have been due to the repeated reassessments, in particular at follow-up.

2.4.1.3 Lack of independence.

There was a lack of independence of scores since the children were taught in a group. Children in the group may have influenced each other due to the group dynamics. This has implications for the statistical analyses which assumes that the participants are treated independently. Indeed, Kratochwill and Shernoff (2003) suggest that the unit of analysis should correspond to the unit of intervention in order to reduce this effect.

The study also suffers from a lack of independence of the researcher. The researcher assigned children to groups, delivered the intervention and completed the outcome measures. They were not blind to whether the children were in the intervention or the control group. Researcher bias may therefore have influenced the assessments, expecting the children in the intervention group to increase on measures more than the control group. In order to reduce these effects, efforts were made to ensure that the assessment data would be valid by using a standardised assessment with clear criteria.

Finally, there was a lack of fidelity to the intervention since the intervention sessions were not independently assessed. The implementation of the intervention may therefore have been affected by a lack of quality of programme delivery and a low adherence to the programme. However, each session was carried out by the same researcher and session plans were clearly followed during each group.

2.4.2 Implications and Future Directions

Since it is important to understand the actual conditions that are required for intervention effectiveness (Kratcockwill & Stoiber 2000; Petersen et al., 2010) this study highlights several implications for future practice delivering narrative interventions in schools. Firstly, it is important to consider the time over which the intervention is implemented in schools. The present study implemented the intervention once a week for six weeks and found no significant impact over time. Davies et al. (2004) implemented the intervention three times a week for eight weeks and also found no significant difference in narrative retelling skills. Previous studies that found significant differences in narrative skills implemented the intervention for a long period of time, notably an entire school year (Stevens et al., 2010).

This study highlights several implications for research investigating the effectiveness of oral narrative interventions. The present data illustrates the importance of including a control group when investigating the effects of an intervention. Previous studies investigating the effects of oral narrative interventions lacked a comparable control group and could not therefore judge whether any progress reported would have been made without the intervention (Davies et al., 2004; Westerveld & Gillon, 2008).

The addition of the control group enabled conclusions to be drawn regarding the long-term effects of the intervention. Although the narrative skills of the intervention group increased, at follow-up measure the intervention group had no longer made significant progress compared to the control group. The addition of a follow-up measure also enabled conclusions to be drawn regarding the long-term effects of the intervention since although a significant difference in narrative skills was found between the intervention and control group at post-test, this was no longer present at follow-up. This also highlights the importance of considering the timing of when post-intervention measures are taken in order to evaluate the effectiveness of interventions. It may be more beneficial for future studies to take post measures after a longer period of time to avoid repeated measurements and enable the longer-term effects of the intervention to be considered.

Future research investigating the effects of narrative interventions should use a larger number of participants and a randomised control trial which would reduce the limitations of the present study and enable stronger conclusions to be drawn. Furthermore, the effects of the Shanks (2001) intervention could be compared to a different narrative intervention in order to investigate the effects of different approaches to teaching narrative structure. Research could also compare the effects of teaching

narrative structure skills at home instead of at school. Results of the present study suggest that children's narrative skills at age 6 years may still be developing. There is a lack of research regarding children's narrative skills over the age of 6 years and therefore future research is required to investigate this further. Research is also needed that investigates the relationship regarding narrative skills and behaviour, both concurrently and longitudinally. This research could be used to inform any further intervention studies.

2.4.3 Conclusion

The present study investigated the effects of an intervention that taught the structure of narratives to children in school on children's narrative production and comprehension skills. Although the narrative skills of the intervention group increased significantly compared to the control group at post-test, no significant differences between intervention and control group were found at follow-up. Whilst the present study suffers from several limitations, it questions the long term benefits of the intervention. The study demonstrates the importance of including a control group in research and raises questions about when post measures should be taken to investigate the maintenance of skills over time. Correlations were found between behaviour and narrative skills which should be investigated further in future research.

