Diversität in Kommunikation und Sprache / Diversity in Communication and Language

RESEARCH

Ulla Licandro

Narrative Skills of Dual Language Learners

Acquisition and Peer-Assisted Support in Early Childhood Education and Care

Springer VS

Diversität in Kommunikation und Sprache / Diversity in Communication and Language

Herausgegeben von/Edited by

Ulrike M. Lüdtke, Leibniz Universität Hannover, Deutschland

Die zunehmende nationale und internationale gesellschaftliche Heterogenität bringt entscheidende Herausforderungen für die Sprachpädagogik, Sprachtherapie und Sprachdidaktik mit sich, die sich in vielfältigen Forschungsfragen zur kommunikativen und sprachlichen Diversität von Personen in der gesamten Lebensspanne widerspiegeln. In der Reihe “Diversität in Kommunikation und Sprache” werden hierzu bereits bestehende theoretische und empirische Zugänge durch innovative und interdisziplinäre Forschungsperspektiven erweitert. Dabei werden beispielsweise Fragestellungen des Erwerbs, der Beeinträchtigung und des Verlustes der Sprach- und Kommunikationskompetenz sowie Aspekte ihrer institutionellen Förderung im Kontext verschiedenster Professionen beleuchtet und durch international vergleichende Studien ergänzt. Mit Arbeiten des wissenschaftlichen Nachwuchses sowie Studien, Monografien und Sammelbänden etablierter Wissenschaftlerinnen und Wissenschaftler wird die Reihe mit Veröffentlichungen in deutscher und englischer Sprache einen wichtigen und zukunftsweisenden Beitrag zur Weiterentwicklung dieser vielfältigen und spannenden Forschungslandschaft leisten.

The increasing national and international social heterogeneity creates crucial challenges for speech-language pedagogy, speech-language therapy, and language didactics, which reflect in numerous research questions targeting communicative and linguistic diversity throughout the lifespan. The publication series "Diversity in Communication and Language" was created to extend existing theoretical and empirical approaches through innovative and interdisciplinary research perspectives. This includes, for example, questions concerning the acquisition, the impairment, and the loss of language and communication skills as well as aspects concerning their institutional support, which will take into account various professions and international comparative research. The series will include works of young researchers as well as studies, monographs and anthologies of established scholars in both, German and English, and will make important and pioneering contributions to the development of this diverse and exciting research environment.

Ulla Licandro

Narrative Skills of Dual Language Learners

Acquisition and Peer-Assisted Support in Early Childhood Education and Care

With a foreword by Prof. Dr. habil. Ulrike M. Lüdtke

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Diversität in Kommunikation und Sprache / Diversity in Communication and Language
ISBN 978-3-658-14672-6 ISBN 978-3-658-14673-3 (eBook)
DOI 10.1007/978-3-658-14673-3

Library of Congress Control Number: 2016943851

Springer VS

Printed on acid-free paper

This Springer VS imprint is published by Springer Nature
The registered company is Springer Fachmedien Wiesbaden GmbH

Foreword

„With a Little Help from My Friends" – my former Ph.D. student Ulla Licandro and I used the title of this famous Beatles song when we published our first article which looked at the role of peers in speech-language support and therapy with bilingual children. And had this book you are holding in your hands not been an excellent dissertation, this metaphoric title would have been a perfect fit once again, as it summarizes some of the research findings resulting from Ulla's vigorous theoretical and empirical work.

The two presented studies, which were conducted in the early childhood education and care (ECEC) environment, had differing, yet complementing aims. The first was to gain insight into oral narrative skills of preschool-age Turkish-German dual language learners (DLLs), a currently understudied population. On the basis of theoretical explications and empirical evidence focusing on the role of peers as developmentally and emotionally attuned interaction partners, the aim of the second study was to explore the effects of a peer-assisted intervention approach on DLLs' narrative skills. Considering DLLs being disproportionately at risk for later academic language problems and academic delays, gaining insight into the development and the support of their narrative skills is ultimately important. The presented studies, including their in-depth discussion, allow us to deepen our understanding of the influence of dual language learning on fictional narrative production, as well as produce emerging evidence for the efficacy of the inclusion of peers as intervention agents in language support.

