3 Fictional Narratives in Preschool-Aged DLLs – Collection, Analysis, and Current State of Research

As established in the previous chapter, oral fictional narratives (i.e. stories) represent complex cognitive, socio-emotional, and linguistic constructions. The challenge a preschool-age child faces when creating a "good" fictional narrative is considerably higher than producing conversational speech: As a narrator, it is required to conceptualize and coordinate a series of events with the production of connected utterances which convey character's perspective, while only limited environmental support is offered. To assess a child's oral language skills in a narrative context therefore allows the examiner to move beyond isolated utterances, and sheds insight into the child's ability to use language in a decontextualized manner. Treating them as spontaneous language samples, children's fictional narratives offer an ecologically valid platform, which allows for the examination of a wide range of complex, and socially, emotionally, and academically valid, aspects of language development (e.g., Norbury, Gemmell, & Paul, 2014). Not only do fictional narrative generations reflect decontextualized language use in a naturalistic setting, but they also represent a source of information about specific language forms (i.e., microstructure), discourse-level language skills in the area of story organization (i.e., macrostructure), as well as the use of evaluative language, and the speech production process (also see section 3.3).

Moreover, due to the wealth of information that can be gathered in a naturalistic setting, it has been argued that analyzing children's oral fictional narratives is one of the most comprehensive ways to examine language development, particularly for DLL children from different linguistic and cultural backgrounds (e.g., Bedore, Peña, Gillam, & Ho, 2010; Fiestas & Peña, 2004; Gagarina et al., 2012, 2015; Gutiérrez-Clellen, 2002; Laing & Kamhi, 2003; Peña, Gillam, & Bedore, 2014; Peña et al., 2006; Rhodes, Ochoa, & Ortiz, 2005; Terry, Mills, Bingham, Mansour, & Marencin, 2013). Because narrative discourse is a common practice in most cultures (e.g., Berman & Slobin, 1994; Carmiol & Sparks, 2014; Gorman, Fiestas, Peña, & Clark, 2011; Minami, 2005; Tulviste et al., 2016), the application of a criterion-referenced narrative as-

sessment may represent a more naturalistic assessment setting than a standardized language assessment and may therefore be a more appropriate way to evaluate DLLs' language skills (e.g., Battle, 2002; Bedore & Peña, 2008; Bedore et al., 2010; Rojas & Iglesias, 2009) than the sole application of standardized instruments – if those are even available for the particular cultural and linguistic backgrounds (American Speech-Language-Hearing Association (ASHA), 2004; Laing & Kamhi, 2003).

To successfully distinguish typically developing DLLs from those at risk for language disorders, it is crucial tough to gather information about the spectrum for narrative skills of typically developing populations with dissimilar language socialization patterns and unbalanced language exposure.

3.1 Narrative Sample Collection

While a narrative assessment may offer an informative and culturally fair (see previous section) option for examining language performance, it depends on the careful choice of elicitation techniques and prompts/stimuli. There are many ways to collect a narrative sample in DLL preschoolers, the choice clearly depending on the purpose and future plans for analysis. Although there is lack of evidence concerning effective strategies for the reliable assessment of preschoolers' personal stories (Spencer & Slocum, 2010), children's fictional narrative construction abilities can be captured reliably (e.g., Reese, Sparks, & Suggate, 2012). To elicit a fictional narrative, an examiner will typically either ask a child to a) reproduce a previously heard narrative (story retell/recall task), or to b) create a novel story (unguided) in response to a prompt (story generation/production task) (Hughes et al., 1997). Because most children are familiar with fictional narrative discourse through shared storybook reading, storybook prompts are often used in these tasks (Curenton & Lucas, 2007).

Comparing the two, story retells bear the disadvantage that the given model might heavily influence the overall story organization and elements applied and that it places additional language processing demands (Gutiérrez-Clellen, 2002). Therefore, it has been argued that the retelling task might represent more a measure of children's comprehension of story elements (Nelson, 2007), confounding narrative ability with

memory skills (Berman & Slobin, 1994). In turn, story generation might be a better reflection of children's actual ability to globally construct a story, because it allows children to lay out their own narrative structure.

3.2 The Development of Fictional Narratives Produced in Response to a Picture-Based Storybook

The prototypical developmental trajectory of independent oral fictional narrative production, as assessed by picture prompts, has historically been established through research with monolingual children from English and rarely other language-speaking backgrounds (for an overview, also Berman & Slobin, 1994; Hughes et al., 1997; Pearson & de Villiers, 2005). The following aspects of narrative development have been identified:

Children aged 3 to 4 often seem to merely describe and comment on events depicted in the pictures and treat each story scene as an isolated event—referred to as "heaps" by Applebee (1978) and isolated description by Stein and Glenn (1979)—, rather than constructing a coherent and cohesive story. In addition to producing these pre-narratives, children in this age range will occasionally produce minimal narrative sequences as characterized by a short chain of temporally related events and notions about time. Consequently, Botting (2002) infered that young children are likely to create structurally incomplete stories (Peterson & McCabe, 1983; Shapiro & Hudson, 1991) with fewer words, shorter story lengths, and less complex syntax.

Over time temporally organized chains of events become more and more common, while the focus still often lies on the most salient pictures, rather than the most important events (Pearson & de Villiers, 2005). Children will start producing causal structures first, which typically relate local or adjacent events in lieu of global story schemes (Trabasso & Rodkin, 1994). At roughly 5 years of age, typically developing children from middle-income homes are usually able to produce narratives that are chronologically structured and sequential. However, they are often not able to sustain the organization throughout and will frequently end their stories at the high point rather than with a conclusion and/or an explanation (e.g., Peterson & McCabe, 1991). Even more experienced narrators, beginning at 5 to 7 years of age, will construct nar-

ratives around an action structure, that is, an internally coherent narrative that consists of an initial goal, attempts to reach the goal, and an outcome (Berman & Slobin, 1994). Here, content and organization both work together to convey the message.

Furthermore, while 4- and 5-year-old monolingual children start to include evaluative language features in their fictional narratives, they are usually small in number and variation (Bamberg & Damrad-Frye, 1991).