Appendices

Appendix A

School name and address
Date

Dear Parent/Guardian

I am a Trainee Educational Psychologist, studying at the University of Southampton and currently working for XX Local Authority Educational Psychology Service. As part of my training, I am carrying out a study looking at children's narrative skills and I would like to investigate the effects of an oral narrative group. This is a group that will run once a week for 6 weeks for about 40 minutes with 6 children. It aims to develop story telling skills for those children who might benefit from some extra support. It uses colourful resources and games, and hopefully we will have a lot of fun! At the end of the group I will write to you to let you know how they have got on.

Over the next few weeks, I will be looking to find children who can take part in the group. This will involve working with the teachers looking at the children's literacy levels in school. I may also work individually with the children to look at their skills at telling stories. Later in the school year I will then run the oral narrative group.

I hope that you will be happy for me to consider your child for the study, and to take part in the narrative group. However, if you **do not** wish them to be considered, then please complete and return the slip to the School Office, within the next week, by XX date.

If your child is chosen for the group and my research, I will write to you again and check that you are still happy for your child to take part. Any personal information about your child will not be shared with anyone else but the school. Your child's participation is voluntary and you may withdraw them from the group at any time by contacting myself, or the school office without any implications for yourself or your child.

If you would like any further information, have any questions, or would like information regarding the findings of the study, please email me at rl7g09@soton.ac.uk or leave a message for me at the school office and I will get back to you.

This project has received ethical approval from the School of Psychology, University of Southampton (Study number...). If you have any questions about this you may contact the Chair of the Ethics Committee, School of Psychology, University of Southampton, Southampton, SO17 1BJ. (023) 8059 5578.

Yours faithfully

Rachel Lander
Trainee Educational Psychologist
Southampton University

- -

Oral narrative group

PARENT OPT-OUT

I **would not** like my child to be considered for the oral narrative group.

Your child's name and form……

Name of parent (print name)……

Signature of parent……Date……

Appendix B

School Address,
Date

Dear Parent/Guardian

I am a Trainee Educational Psychologist, studying at the University of Southampton and currently working for XXX Educational Psychology Service.

I wrote to you a last week to let you know that I am carrying out a study looking at children's narrative skills. Your child has been chosen to take part in the study, and I am writing to ask if you would still like them to take part?

Your child has been chosen to take part in a narrative group. The group will run once a week for 6 weeks for about 40 minutes on _____. It aims to teach children how to tell stories using colourful resources and games, and hopefully we will have a lot of fun!

If you would like your child to take part, please read the information sheet attached and complete and return the consent form below and the questionnaire attached within the next week, by Friday 30th September.

In agreeing for your child to take part in the group you will be giving your consent for data to be used for the purposes of research. Published results of the research project will not use your child's name, or school and will therefore maintain confidentiality. Your child's participation is voluntary and you may withdraw them from the group at any time without any consequences to you or your child. If you would like any further information, have any questions, or would like information regarding the findings of the study, please email me at rl7g09@soton.ac.uk or leave a message for me at the school office and I will get back to you.

This project has received favourable ethical approval from the School of Psychology, University of Southampton. If you have any questions about this you may contact the Chair of the Ethics Committee, School of Psychology, University of Southampton, Southampton, SO17 1BJ. (023) 8059 5578.

Yours faithfully

Rachel Lander
Trainee Educational Psychologist
Southampton University

- -

Oral narrative group

PARENT CONSENT

I would like my child to be part of the oral narrative group. I have also completed and returned the questionnaire.

Your child's name and form……

Name of parent (print name)……

Signature of parent…… Date……...

Appendix C

School name and address
Date

Dear Parent/Guardian

I am a Trainee Educational Psychologist, studying at the University of Southampton and currently working with XX Local Authority.

I wrote to you a few weeks ago to let you know that I am carrying out a study looking at children's narrative skills. Your child has been chosen to take part in the study, and I am writing to ask if you would still like them to take part? The study will measure your child's narrative skills this term and some of their other strengths and difficulties. Next term they will take part in a 6 week oral narrative group that aims to develop children's story telling skills.