As the head of the Department of Speech-Language Pedagogy and Therapy, I can strongly recommend this book to all researchers, practitioners, and students. It is one of the first works that includes a peer-based approach in the ECEC environment and thus, is path breaking not only for Germany, but also internationally. Furthermore, this monograph convinces through integrity of content and style, which originates, in my opinion, from Ulla Licandro not only researching bilingualism, multiculturalism, and cooperativeness with her peers, but also living it in her daily life.

In this sense, I wish everybody picking up this volume an inspiring and elucidating read. I would also like to extend my best wishes and thanks to Prof. Laura Justice from the Ohio State University who served as Ulla's second advisor and whose tremendous expertise supported her to accomplish this work in the best possible way.

To Ulla and her research team, I wish many creative research ideas, successful pro-jects, and always enough funds to continue pursuing work in this field in the future. It will be important

to gather further insights into early narrative skills and peer-assisted support of language development in ECEC contexts – not only for speakers of Turkish and German, but also for children from many other cultural and linguistic backgrounds. This is especially true considering the growing numbers of refugees and migrants in Europe and the rest of the world. These insights may confirm another song title: "That´s What Friends Are For"!

Hannover, May 2016
Prof. Dr. Ulrike M. Lüdtke
Department of Speech-Language Pedagogy and Therapy
Institute of Special Education
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Thank you

Numerous people and networks have supported me along my journey towards this dissertation in many ways. I would especially like to thank some of them here:

- My advisor, Prof. Dr. habil. Ulrike M. Lüdtke, for bringing me into her team and for our fruitful working relationship. Through her suggestions and encouragement, she has supported me in completing this doctoral dissertation and much more. I would also like to thank my second advisor, Prof. Laura M. Justice, Ph.D., for warmly welcoming and guiding me during my research stay in Columbus as well as for her ongoing support;
- All of my wonderful colleagues at Leibniz University Hannover, especially Christine Beckerle and Ulrich Stitzinger, for their open ears and encouraging conversations; the doctoral colloquium of the Department of Speech-Language Pedagogy and Therapy as well as the Research Network Early Childhood Education and Development for giving me the opportunity to discuss my work in progress and to develop it further;
- The whole research team STEPs, especially Dr. Nicole Mühlpforte and Ayda Candan, and the student assistants for their dedicated cooperation;
- Prof. Karla McGregor, Ph.D., for stimulating my interest in pursuing a career in child language research and providing her intervention materials for the preparation of one of the studies;
- The Robert Bosch Foundation's Research and Study Program on Education in Early Childhood for their financial and inspirational support;
- All children, families, and ECEC institutions, whose willingness to participate made this work possible to begin with;
- Most importantly, I would like to thank my little and big family, who have given me the curiosity, strength, and joy to tackle all adventures, academic and otherwise.

Hannover, May 2016 Ulla Licandro

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1 Introduction

Growing up with multiple languages has become an omnipresent phenomenon in our modern society of large-scale migration. As a result, children in both international and German early childhood education and care institutions, especially in metropolitan areas, are increasingly diverse both linguistically and culturally. In Germany, currently about 35% of children below the ages of six grow up with a migration background[1], many of whom speak at least one language other than German at home (Bundesministerium für Familie, Senioren, Frauen und Jugend, 2014). This phenomenon will continue to increase in significance in the future, as the number of children entering the educational system speaking a language other than the language of schooling is rising (e.g., Prevoo, Malda, Mesman, & Van IJzendoorn, 2016). For example, because of the ongoing war in Syria, the number of refugees has increased massively—especially in the neighboring countries of Syria, but also in most European states.