In the area of syntactic development, there is evidence that the production of connectivity, which reflects on the use of conjunctions creating coordinating, temporal, and/or causal connections between utterances, becomes more sophisticated in terms of types and tokens produced over the preschool period. The coordinating conjunction "and" is the earliest and most ubiquitous marker of connectivity in children's narratives, later followed by temporal and causal connections. Typically developing 5-year-olds are able to connect sentences together cohesively by using additive and temporal markers, such as "and" as well as "then" (Peterson & McCabe, 1991). Shapiro & Hudson (1991) found that 6-year-olds produced stories with a greater proportion of temporal connectives relative to the narratives generated by 4-year-olds, while Curenton and Justice (2004) reported that 4- and 5-year-olds use significantly more conjunctions than 3-year-olds when generating a fictional story in response to a wordless picture book.

Notably though, even if children at the late preschool age are considered to be in command of their syntactic system, creating sustained discourse still poses a challenge (Hickmann, 2003). Overall, children's narrative performances in the preschool-age are highly variable based on the ongoing acquisition of skills necessary to create complete and complex stories, e.g., in the areas of vocabulary, complex grammatical forms, as well as discourse organization. As has been confirmed for child narrators from different language and cultural backgrounds, well-formed global-level organization of narrative structure typically does not emerge until around ages of 9 to 10 (Berman, 2009), while rhetorical expressiveness further consolidates through adolescence and adulthood (Berman & Slobin, 1994).

Comparable to the development of monolingual children, research including DLLs showed that these children also show a gradual sophistication of their oral fictional narratives skills. That is, while 4-year-olds may still describe events (Muñoz, Gillam, Peña, & Gulley-Faehnle, 2003), at the late preschool age, typically developing DLLs' fictional narratives can be expected to manifest autonomous text construction, while maturation in narrative global organization (Heilmann, Miller, & Nockerts, 2010; Heilmann, Miller, Nockerts, & Dunaway, 2010; Muñoz et al., 2003; Ukrainetz et al., 2005) and content and form (Greenhalgh & Strong, 2001) continues through the school-age (for a more in-depth analysis of young DLLs' oral narrative performances, see section 3.4).

After this broad overview, it is important to put forth a more detailed approach on narrative analysis, which allows a deeper insight into DLLs' preschool fictional narrative skills.

3.3 Foundations of a Comprehensive Framework for Analyzing Fictional Narrative Productions

A child's ability to independently compose a novel fictional narrative for a naïve listener (e.g., based on pictorial prompts as found in a storybook), requires a certain degree of command of the target language lexicon and morpho-syntax; however, it also requires cognitive-linguistic interface skills to produce the essential components/events of a coherent story, such as in establishing the setting and describing an initiating event, a response, and an outcome (Gutiérrez-Clellen, 2012; Schneider, Hayward, & Dubé, 2006). Furthermore, evaluative devices are needed to help transmit the character perspective and, as such, the point of the story. Given the complex nature of child narrative discourse, it is compelling yet impossible to capture the structure of narrative discourse by any single tool or analysis. Also, in many countries, such as Germany, no norm-referenced instruments currently exist to capture children's narrative skills on a discourse and linguistic level. However, a criterion-referenced assessment can be applied to narrative language samples (Bedore, Peña, Gillam, & Ho, 2010; Hughes et al., 1997; Laing & Kamhi, 2003) to assess the inclusion of selected linguistic structures and their interrelatedness in narrative discourse (Petersen, Gillam,

& Gillam, 2008). A multi-faceted and integrative framework is necessary to adequately capture these various skills.

As presented in Figure 4 and in the upcoming sections, this analytical framework[10] should consider skills in the areas of narrative macrostructure, referring to the global scheme of a produced story structure, microstructure, representing the linguistic features expressing the narrative content, and evaluative language, which is used to transmit the story characters' perspective as well as the speech planning and production processes involved in the oral expression of a story. Furthermore, aspects of the speech production process can be targeted. It is obvious that a strong relationship between these distinct levels of observation should be assumed.
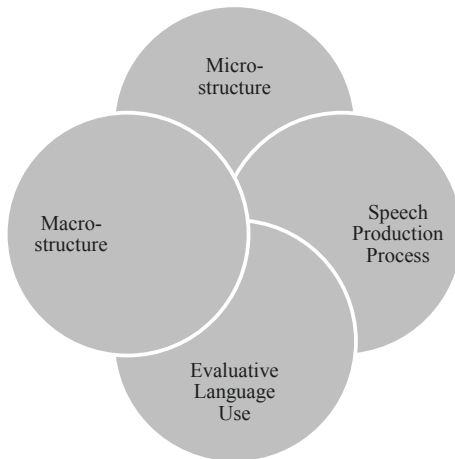

Figure 4   Interconnected Layers of Fictional Narrative Production and Analysis

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[10] Another framework for the linguistic analysis of narrative discourse was established by Berman and Slobin (1994; also see Berman, 2005) and is based on the analysis of form, i.e., linguistic and expressive devices, and function, i.e., the purposes these forms serve in narrative constructions (see, for example, Kupersmitt, Yifat, & Blum-Kulka, 2014; Minami, 2005). Also, narratives have been analyzed with a focus on coherence (i.e., the structure of a story with event sequences ideally related to each other in a meaningful way, e.g., Shapiro & Hudson, 1991) and cohesion (i.e., the linguistic devices used to link the utterances, e.g., Cain, 2003). However, in communication sciences and disorders, analytic frameworks targeting narrative micro- and macrostructure are by far the most common choice and offer the most detailed analyses (e.g., Petersen, 2011).

Narrative Microstructure

Narrative analysis on the microstructure level is invested in documenting the use of lexical, morphological, and syntactic properties applied in the construction of a narrative. It is therefore an overarching term representing internal properties and structures children use in their narratives that increase narrative clarity and cohesive adequacy on the word and grammatical level (e.g., Justice et al., 2006, 2010; Justice, Sofka, & McGinty, 2007).

Measures of narrative microstructure have traditionally included indicators of

- productivity, e.g., total number of words, total number of communication units (C-units)
- lexical diversity, e.g., number of different words and/or lemmas
- syntactic complexity, e.g., mean length of utterance/C-unit in words

        (see Gagarina et al., 2012; 2015; Justice et al., 2006; Mills, 2015)

Therefore, these skills are highly language-dependent, drawing on the lexical and morpho-syntactical knowledge of DLLs in their respective languages.