If you would like your child to take part, please read the information sheet attached and complete and return the consent form below and the questionnaire attached within the next week, by XX date. In agreeing for your child to take part in the group you will be giving your consent for data to be used for the purposes of research. Published results of the research project will not use your child's name, or school and will therefore maintain confidentiality. Your child's participation is voluntary and you may withdraw them from the group at any time at any time without any consequences to you or your child.

If you would like any further information, have any questions, or would like information regarding the findings of the study, please email me at rl7g09@soton.ac.uk or leave a message for me at the school office and I will get back to you.

This project has received favourable ethical approval from the School of Psychology, University of Southampton (Study number....). If you have any questions about this you may contact the Chair of the Ethics Committee, School of Psychology, University of Southampton, Southampton, SO17 1BJ. (023) 8059 5578.

Yours faithfully

Rachel Lander
Trainee Educational Psychologist
Southampton University

- -

Oral narrative group

PARENT CONSENT

I would like my child to be part of the oral narrative study, and I would like them to be part of the narrative group running next term. I have read the information sheet and I have also completed and returned the questionnaire.

Your child's name and form……

Name of parent (print name)……

Signature of parent…… Date……...

Appendix D

Participant Information Sheet (Version: 2 Date:08/07/11)

Study Title: Investigating the effects of an oral narrative intervention

Researcher: Rachel Lander (Trainee Educational Psychologist)

ERGO Study ID number:

RGO reference number:

Please read this information carefully before deciding to take part in this research. If you are happy to participate you will be asked to sign a consent form.

What is the research about?

I am a Trainee Educational Psychologist, studying at the University of Southampton and currently working for XX Local Authority Educational Psychology Service. As part of my training, I am carrying out a study looking at children's narrative skills. I would like to investigate the effects of an oral narrative group which aims to help children's skills at telling stories.

Why has my child been chosen?

Your child has been chosen to take part in the group because it is thought that they might benefit from being given some extra help with their story telling skills.

What will happen?

I will run the group each week for 6 weeks. The groups will last approximately 40 minutes with 6 children. It uses colourful resources and games, and hopefully we will have a lot of fun! They will take place at a convenient time for your class teacher, when the children will not miss out on any significant work. They will not be at break or lunchtime. When the group has finished, I will assess your child's narrative skills. I will then see how they are getting on after another 6 weeks. You and your child's teachers will also be asked to complete a 'strengths and difficulties' questionnaire before and after the group.

Are there any benefits in my child taking part?

I hope that your child will enjoy taking part in the groups. The groups also hope to help children with their narrative skills. When the groups have finished and the assessments have been done, I will write to you and your child's class teacher and let you know how your child has got on in the group. I will also provide some information about how you might like to support your child's story telling skills.

Are there any risks involved?

I hope that your child will enjoy working with me and participating in the groups. I will make every attempt to reassure them, however if they do not want to take part then they can re-join their class. I have had a full CRB check.

Will my child's participation be confidential?

Personal information about your child's participation in the groups will only be shared with you and your child's class teacher. Any data kept about your child will remain confidential and stored on a password protected computer and comply with the data protection act. Data will be destroyed after a maximum of 10 years.

What happens if I change my mind?

If you change your mind and would rather that your child didn't participate in the groups then please do not hesitate to contact myself, or leave a message with the school office. This will not affect you or your child in any way.

What happens if something goes wrong?

If you have any concerns, then please contact the HeadTeacher (details to be added) or the chair of the ethics committee School of Psychology, University of Southampton, Southampton, SO17 1BJ. (023) 8059 5578.

Where can I get more information?

If you require more information, please do not hesitate to contact me at (Local Authority Educational Psychology department address to be added).

Appendix E

Participant Information Sheet (Version: 2 Date:08/07/11)

Study Title: Investigating the effects of an oral narrative intervention

Researcher: Rachel Lander (Trainee Educational Psychologist)

ERGO Study ID number:

RGO reference number:

Please read this information carefully before deciding to take part in this research. If you are happy to participate you will be asked to sign a consent form.