While the majority of people worldwide are growing up speaking multiple languages and it is widely accepted that the developing child is perfectly capable of doing so (e.g., Grosjean & Li, 2013), in many countries, such as Germany, given that most schools instruct in German only, speaking a language other than the majority and academic language at home is associated with accentuated educational disadvantages. For example, those children are more likely to start formal schooling later than their monolingual peers (Autorengruppe Bildungsberichterstattung, 2010) and have been disproportionately represented among those who display difficulty with literacy, mathematics, and overall educational attainment (for a review, see Stanat, Rauch, & Segeritz, 2010). Furthermore, having a migration background posits a disadvantage through all stages of the educational system, because even when coming from similar socio-

[1] According to the definition of the German Federal Statistical Office, people considered having a migrant background are "those who have immigrated to Germany since 1950, their descendants, and the foreign population" (Statistisches Bundesamt, 2013). This includes all persons born in Germany who have at least one immigrated parent or who were born as a foreigner in Germany, covering first to third generation immigrants. In 2013, roughly 16.5 million people with a migration background resided in Germany, accounting for 20.5% of the German population (Statistisches Bundesamt, 2013).

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DOI 10.1007/978-3-658-14673-3_1

economic backgrounds, fewer students with migration backgrounds attend higher forms of schooling and higher numbers leave the educational system before graduating (Statistisches Bundesamt, 2014). As a result, taken together as a group, they are less likely to engage in secondary and university-level education, but more likely to attend special educational and lower level academic institutions than their monolingual peers (Stanat & Edele, 2011). This is especially true for children and adolescents of Turkish heritage, who are among one of the largest ethnic and linguistic minority groups in Germany[2] (Statistisches Bundesamt, 2013; also see Willard, Agache, Jäkel, Glück, & Leyendecker, 2015).

Despite a positive trend over recent years (for an overview, see Klieme, Jude, Baumert & Prenzel, 2010), these differences are prevalent and especially pronounced in the area of reading. For example, in the 2009 "Programme for International Student Assessment" (PISA) study, children who spoke a different language than German at home reached significantly lower scores than their German-only speaking peers, while controlling for socio-economic status. Similar effects have been shown for children of Turkish heritage in primary school (Kristen & Dollmann, 2010). Comparable situations exist internationally. For example, in the United States, dual language learners of Spanish and English haven been reported to academically lag behind their English monolingual peers (Mancilla-Martinez & Lesaux, 2011).

One reason for these educational disparities is a commonly occurring yet profound difference in linguistic competences in the language of instruction (Halle, Hair, Wandner, McNamara, & Chien, 2012), also known as the "academic language"[3] (e.g., Peets & Bialystock, 2015; Snow & Uccelli, 2009). To be well equipped for the linguistic requirements in school, children need to previously have acquired some level of print, alphabet, phonological, as well as vocabulary knowledge, and a fundamental interest to engage in literacy activities. Also, the ability to work with increasingly

[2] Families where at least one parent has a Turkish migrant background account for 18% of all families with migrant backgrounds, which makes them the largest family minority group and Turkish one of the main immigrant languages in Germany (Bundesministerium für Familie, Senioren, Frauen und Jugend, 2014).

[3] Another variation of the term is "educational language," which has been used by Gogolin & Lange (2011); for more terms and explications, see Snow & Uccelli, 2009 and Snow, 2010.

complex and decontextualized linguistic information—conveying the distinct from context—is a key component to accessing the academic curriculum and successful classroom participation, which ultimately determines academic achievement (e.g., Dickinson & Porche, 2011; Pearson, 2002).

To adequately support and promote dual language learners' linguistic and academic development, better insights into the specifics of dual language learners' language use including areas which are challenging, but also sources of strength, need to be gained (e.g., Gámez, Lesaux, & Rizzo, 2015; Hammer et al., 2014). It is also crucial to examine successful ways in supporting academic relevant language skills early on, before this growing population enters formal schooling, as many children from non-German speaking backgrounds suffer from a paucitiy of acquisition opportunity for academic-level language skills in German (Paetsch, Wolf, Stanat, & Darsow, 2014).

The Present Work

From an educational and clinical viewpoint, based on the current research literature, the present work will propose that fictional oral narratives reflect these demands of academic language use, as they build on the use of decontextualized language in conveying made-up events (see section 2.2). However, while there is a well-established literature base on the narrative development of monolingual children (e.g., Becker, 2011; Berman & Slobin, 1994; Peterson & McCabe, 1983), the knowledge base on the successful acquisition of fiction oral narrative skills of preschool-aged children growing up with multiple languages is limited, especially on those coming from language and cultural backgrounds other than Spanish and English speakers growing up in the United States (e.g., Hammer et al., 2014; also see sections 3.4 and 3.5). Furthermore, it will be argued that narratives can serve not only as an effective teaching context that provides the opportunity to acquire decontextualized language skills for young children, but also that peers may be successful agents in preschool-based intervention to support emerging fictional narrative skills (see sections 7.2 and 7.3).