Narrative Macrostructure

Other than micro-level analysis of oral narrative productions, narrative macrostructure focuses on discourse rather than word or sentence-level components. More specifically, narrative macrostructure comprises skills referring to the composition and representation of hierarchically and sequentially organized event sequences, which allow the understanding and verbalization of narrative discourse (Hickmann, 2003) and thus represents the general characteristics of a narrative, such as the global thematic organization of main ideas (Hughes et al, 1997). This way, the macrostructure reflects the global story organization of a narrative across utterances. These skills are multiply determined, drawing for example on a child's expressive language skills, age, causal thinking, and cultural experiences (e.g., Cárdenas-Hagan, Carlson, & Pollard-Durodola, 2007; Gorman et al., 2011; Justice et al., 2010; Laurent, Nicoladis, & Marentette, 2015; Melzi, Schick, & Bostwick, 2013; Montanari, 2004) and therefore have been of special interest in the study of DLLs' narrative development.

Story Grammar. Historically, children's macrolevel discourse skills have been assessed by the inclusion of story grammar elements, which offers a framework for deriving the specific aspects to be expressed in a sequence of utterances to create a hierarchically and sequentially organized story.

One well-known concept of this story grammar[11] approach has been specified by the pioneering work of Stein and Glenn (1979, 1982) and the more recent work from Lucero (2015) as well as Terry and colleagues (2013). It focuses on two major components of typical and well-formed fictional narratives (e.g., those found in storybooks): the setting and the episode system. While the setting provides orienting and contextual information about the character and the initial situation, the episode system consists of different referential subcategories, all of which are basic units constitutive of stories:

- Initiating events
- Internal responses
- Plans
- Actions
- Consequences
- Reactions

Overall, this approach posits a coherent narrative to be goal-directed[12] from the main character's viewpoint (Reese et al., 2011). Story grammar research has been widely applied to the study of fictional narrative skills in children, including DLLs with and without language impairment (e.g., Cleave et al., 2010; Iluz-Cohen & Walters, 2012; Fiestas & Peña, 2004; Gagarina et al., 2012; 2015; Guitiérrez-Clellen et al., 2008; Pearson, 2001, 2002; Uccelli & Paéz, 2007).

Episodic Structure. Therefore, to more closely capture the complexity of a narrative, an assessment should incorporate the expression of story grammar features together with elements pertaining to narrative cohesion (such as additive, temporal, and causal

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[11] Story grammar has also been referred to as narrative structure, story schema, or story elements (for an overview, see Hickmann, 2003).

[12] This feature distinguishes the story grammar model from approaches in the linguistic tradition which do not presuppose a goal-directedness of narrative events (see Reese et al., 2011).

connectors). For example, for clinical purposes, it is well established to holistically assess the overall maturity of narrative organization (e.g., Paul, 2007), which may also be used when comparing a DLL child's narrative ability across its languages (e.g., Gagarina et al., 2015). To aid with the procedure, Westby (2005) designed a decision tree based on Glenn and Stein's (1980) classification of types of story structures featuring a flow chart that guides the process of assessing a narrative production from a descriptive sequence to a complete episode (for further information, and a depiction of such flow chart, also see section 4.4.2).

Furthermore, researchers have argued to also assess the use of evaluative language components[13] (e.g., Curenton & Justice, 2004; Gagarina et al., 2012, 2015; Hipfner-Boucher, 2011; Heilmann, Miller, Nockerts, & Dunaway, 2010; Petersen et al., 2008).

Evaluative Language Use

In the production of an advanced narrative, it is not only important to convey the "landscape of action" (Bruner, 1986, p.99)—that is, what happens to the story's characters—but also to deliver the "landscape of consciousness" (Bruner, 1986, p. 99)—that being the interpretation and verbalization of what those involved in the action intent, feel, or believe. When developing fictional narrative competence (i.e. a narrative genre where the represented content does not converge with a personal experience of the representing narrator), the child's use of evaluative language is particularly important, because the adequate incorporation of evaluative expressions helps to build the character's perspective, which is crucial in conveying the point of a story (Eaton, Collis, & Lewis, 1999; Bamberg & Damrad-Frye, 1991; Peterson & McCabe, 1983; Shiro, 2003), and has been connected to the development of friendships and self-concept (Fivush, Haden, & Reese, 2006). Therefore, children need to acquire the ability to use evaluative expressions, for example, through the use of internal state language or character dialogue (see below).

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[13] Strictly speaking, both narrative cohesion and evaluative language can be seen as microstructural features. However, to emphasize their contribution to narrative complexity, they are presented here in a separate area.

Preschool-age children begin to apply aspects of evaluative language, especially when telling fictional stories supported by picture prompts (e.g., Curenton & Justice, 2004). For example, Curenton (2011) found that 3-to-5-year old monolingual preschoolers who created narratives that included the character's motives and/or intentions also had higher cognitive skills. With growing age and experience, the frequency and range of used terms increases (Eaton, Collis, & Lewis, 1999; Griffin et al, 2004; Peterson & McCabe, 1983; Ukrainetz et al., 2005).

A way of approaching narrative evaluation is by analyzing the tokens and the frequency inclusion of specific (microstructural) linguistic features representing evaluative aspects, among which are (adopted from Hipfner-Boucher, 2011, Shiro, 2003 and Tager-Flusberg & Sullivan, 1995):

- Modifiers (adjectives and adverbs) to increase the explicitness of character, object, time, manner, place, and event descriptions (e.g., *finally, really bad*)
- Internal state language
    - emotional states (e.g., *sad, happy*)
    - cognitions (e.g., *think, believe, know*)
    - intentions (e.g., *want, try*)
    - physical states (e.g., *tired, hurt*)
- Character dialogue (both direct, e.g., *He said, "I will find you"* and free, e.g., *"Where are you, frog?"*)

Speech Production Process

Another measure to be considered in oral fictional narrative production refers to the area of linguistic fluency: It is a common phenomenon in oral language production that speakers interrupt themselves to repair their communication, use repetitions, filled pauses, and revise their language (see Table 1); for example, when they realize they made a mistake, or when they decide to modify their message (Levelt, 1989). Loban (1976) introduced the collective term *mazes* for such series of words, initial parts of words, or unattached fragments, which do not contribute meaning to the ongoing flow

of language. This verbal behavior might be especially prevalent when trying to express a complicated or abstract idea, which is not yet fully developed.