What is the research about?

I am a Trainee Educational Psychologist, studying at the University of Southampton and currently working for XX Local Authority Educational Psychology Service. As part of my training, I am carrying out a study looking at children's narrative skills. I would like to investigate the effects of an oral narrative group which aims to help children's skills at telling stories.

Why has my child been chosen?

Your child has been chosen to take part in the group because it is thought that they might benefit from being given some extra help with their story telling skills.

What will happen?

Over this term I will look at your child's narrative skills. Over the next 12 weeks, this will involve your child will spending 3 sessions with me doing some activities to look at their story telling skills. You and your child's teachers will also be asked to complete a 'strengths and difficulties' questionnaire twice. Next term they will then take part in a narrative group. The group will run once a week for 6 weeks for about 40 minutes. The group will be with 6 children and aims to develop children's story telling skills. It uses colourful resources and games, and hopefully we will have a lot of fun! They will take place at a convenient time for your class teacher, when the children will not miss out on any significant work. They will also not be at break or lunchtime.

Are there any benefits in my child taking part?

I hope that your child will enjoy taking part in the groups. The groups also hope to help children with their narrative skills. When the groups have finished, I will write to you and your child's class teacher and let you know how your child has got on in the group. I also provide some information about how you might like to support your child's story telling skills.

Are there any risks involved?

I hope that your child will enjoy working with me and participating in the groups. I will make every attempt to reassure them, however if they do not want to take part then they can re-join their class. I have had a full CRB check.

Will my child's participation be confidential?

Personal information about your child's participation in the groups will only be shared with you and your child's class teacher. Any data kept about your child will remain confidential and stored on a password protected computer and comply with the data protection act. Data will be destroyed after a maximum of 10 years.

What happens if I change my mind?

If you change your mind and would rather that your child didn't participate in the groups then please do not hesitate to contact myself, or leave a message with the school office. This will not affect you or your child in any way.

What happens if something goes wrong?

If you have any concerns, then please contact the Head Teacher (details to be added) or the chair of the ethics committee School of Psychology, University of Southampton, Southampton, SO17 1BJ. (023) 8059 5578.

Where can I get more information?

If you require more information, please do not hesitate to contact me at (Local Authority Educational Psychology department address to be added).

Appendix F

The Test of Narrative Language

Task 1: McDonalds Story.

Narrative Comprehension (No Picture Cues) Total score of 15

- The child is asked whether they have ever been to McDonalds and what they like to eat, in order to cue them into the story. The child is then told a short story about two children who come home from school and are asked if they would like to go out for dinner. The children want to go to McDonalds and go in the car with their mother. They discuss what they would like to eat and place their order. When their mother comes to pay she realises she has left her purse at home.
- The child is asked 12 questions about what happened in the story, for example what the children's names were, where they went to eat and what the problem was at the end of the story.

Task 2: McDonalds Story

Oral Narration (No Picture Cues) Total score of 26

- The child is asked to tell the story back to the examiner in the same way that they were told it. They are marked for including specific words and phrases in their story, for example including the children's names, where they went to eat and what the children wanted to eat.

Task 3: The Shipwreck story

Narrative Comprehension (Five Sequenced Pictures) Total score of 11

- The child is told a story that corresponds with a set of 5 pictures that are shown to them. They are told that they will be asked some questions about the story and then have a chance to make up a story of their own for some different pictures.
- The story is called 'The Shipwreck' and is about a little boy who makes a model of a ship at home with his mother for a school project. When it is ready he takes it to school, however on the way he trips and falls on a rock and the ship is ruined. He is upset but then decides to take it to school and mend it. His teacher asks him what happened and tells him that he has worked hard and been brave and gives him a good mark.
- The child is then asked questions about the story, for example what the name of the boy was, whether there was anyone else in the story, what the problem in the story was and what the boy decided to do with his boat.