To follow up on these arguments, the current work presents two studies, which had two overarching research aims. The first was to identify and examine specific components of emerging skills in the realm of German fictional narrative production

of preschool-age children growing up speaking Turkish and German. This aim will be established on the notion that explicating the discourse-level and utterance-level oral construction details of extended discourse in a meaningful context reflects the demands of academic language use and can serve as an indicator of a child's strengths and weaknesses in current and future language performance (see chapters 2 and 3). The second aim was to explore a culturally-sensitive way of supporting children's emerging fictional narrative skills through a peer tutoring intervention approach (see chapter 7). Drawing on both theoretical explications conceptualizing peers as developmentally and emotionally attuned linguistic interaction partners as well as current research evidence highlighting the role of peers in preschool dual language acquisition, it will be argued that peers may be well-suited for mediating each other's advancement in the area of fictional narrative production (see sections 7.1 through 7.3).

Before further discussing the theoretical and empirical background of the proposed research, it is imperative to clarify central terms which will be used throughout the current work, among which are *dual language learner(s)*, *preschool-age* as well as *early childhood education and care*. Due to their central importance for the current work, theoretical considerations and definitions concerning *narrative, fictional narratives*, *peers*, *peer-assisted learning*, and *peer tutoring* will be discussed in organized sections in chapters 1 and 7, respectively.

Clarification of Central Terms

Children growing up with more than one language and/or coming from diverse cultural and linguistic backgrounds form a heterogeneous group. Besides typical developmental variations, emerging language and literacy skills vary highly in these children due to inter-individual differences in time of onset of exposure to their languages (i.e. age of acquisition), past and present home and institutional acquisition contexts, level of language mastery, and last but not least social status and prestige of their languages and communities (e.g., Armon-Lotem, de Jong, & Meir, 2015; Auer & Wei, 2009; Bialystok, 2001; Butler & Hakuta, 2004; de Groot, 2011; Kohnert, 2010; Thordardottir,

2011). As a result, the research literature offers various terms with reference to those children, including dual language learners, bilinguals, second language learners, and minority language speakers; most lacking consistent definitions (Hammer et al., 2014). For consistency and in accordance with current research (e.g., Hammer et al., 2014; Hammer, Jia, & Uchikoshi, 2011; Palermo & Mikulski, 2014; Paradis, Genesee, & Crago, 2011; Peña & Halle, 2011; Restrepo, Morgan, & Thompson, 2013), the current work will adopt a functional definition, where the denomination *dual language learner (DLL)* is defined as a child growing up using (at least) two languages on a regular basis in their everyday life. Therefore, DLL will be used as a collective term in reference to both simultaneous bilingual children exposed to their two languages Turkish and German from infancy on (e.g., De Houwer, 2009) as well as sequentially bilingual children who were (mainly) exposed to Turkish at home and who started learning German as their second language (L2) later on during their preschool-age after having already established a sophisticated basis in their first language (L1) (e.g., Chilla, Rothweiler, & Babur, 2010), regardless of their current L1 and/or L2 skills. In keeping with standard practice, the abbreviation DLL will also be used in reference to the adjective *dual language learning*.

Furthermore, in accordance with Hammer et al. (2014), the terms *infant*/*toddler* will refer to children from birth through 2 years and 11 months of age while the term *preschooler*/*preschool age* will refer to children from 3 through 6 years of age, who are not yet attending first grade.

Finally, following international political and research conventions, the term *early childhood education and care (ECEC)* will refer to regulated arrangements in the area of early childhood education and care from infancy through compulsory primary school age, including center and family daycare, privately and publicly funded provision, as well as preschool and preprimary provision (e.g., Burger, 2014; European Commission, 2014; Organization for Economic Co-operation and Development (OECD), ECEC Network, 2015). The term *early childhood practitioner* will be used in reference to early educators and other employees in ECEC institutions, who work pedagogically with the attending children.