Table 1.   *Examples of Mazes Produced by DLLs*

Types of mazes	Examples from Child Narrative Productions
Repetitions	- **Dann dann** geht der nach draußen. *[**Then then** he goes outside.]* - **Und und hat hat** Frosch gefunden. *[**And and has has** found frog.]*
Filled Pauses	- Da kommt **ähm** ein **ähm** Tier. *[There comes **uhm** an **uhm** animal.]*
Language Revisions	- Und **ihre diese** Schuhe liegen da. *[And **her these** shoes lie there.]* - Und **das war noch ihre Hund** war immer noch da. *[And **it still was her dog** was still there.]* - **Da sind zw da sind viele** Bienen. *[**There are tw there are many** bees.]*

Note. Examples taken from DLLs' narrative productions presented in this work (Study I).

Thus, the use of such mazes in extended dialogue, such as in narratives, may give insights into the internal processes of language formulation and has been discussed as a predictor of language competence (e.g., Bedore, Fiestas, Peña, & Nagy, 2006; Nettelbladt & Hansson, 1999). As previously argued, when generating a narrative, the child narrator has to coordinate and convey the overall story plot and the usage of appropriate lexical and syntactic information. Therefore, in contrast to conversationally produced speech, he or she is challenged to use more complex language, promoting incidences of language formulation difficulties (Leadholm & Miller, 1992). Children with specific language impairment (SLI) demonstrate higher production of mazes in their language samples than do typically developing children (Nettelbladt & Hansson, 1999), which makes them an important clinical marker. In narrative production, frequent self-interruptions, revisions, and hesitations often occur to the detriment of linguistic cohesiveness while the likelihood of loss of the accessibility to referents increases (Montanari, 2004).

In summation, assessing child narrative abilities in both a micro- and macrostructural framework is well-established, for mono- as well as for dual-language learning children (see section 3.1). As the analysis of evaluative language aspects provides insight into the development of the ability to express character perspective in reflecting awareness of intentionality and goal-directed behavior of protagonists, and thus into the ability to deliver the story's point, it should also be considered when attempting to gather a holistic impression of a child's narrative skills. Especially when assessing DLLs oral narrative abilities, an additional measure of the speech production process, for example by an analysis of maze use, provides further insight into linguistic strengths and weaknesses.

After having explored the importance of fictional narrative skills in DLLs' language development and how they can be assessed and analyzed, how these skills actually develop over the preschool period will next be examined. Before focusing on current research evidence on structural fictional narrative skills of DLLs in the preschool age, a broader overview will first be provided.

3.4 Narrative Skills in Preschool-Age Dual Language Learners

While narrative developmental patterns are well-established for monolinguals speakers, there is only limited information regarding the narrative abilities of DLLs. However, often motivated by the close connection of narrative abilities and academic language skills, in recent years, more and more studies have emerged. Overall, existing work on the narrative abilities of young DLLs is mainly informed from three different research perspectives: Firstly, by exploring relations of within-language measures of narrative competence longitudinally and cross-sectionally; secondly, by conducting cross-linguistic comparisons of DLLs' narrative performance in each of their languages; and thirdly, by comparing aspects of DLLs' narrative productions to the narrative performances of monolingual samples.

While Table 2 offers an overview of studies examining aspects of fictional narrative production in preschool-age DLLs, selected research evidence will be discussed in more detail in the upcoming sections.

Table 2. *Overview of Peer-Reviewed Research Evidence on Fictional Narrative Generative Abilities in Preschool- to Early School-Age DLLs*

Author(s) (Year)	DLL Participants (*M*$_{age}$ years; months)	Languages Spoken (Country)	Narrative Task (Type of Prompt)	Selected Aspects of Narrative Analysis
LONGITUDINAL AND CROSS-AGE EVIDENCE				
Kupersmitt et al. (2014)	20 preschoolers (6;2)	Various first languages (home exposure), Hebrew (Israel)	Story generation (picture sequence)	Story grammar elements, connectivity, number of clauses
Laurent et al. (2015)	10 4-to 5-year-olds (4;4 months)	French (home & school exposure), English (home exposure) (Canada)	Story generation (2 cartoon segments, in total 6 minutes)	Story structure, TNW, NDW
Melzi et al. (2013)	Time I: 118 4-year-olds (4;5) Time II: 39 5-year-olds (5;10)	Spanish (home exposure), English (USA)	Story generation (picture book)	Story grammar, evaluative language use, conversational autonomy
Montanari (2004)	3 5-year-olds (5;6)	Spanish (home exposure), English (USA)	Story generation (picture book: Frog Story)	Overall action structure, cohesion, temporal perspective, evaluative language use
Muñoz et al. (2003)	12 under 5-year-olds (4;3), 12 over 5-year-old (5;3)	Spanish (home and school exposure), English (home and school exposure) (USA)	Story generation (picture book: Frog Story)	Story grammar, TNW, NDW, TNCU, MLCU, grammatical C-units
Uccelli & Pàez (2007)	24 kindergarteners (5; 6)	Spanish (home exposure), English (USA)	Story generation (picture sequences)	Story Score (composite), NDW, TNW
CROSS-LINGUISTIC EVIDENCE				
Fiestas & Peña (2004)	12 4- to 6-year-olds (no mean age provided)	Spanish (home exposure), English (USA)	Story generation (Frog Story and single-picture-prompt)	Story grammar elements, MLCU, NCU, TNW, grammatical utterances
Fiestas et al. (2005)	30 4-to 7-year-olds (6;0)	Spanish (home exposure), English (USA)	Story generation (picture book: Frog Story)	Maze use
Iluz-Cohen & Walters (2012)	8 5-to 6-year-olds (5;11)	English (home exposure), Hebrew (Israel)	Story generation (picture book)	Story grammar elements, MLU, lexical and morpho-syntactical measures, code-switching
Uccelli & Pàez (2007)	see above			