Task 4: Late for School

Oral Narration (Five Sequenced Pictures) Total score of 30

- The child is given a sequence of 5 pictures about a little boy who gets up late for school and misses the bus. When he gets to school his teacher appears to be cross.
- The child is asked to tell the story that goes with the pictures. Their story is marked for narrative features including temporal relationships between events, causal relationships, being a complete story that makes sense and having correct grammar.

Task 5: The Dragon Story

Narrative Comprehension (One Single Picture) Total score of 14

- The child is told a story called 'The Dragon', which goes with the picture in front of them. They are told that they will be asked some questions and then asked to make up their own story about a different picture.
- The story is about some children who are out walking and find a cave. They see a dragon that is guarding some treasure and want to go home and tell their mother and father. They decide that they need to take home some treasure to prove that their story is true. When the dragon goes into the cave the girl tries to take the treasure, but it hears her and comes out of the cave blowing fire and causing her to drop the treasure and run home. Her brother follows and when they get home they tell their mother and father however they do not believe them. The children decide to take their parents to the dragon, although when they start looking for the path they can't find it. They don't know whether their story was real, or just a dream.
- The children are asked several questions about what they have heard, for example what the children's names were, where they were going, what they wanted to take home with them and where they went when they were scared.

Task 6: The Alien Story

Oral Narration (One Single Picture) Total score of 34.

- The child is shown a picture of some aliens that have landed their ship in a park and are coming out of the door with their suitcases.
- The child is asked to think of a story to tell that goes with the picture. Their story is marked according to whether they have included important features of narrative for example the setting, the characters, the story elements and vocabulary and grammar.

Appendix G

Verbal information to children

Verbal Information to children for initial assessments for intervention group and control group.

You have been specially chosen to come and do some work with me. We are going to go and tell some stories together. Would that be okay? We are going to go and work in [describe room]. We'll work together for about half an hour [explain in more detail if needed, ie when they will come back, before break etc]. If you want to come back before then, that's fine, you just need to let me know. I've heard that you're brilliant you are at telling stories, we're going to record them so that we can play them to other people. I will tell your mum and your class teacher how you got on. [After assessments] Well done! You did very well. I might come back in a few weeks and see you again to see how you are getting on with your story telling. Would that be okay?

Verbal Information for oral narrative group

You have been specially chosen to be part of our exciting group. We will work together for about 40 minutes [explain time if necessary ie until break]. We are going to learn more about telling good stories. We are going to play some games and do some fun activities. We are going to have a session like this each week, for the next 6 weeks. Is everyone okay with that? Does anyone feel that they might not want to be in the group? Does anyone have any questions? Does anyone have any worries about it? If you feel that you want to go back to class at any time, just let me know.

Verbal debrief at end of group

Well done everyone! That was your last group today. We have all done a brilliant job. You are each going to have one last session on your own, just with me, like you did at the beginning of the group. I will then give you a certificate to let you know that you have done the group. I will also tell your mum and your class teacher how you have got on and give them some other ideas of fun activities that they might like to do with you in class or at home.

Appendix H

Oral Narrative Intervention (Shanks 2001)

Week 1, Introduction

Week 2, Who

Week 3, Where

Week 4, When

Week 5, What Happened

Week 6, The End

Example Session - Week 2, Who

- Recap all of the story components using the story component cards. Each child stands on a story component card and has to put their hand up when they hear their question word. *Example.* Who is happy? When is it playtime? Where are you?

- Introduce who using books, TV programmes etc. Encourage the children to say who their favourite character is.

- Give each child a story book and ask them to identify who is in their book. Eg Goldilocks and the three bears, who is in the story?

- Who am I? This can played as a team game where the children divide into teams and take turns at guessing Who am I?. The children in each team have to agree on an answer. If the children shout out then the point goes to the other team! *Example*: 'I am an animal, I have whiskers, I like drinking milk, I purr' (Other statements are given to read).

- Guess Who! Have a feely bag containing objects associated with different whos. Eg. A tractor - farmer, football - footballer. The children take it in turns to take out an object and guess who it would belong to.