Author(s) (Year)	DLL Participants (M_{age} years; months)	Languages Spoken (Country)	Narrative Task (Type of Prompt)	Selected Aspects of Narrative Analysis
EVIDENCE FROM COMPARING MONO- AND DUAL-LANGUAGE LEARNERS				
Blom & Boerma (2015, July)	31 5-to-6 year-olds (not provided), with and without LI	Various first languages (home exposure), Dutch (Netherlands)	Story generation and retell of picture sequences (MAIN; Gagarina et al., 2012)	Story production (composite), number of internal state terms
Cleave et al. (2010)	12 (4;4), with LI	Various first languages (home exposure), English (Canada)	Story generation (picture sequences, ENNI[a]); Story retell (Renfrew Bus Story[b])	Story grammar elements, complexity index, information units, TNU, noun phrases, literate language features
Fiestas et al. (2005)	see above			
Paradis & Kirova (2014)	21 4-to 5-year-olds (4;8)	Various languages (home exposure), English (Canada)	Story generation (picture sequences, ENNI[a])	Story grammar (composite), MLU, complex sentences, NDW, referring expressions
Peets & Bialystok (2015)	25 5- to 6-year-olds (5;5)	Various first languages, English (Canada)	Story generation (picture book: Frog Story)	Genre features, TNW, NDW, MLU, syntactic and morphological errors
Resendiz et al. (2014)	88 4-to 6-year-olds (4;10)	Spanish (home exposure), English (USA)	Story generation (picture book: not specified)	Grammaticality scores
EVIDENCE ON THE ROLE OF EXPRESSIVE LANGUAGE SKILLS				
Bedore et al. (2006)	22 4-to 7-year-olds (5;9)	Spanish (home exposure), English (USA)	Story generation (picture books: Frog Stories)	TNCU, NDW, MLCU, maze use
Bedore et al. (2010)	170 5-to-6-year-olds (5;7)	Spanish (home exposure), English (USA)	Story generation (picture books: Frog Stories)	TNU, NDW, MLU, grammatical utterances
Laurent et al. (2015)	see above			
Lofranco et al. (2006)	8 6- to 7 year-olds (7;7)	Filipino (home exposure), English (USA)	Story generation and retell (picture books)	Stories produced in English: complexity score (composite), TNCU, TNW, TTR, MLU, maze use
Montanari (2004)	see above			
Uccelli & Pàez (2007)	see above			

Note. For longitudinal studies reaching past the preschool age, only data for preschool-aged participants is provided. NDW = number of different words, MLCU = mean length of C-unit, MLU = mean length of utterance, TNCU = total number of C-units, TNU = total number of utterances, TNW = total number of words, TTR = type-token-ratio. [a] Glasgow & Cowley, 1994. [b] ENNI = Edmonton Narrative Norms Instrument (Schneider, Hayward, & Dubé, 2006).

Like their monolingual peers, DLLs make changes on the length of their narratives and their use of macro- and microstructures as their narrative productions become more sophisticated over the preschool period and into their formal school years.

Longitudinal studies tracking the development of microstructural features within languages from ECEC into the early school age found high inter-individual variability, as displayed by high numbers of standard deviations, and an increase in total number of words, number of different words, and mean length of utterance in both of DLLs' languages (Bedore et al., 2010; Laurent et al., 2015; Miller, et al., 2006; Muñoz et al., 2003; Uccelli & Páez, 2007).

For example, Uccelli and Páez (2007) conducted a longitudinal study of narrative skills and vocabulary development in 24 DLLs who were exposed to Spanish at home and to English at both ECEC and school, respectively; in addition, all came from low socio-economic backgrounds. In ECEC and in first grade, self-generated fictional narratives were collected in both languages. On the microstructure level, narratives were assessed via total number of words and number of different words. For English narratives, only the latter was found to be a sensitive developmental measure. Also, they reported significant developmental gains in both Spanish and English fictional narrative macrostructure (as measured in story structure levels) from kindergarten to first grade on a story generation task. Analyses revealed higher story structure scores in L2 (English) versus L1 (Spanish) narratives.

Laurent and colleagues (2015), who collected story generations in response to cartoon sequences from preschool-to school-aged English-French DLLs, also found that older children's narratives in both languages included more story structure elements. Similarly, Montanari (2004) examined the narrative generations of three 5-year-olds (Spanish-English DLLs) at one time point in preschool and again six months later and reported a qualitative increase in macrostructure use, with ongoing support of both languages provided.

Finally, Spanish-speaking preschoolers growing up in the United States displayed higher levels of complexity in the areas of both narrative macrostructure evaluative language use at age 5 in comparison to age 4 (Melzi et al., 2013).

Cross-Linguistic Evidence

Examining fictional narrative production from a cross-linguistic perspective, Berman and Slobin's seminal publication (1994) featured analyses of stories generated in response to the wordless picture book "Frog, where are you?" (Mayer, 1969) obtained from monolingual children and adult speakers of English, German, Spanish, Hebrew, and Turkish. Comparisons across age groups and languages revealed considerable pattern consistency, so that the researchers discussed that

> the choice of components to be expressed is governed by a quite general development of shared perceptual and cognitive abilities, rather than by the dictates of language-particular forms of expression.
>
> (Berman & Slobin, 1994, p. 53)

This view (also see Berman, 2001) has been supported by research evidence comparing macrolevel narrative skills of mono- and dual-language learners.

For example, Fiestas and Peña (2004) elicited story generations via wordless picture books in both English and Spanish from 12 balanced DLLs between the ages of 4 and 6. While subsequent macrostructural analyses revealed variations in the inclusion of selected story grammar aspects between the two languages–specifically, initiating events and attempts were more often included in Spanish, while English narratives included more consequences–overall story grammar ratings were similar regardless of language used, suggesting an overall comparable level of narrative complexity. This finding was confirmed by an Israeli study on English-Hebrew DLLs, where Iluz-Cohen and Walters (2012) reported story grammar use across two story generations and across languages to be similar in 5- to 6-year-olds. Similarly, Uccelli and Paéz (2007) found clear cross-linguistic associations for narrative macrostructure, as ECEC Spanish story scores predicted first-grade English narrative quality even when controlling for the effects of English vocabulary and English narrative productivity.

To gain further insight into the role of dual-language learning for narrative production, further research has compared DLLs' performance to children growing up monolingually.

Blom & Boerma (2015, July) reported that the use of macrostructure in a self-generated story in response to a wordless picture book did not differ between groups of thirty-one 5-to-6-year old monolingual and sequential learners of Dutch. Furthermore, in the area of evaluative language use, the study offered emerging evidence that DLLs used slightly more internal state terms than monolingual children. This also seems to be the case in children with SLI: Cleave and colleagues (2010) compared the inclusion of story grammar aspects in the narratives of 5- to 6-year-old DLLs with SLI and reported no differences between English monolingual children and predominantly English-speaking DLLs.

While skills at the macrolevel seem comparable between same-aged mono- and dual-language learners, a different picture emerges when also taking microlevel narrative skills into account. For example, Paradis and Kirova (2014) examined the L2 fictional narrative generations of 21 DLL 4-to 5-year-old children in comparison to monolingual norms (standardized narrative assessment ENNI, Schneider et al., 2006). While children's macrolevel skills were in close proximity to the monolingual norm, DLLs reached lower measures in the area of narrative microstructure (i.e., utterance length, sentence complexity, lexical diversity, and use of referring expressions in first mentions)[14]. In fact, differences in narrative expression on the microstructure level may persist into adolescence (Gámez et al., 2015).

A possible explanation is that the production of narrative macrostructure, referring to a story's global organization and coherence, is driven more by global cognitive aspects and thus universally acquired across DLLs' languages, so that it more easily translates from one language to the other. Meanwhile, narrative microstructure refers to measures of linguistic composition of the narrative; that is, skills more dependent on specific language-dependent grammar and vocabulary knowledge (Gagarina et al., 2015; Paradis & Kirova, 2014).

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[14] The only microstructure skill not different was a measure of productivity, namely total number in words. However, this might not be surprising, as the overall productivity rate is less influenced by lexical and grammar proficiency than for example lexical diversity (Paradis & Kirova, 2014).

This notion is supported by Squires and colleagues' (2014) research findings in the area of narrative retell: While typically developing preschool-age DLLs' macrostructure scores in Spanish (home exposure) predicted macrostructure scores in English (school exposure) in first grade, the same relation was not found for microstructure measures. As such, it was concluded that children "transferred conceptually dependent narrative skills easily, but then had to learn independently the nuances of each language to be successful using literate language" (Squires et al., 2014, p. 60). Note though that a study conducted by Resendiz, Henrich, Domsch, & Belasco (2014) reported no differences between grammaticality scores in narratives of typically developing four-year-olds DLLs and those growing up monolingually.

Evidence on the Role of Expressive Language Skills

Children who are highly fluent in and who receive continuous input from both of their languages seem to have similar fictional narrative skills in both of their languages. Laurent and colleagues (2015) collected fictional story generations of preschool- to school-aged DLLs who were highly fluent in each of their languages—English and French—and reported no across-language differences in the macro- and microlevel elaborateness of children's narratives at any age. Across language comparisons revealed moderate correlations for micro-level measures (word types, $r = .40$; word tokens, $r = .30$) and high correlations for macro-level measures (number of included scenes, $r = .60$; story structure, $r = .58$), indicating an age-related and simultaneous growth in fictional narrative abilities. Other work including preschool-age DLLs experiencing equal input in their languages also reported microlevel ratings of narrative productivity and syntactic complexity (number of words, number of communication units, mean length of communication units, etc.) to be similar across languages (Fiestas & Peña, 2004).

This relationship changes, however, when varying expressive language skills are at play (i.e., from children experiencing varying language input in their respective languages). For example, Bedore and colleagues (2010) analyzed the spontaneous oral narratives of 170 preschool-age children who were learning Spanish from birth on and

who were either simultaneous or sequential learners of English. Within languages, lexical (as measured by number of different words (NDW) and grammatical domains (as measured by mean length of utterance (MLU) were highly and significantly correlated (English MLU and English NDW: $r = .57$, $p < .001$). Furthermore, they reported weak correlations for MLU across languages of simultaneous and sequential DLLs ($r = .26$, $p < .001$), while no significant correlations emerged for lexical diversity ($r = .12$, *ns*). In children's English-language narratives, levels of language ability as assessed by a standardized test were correlated with microlevel narrative abilities, specifically MLU (as a measure of grammatical complexity) and NDW (as a measure of lexical diversity).

Another area possibly affected by linguistic knowledge is speech production, as often assessed via maze use (see section 3.3). Findings of Lofranco, Peña, and Bedore (2006) suggested that maze use might be related to level of exposure to another language. The researchers collected English-language narrative generations and retells of eight 6- and 7-year-old Filipino American children who were exposed to Filipino at home, but were all dominant speakers of English, according to parental report. While complexity and productivity measures were reported to be consistent with narratives from monolingual English children, bilingual children displayed greater variability on utterance-level maze use that was likely related to amount and language input patterns, such that higher levels of exposure to Filipino and a lower number of years of exposure to English yielded higher maze use.

Furthermore, Bedore and colleagues (2006) compared the spontaneous fictional narrative productions of 22 4- to 7-year-old (M = 5 years, 9 months) DLLs who were mainly acquiring Spanish at home and English in the ECEC and school environment and who were either functionally monolingual (exposure to one of the languages less than 20% of the time) or bilingual. When producing stories in English, the functionally bilingual children produced on average 13% of utterances including mazes[15]. While there was a trend for higher maze use in functional bilinguals, it was not statistically

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[15] Maze use was assessed by calculating the number of utterances with mazes over utterances without mazes.

significant, so that it was concluded that rates of maze production were similar between both groups. Further analyses revealed a positive correlation between maze use and language productivity (mean length of utterance, number of words) in each language. It was concluded that bilingual children do not necessarily display greater levels of linguistic uncertainty, as expressed by maze use, than do their functionally monolingual peers. However, speakers with larger vocabularies (as determined by parent and teacher report) may have more uncertainty in word selection resulting in higher maze use.

Finally, Fiestas and colleagues (2005) assessed the use of maze words over total words produced in spontaneous storybook generations from 30 typically developing children from Spanish-English-speaking backgrounds who were, on average, 6 years old. Children exposed to both languages, but who were functionally monolingual, displayed on average 14.2% of maze uses, while functional bilinguals produced on average 20.2% of maze words, which did not yield statistical significance (Fiestas, Bedore, Peña, & Nagy, 2005).

Importantly, expressive language skills also seem to play a central role when creating macrolevel structures. Montanari (2004) examined the development of narrative competence in three 5-to 6-year-old Spanish-English DLLs with different English proficiency levels in the areas of overall structuring, evaluation, use of temporal perspective, and referential expressions. Similar to previously presented studies, Montanari found an increase with age across and within a child's languages and reported the ability to express aspects of narrative macrostructure to be acquired across languages, i.e., universally, and to be applicable language-independently. However, Montanari also emphasized the importance of linguistic proficiency in this process: Both narrative coherence and cohesion might suffer when the learner's array of linguistic devices in the respective language is very limited (2004). Along these lines, in Uccelli and Páez' (2007) study, expressive vocabulary was positively and moderately associated with narrative macrostructure in both of the children's languages (Spanish L1 and English L2), such that DLLs with larger L2 vocabularies reached higher narrative quality scores for their L2 narratives.