- Who Lotto game. Using the who pictures and the lotto board (supplied) the adult asks the questions on the lotto board. The children take turns at finding the corresponding pictures.

- Story telling. Give each child a character and generate a story using each of the characters. When the child hears their character, they jump up.

Appendix I

Ethical Approval and Research Governance

From: ERGO [DoNotReply@ERGO.soton.ac.uk]
Sent: 12 July 2011 17:47
To: Lander R.
Subject: Your Ethics Submission (Ethics ID:665) has been reviewed and approved

Submission Number: 665
Submission Name: Investigating The Effects of an Oral Narrative Intervention
This is email is to let you know your submission was approved by the Ethics Committee.

Please note that you cannot begin your research before you have had positive approval from the University of Southampton Research Governance Office (RGO) and Insurance Services. You should receive this via email within two working weeks. If there is a delay please email rgoinfo@soton.ac.uk.

Comments
None
Click here to view your submission

ERGO : Ethics and Research Governance Online
http://www.ergo.soton.ac.uk

DO NOT REPLY TO THIS EMAIL

From: ERGO [DoNotReply@ERGO.soton.ac.uk]
Sent: 21 July 2011 10:09
To: Lander R.
Subject: Research Governance Feedback on your Ethics Submission (Ethics ID:665)

Submission Number 665:
Submission Title Investigating The Effects of an Oral Narrative Intervention:
The Research Governance Office has reviewed and approved your submission

You can begin your research unless you are still awaiting specific Health and Safety approval (e.g. for a Genetic or Biological Materials Risk Assessment) or external ethics review (e.g. NRES).The following comments have been made:

"No issues, letter to be sent shortly."

ERGO : Ethics and Research Governance Online

Appendix J

Head teacher consent form
Title: Measuring the effects of an oral narrative intervention

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Please initial the box(es) if you agree with the statement(s):

I agree that my school can take part in this research project.	☐
I am happy for this project to initially use opt-out consent to find suitable participants for the study.	☐
I understand that parents of children recruited for the study will be asked for opt-in consent for their children to take part.	☐
Parents of children in this school have been sent information about this study and what it involves for them and their child.	☐
I have read and understood the parent opt out letter and have had the opportunity to ask questions about the study.	☐
I understand that parents' agreement for their child to be included in the study is voluntary and they ask to have it withdrawn at any time without their legal rights being affected.	☐
I am happy to address any parents concerns regarding their child being recruited for the study .	☐

Name of Head teacher (print name)……

Signature of Head teacher……..

Name of researcher:……

Signature of Researcher: ……

Date……

Appendix K

[Oral narrative intervention]

Debriefing Statement *(written)* (Version 2 08/07/11)

[The debriefing statement will consist of a short report to the parents after the narrative group has run and may vary depending on the progress that the children have made in the group.]

Dear Parent,

Thank you for agreeing for [name of child] to take part in the narrative group. Along with the other children in the group, the information about how [name of child] got on in the group will help our understanding of how we can develop children's story telling skills. When I write up my research, I will not use any identifying characteristics in my report. If you wish to have a copy of the summary of my research when I have finished writing it, or have any further questions, then please email me on [email address].

Story telling skills are important for lots of our daily life skills. It is important that we can learn to tell people what we have been doing on previous days, or what we will be doing in order so that other people can understand us. This helps us to make friends, and can help with our subjects at school.

When we tell stories, it is good to think about telling people 'who', 'where', 'when', 'what happened' 'why' and give an ending. These are the things that we have been working on in the narrative group. [Name of child, Explanation of how they got on in the group, skills they were good at, skills that they could develop, strategies that might help them.]

If you have any further questions about this, please don't hesitate to contact me by leaving your name and contact details at the school office, or calling me on [office number]

Many thanks,

Signature _____ Date _____

Name

If you have questions about your rights as a participant in this research, or if you feel that you have been placed at risk, you may contact the Chair of the Ethics Committee, School of Psychology, University of Southampton, Southampton, SO17 1BJ.

Phone: (023) 8059 557

Reference List

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