Summary – Factors Influencing Fictional Narrative Generation in DLLs

How the exposure to a language at home affects narrative production in a second language is an important question. When reviewing previous studies, it should be kept in mind that research aims and therefore methods differed, but to lie out all features would go beyond the scope of the current discussion. Still, a number of important aspects informing future research can be drawn from the evidence reviewed. Existing research on the fictional narrative generation abilities of preschool-aged DLLs has taken on different angles; among those are longitudinal and cross-sectional research, comparisons with monolingual language learners, and studies analyzing the influence of linguistic proficiency levels.

For one, studies reported age-related growth patterns in the area of micro- and macrostructure, given a continuous support in the respective languages. While some studies did not find a difference in the performance in either language (Laurent et al., 2015; Fiestas & Peña, 2004), cross-linguistic research findings indicated that the macrostructure of oral narratives produced in the L1 and L2 were similar, but that DLLs may display differential performance on lexical measures (microstructure) in each of their languages (Cárdenas-Hagan et al., 2007; Iluz-Cohen and Walters, 2012; Simón-Cereijido & Guitiérrez-Clellen, 2009). These studies illustrate that measures of narrative microstructure are also valid indicators of developmental change in DLLs' narrative abilities, though performance on these measures may vary as a result of experience with or fluency in each language. Two main aspects can be drawn from these previous studies: firstly, that age-related change is present, and secondly, that narrative microstructure depends on input and previous language experience.

Furthermore, comparing children from mono- and dual-language backgrounds, some studies reported the expression of macrostructure to be similar, even in sequential language learners (Blom & Boerma, 2015, July; Paradis & Kirova, 2014), while microstructural aspects may differ as an effect of expressive language skills. A possible explanation is that narrative macrostructural components reflect capacities that draw more on shared knowledge, going beyond the specifics of language and thus are more likely to be highly associated between the two languages of young DLLs. Meanwhile,

the reliance of microlevel skills on a narrator's level of language mastery might be more heavily affected by knowledge distribution across languages (Paradis & Kirova, 2014), leading to "profile effects," as also found in other areas of DLLs' language and literacy skills (Oller, Pearson, & Cobo-Lewis, 2007). However, other studies emphasized that the expression of narrative macrostructure might also heavily depend on linguistic knowledge (Montanari, 2004; Uccelli & Páez, 2007).

Finally, while there is emerging evidence that the occurrence of maze use in DLLs' narratives depends on the level of input and expressive language skills in another language, the contributions of dual-language learning to the production of mazes are not yet entirely clear.

3.5 Chapter Summary and Consequences for Future Research – Study I

Rooted in its role played in fundamental developmental areas, the narrative language format unfolds its special value. This embedded scenario gives rise to the in-depth exploration of the relationship between the function, content, and structuring of narratives and central developmental aspects. As a main strand, the role of narratives in the development of oral language, forming a bridge to literacy and later academic skills, promoting higher level cognitive and conceptual skills, was derived from the scientific discourse and selected here for an in-depth exploration.

The study of fictional narrative language in children is especially informative and valuable as it offers insight in rich language contexts, reflecting decontextualized language skills as required in academic settings. In contrast to conversational language use in daily interactions, narration is primarily a monologic style of discourse that involves an array of higher-level language and cognitive skills. To produce a comprehensive and well-formed story, a child has to understand cause-effect relationships, create coherently and cohesively organized utterances on the basis of explicit linguistic markers without extralinguistic support, and has to structure the narration along the lines of abstract universal story features that aid the listener's comprehension. As a result, narrative production reflects a child's command of the target language lexicon and morpho-syntax, but it also requires cognitive-linguistic interface skills to produce

the essential components/events of a coherent story (for example, establishing the setting and describing an initiating event, a response, and an outcome) (Gutiérrez-Clellen, 2012; Schneider, Hayward, & Dubé, 2006). Furthermore, the use of evaluative language enables the narrator to convey the character's perspective and, in turn, the point of a story (see section 3.3).

Moreover, narrative analysis has been promoted as an assessment instrument, especially for DLLs from culturally and linguistically diverse backgrounds. As DLLs experience different quantity and quality of exposure to their languages, as a group they display a great variability in linguistic performance (e.g., Hammer et al., 2014; Hoff & Core, 2015). Consequently, both clinicians and early childhood practitioners encounter difficulties in differentiating typical language learner variance from impairment among children from culturally and linguistically diverse backgrounds (Gillam, Peña, Bedore, Bohman, & Mendez-Perez, 2013), even if they are fluent second language users (Kritikos, 2003; Schütte & Lüdtke, 2013). This can be partly attributed to the fact that limited data on the typical trajectories of other-language-influenced majority languages are available.

To successfully compare and interpret the second language performance of children from culturally and linguistically diverse backgrounds, developmental data on these populations as well as continued research into methods of evaluation is needed. While oral narrative language performance is one area that has been shown to be effective in evaluating the microstructure and macrostructure in monolingual and bilingual populations, oral language skills in preschool-age DLLs from various language backgrounds have received relatively little attention. For example, currently, much of the normative data that exists is based on narrative development in monolingual children. Fewer studies of children's narratives have attended to DLLs, even though the development of children growing up with more than two languages and often cultures has been a subject of growing interest over the last few years.

Main aspects to draw from the reviewed studies are that a), narrative analytic frameworks including measures of microstructure and macrostructure can serve as sensitive indicators of young DLLs' narrative competence, and that b), DLLs' narrative perfor-

mance may highly vary depending on previous experience or proficiency in the targeted language. There is emerging evidence that the narrative skillset displayed in the oral production of fictional narratives by preschool-aged DLLs is related to age (and thus the amount of experience with narrative-specific micro- and macrolevel language skills, see chapter 2), the level of exposure to the respective languages, and the resulting expressive language skills, while also relying on overarching skills, such as non-verbal intelligence.

Overall, the research base on narrative skills in DLLs is still limited, both in sheer number and in sample sizes included in studies. Besides the need to diversify research, especially on young DLLs, the languages and cultures under study need to be diversified, as well.

An important caveat when analyzing peer-reviewed evidence on narrative skills of DLLs is that most studies were conducted including children in the school-age. Furthermore, the majority of the sources here reflect the research base on DLLs and acquisition and use of narrative language in the United States and in Canada; much of it is focused on learners of Spanish and English[16]. In fact, the vast majority of research in the area of DLLs' early language and literacy development included children who were learning English as a second language, accounting for 84% of published research between the years of 2000 and 2011 (Hammer et al., 2014). In contrast to the relative wealth of research on DLLs growing up in North America, there is a paucity of research investigating narrative skills of children from diverse linguistic and cultural backgrounds to identify aspects of DLLs' development that are common to and that differ across languages and populations (Hammer et al., 2011)[17]. For example, fiction-

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[16] A possible limitation to this claim lies in the review's reliance on peer-reviewed sources published in English or German.

[17] In the future, however, more studies are likely to focus on the narrative ability of DLLs thanks to the creation of MAIN, the Multilingual Assessment Instrument for Narratives (Gagarina et al., 2012), a tool developed in the COST Action IS0804 'Language Impairment in a Multilingual Society: Linguistic Patterns and the Road to Assessment'.

al narrative skills of preschool-age Turkish-speaking German language learners are still virtually unexplored[18].

In terms of research foci, most studies of DLLs' narrative performance, such as the one by Gutiérrez-Clellen (2002), have focused on cross-language comparison, not on charting the relations between narrative abilities and other child measures involved. Furthermore, besides examining child narrators from different language backgrounds, it is crucial to further examine the spectrum of narrative skills of typically developing populations with dissimilar language socialization patterns and unbalanced language exposure. As the state of expressive language skills plays an important, yet not entirely clear role in fictional narrative production, learners along the whole spectrum of bilingualism should be included in narrative research, in order to gain a better understanding of influencing factors on narrative development.

While it should be recognized that a child's language development occurs in the context of its social, emotional, and cognitive development, drawing on existing research evidence, it may also be informative to further investigate the contributions of selected factors, such as expressive language, nonverbal intelligence, as well as the home language and literacy environment to narrative expression in preschool-age DLLs.

Therefore, the current study aims to generate theoretically challenging questions regarding the underlying principles of the construction of novel representations to support new complexities in discourse and narrative more specifically. Doing so in the preschool-age allows for the exploration of the variety of developmental trajectories even before children begin receiving formal instruction in reading and language in school. Data on the performance of typically developing children from culturally and linguistically diverse backgrounds such as Turkish-German, can be used to add to the knowledge base that serves to develop methods which can help clinicians distinguish typical L2 learner variations from differences due to impairment (Gillam et al., 2013;

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[18] An exception is a study conducted by Pfaff (2001) which included narratives produced by two Turkish-German DLLs in the ECEC environment. However, her focus was inherently different than the one from the current study, namely examining aspects of interlocutors responses, specifically, relating to language mixing and to error patterns, in narrative co-constructions with those children.

Paradis et al., 2013) and that can be applied to the design and delivery of prevention and intervention models. In this capacity, it is not only crucial to identify markers of language impairment for different languages (e.g., Leonard, 2014), but to also explore developmental pathways associated with successful dual language and literacy achievement.

A comprehensive profile of the German narrative abilities of preschool-age Turkish-German speaking children would therefore not only provide valuable information to clinicians, but may also inform linguistic expectations for children who are participating in early education and early intervention programs. Thus, the first study of this work was designed to advance the theoretical and empirical literature focused on narrative skills of DLLs, in the current case with a sample of preschool-aged DLLs of Turkish and German.

Emerging Narrative Skills of Preschool-Age Turkish-German DLLs: A Multidimensional Approach (Study I)

Preschool narrative skills provide insight in quantitative and qualitative aspects of connected language production which reflects and promotes socio-emotionally important outcomes (e.g., Guajardo & Watson, 2002). Furthermore, because of their importance for oral and written story generation and retelling, summarizing, and reporting, these skills are related to wide areas of school curricula (Mills, 2015). In turn, emerging narrative skills are also related to academic skills, because they are predictive of children's academic outcomes in reading, writing, as well as mathematics (e.g., Griffin et al., 2004; O'Neill et al., 2004). In this light, it is especially important to understand emerging narrative skills of DLLs, as these children frequently face educational disparities (see introduction and section 2.2). However, despite the fact that the majority of children worldwide are growing up learning multiple languages, the evidence base on narrative skills of preschool-age DLLs is limited and diverse.

Overall, little is known about how DLLs master the acquisition of a narrative skillset. While interest in the development of narrative skills has been increasing over the past few years, deriving firm conclusions about the links between dual language learning and narrative skill development is still difficult. Existing DLL data are limited in terms of number of studies, sample sizes, and almost exclusively focused on DLLs from Spanish-English speaking backgrounds. Thus, how individual growth trajectories vary systematically as a function of language and contextual variables, such as characteristics of the individual children, language background, and language experiences at home and at ECEC, remains subject for further study. To successfully distinguish typically developing DLL children from those at risk for language disorders, more knowledge is needed about the spectrum for narrative skills of typically developing populations with dissimilar language socialization patterns and varying levels of language exposure.

Based on these theoretical considerations and the current empirical background, the current study pursued two main research aims. The first was to *examine the emergent*

fictional narrative skills of preschool-age dual language learners via a multidimen-sional approach, i.e., from the point of view of narrative microstructure, macrostructure, evaluative language use, and the speech production process. The second aim was to *examine the relationships between narrative competence and other measures of child development and home language environment*. These overarching aims translated into three research goals.

First, to gain insight into DLL children's developing skills in the majority language German, the study seeks to describe the range of productive competence that preliterate preschool-age children demonstrate in their generations of narrative talk in one of their languages—German. Second, the study seeks to extend the current body of research literature, as the data examined was collected from children of a cultural and linguistic background different from that typically studied in language acquisition research, namely DLLs of Turkish and German with a Turkish speaking family background with varying degrees of exposure to German. Third, the last goal was to investigate the German oral generations of fictional narratives of DLL preschool-age children in response to a wordless picture book to ultimately explore the relationship between performance on concurrent measures of language and cognitive development and indices of narrative microstructure, macrostructure, evaluative language use, and the speech production process to identify contentual and structural aspects of emerging narrative skills.

Specific research questions addressed in the study were:

1. *Which characteristics of narrative skills can be identified in generations of German fictional narratives by Turkish-German preschool-age DLLs?*

2. *Do narrative measures correlate within narrative samples? To what extent do those measures of narrative ability correlate with age, concurrent measures of linguistic and cognitive skills as well as characteristics of the home language environment?*

3. *How much of the variance in the children's narrative complexity can be accounted for by three main factors known to be involved in narrative production—namely, chronological age, expressive vocabulary, and nonverbal intelligence?*