The initial part of this work is organized in two main chapters. The first is invested in offering a contemporary and comprehensive perspective on the role and scope of narrative skills in DLLs over the preschool period, including a special focus on fictional narrative skills. The second chapter is devoted to the collection, analysis, and current state of research concerning the fictional narrative skills of DLLs in order to lay the foundation for the first study presented here, namely exploring the emerging German fictional narrative skills of preschool-age Turkish-German DLLs.

2 A Contemporary Perspective on the Developmental Continuum of Fictional Narrative Skills in DLLs over the Preschool Period

"Human beings, especially after the development of the verbal faculty, have constantly told stories, presented events and squeezed aspects of the world into narrative form" (Cobley, 2001, p. 2). As a result, it is not surprising that a wide range of overarching disciplines inform research on narrative, including but not limited to history, philosophy, linguistics, psychology, and sociology. Before further discussing and exploring the role and scope of fictional narrative skills in DLLs as well as the current approaches and foci to the analysis of these skills, the domain to be investigated first requires specification in regards to the clarification of central terms and theoretical underpinnings.

As the current work is devoted to the study of oral fictional narrative skills displayed by preschool-aged DLLs and the support thereof via a peer-assisted intervention and is grounded in the scientific discipline of communication sciences and disorders, the theoretical backdrop presented in this section will mainly draw on linguistic, sociological, and developmental psychological aspects. The first sections of this chapter will be devoted to the *theoretical underpinnings of narrative production in child language*, where different views on narratives in early childhood will be discussed. After reflecting on *narrative as a mode for establishing and representing meaning through co-construction* (e.g., Bruner, 1986, 1990, 1991; Lüdtke, 2012a), narrative will be discussed as a *form of decontextualized extended discourse* (e.g., Berman & Slobin, 1994; Curenton & Lucas, 2007), followed by a section on the *emergence of narrative* in a socio-emotional context, *based on a social-interactionist point of view*. After giving an *overview on the types of narratives produced by preschool-aged learners* (both mono- and dual-language), this work will focus on the study of *fictional narrative production in early childhood*, including the derivation of a *working definition*. Finally, drawing on current research evidence, an *overview of the development of fictional narrative competence over the preschool period* will be provided.

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DOI 10.1007/978-3-658-14673-3_2

2.1 Theoretical Underpinnings of Narrative Production in Child Language

The following sections will serve to examine the theoretical underpinnings of oral narrative production in the area of child language, by exploring aspects representative of the function and structural characteristics of narrative production in preschool-aged children, without becoming too invested in a restrictive definition.

2.1.1 Viewpoints on Narrative in Child Development

While the term is ubiquitous, *narrative* has resisted precise definition. Therefore, definitional and methodological approaches in research on "narrative" must be first addressed. In the scope of child language research, major theoretical approaches are presented here. The first to be explored, posits narratives in childhood as a central place of interaction, where shared meaning is established. Furthermore, narrative has been explored as a form of decontextualized extended discourse, providing insight into socio-emotionally relevant, decontextualized linguistic skills.

Narrative as a Mode for Establishing and Representing Meaning through Co-Construction

Several researchers emphasize the embeddedness and specificity of narrative composing practices as inherent to the organization of both thought and interpersonal communication.

Prominently, Bruner proposed a human propensity towards narrative and suggested that the mind structures its sense of reality through "cultural products, like language and other symbolic systems" (1991, p. 3, also see 1990). Narrative is one of those products. Ultimately, he posits the narrative mode as an epistemological entity, which represents both a way of conversing about life and a means of knowing. As narratives are put forth as being fundamental to the storage and communicative interpretation of most episodic experiences and memories, "the structure of language and the structure of thought eventually become inextricable" (Bruner, 1991, p. 5). Narration, then, is an ontological condition of social life and constitutes an essential role in intersubjective communication, as it shapes the human organization of experience in "how we go

about constructing and representing the rich and messy domain of human interaction" (Bruner, 1991, p. 4).

Looking at narrative from a developmental psychological and emotion theory perspective allows one to consider the socio-emotional aspects of creating narrative, which can be found very early on in life, because the emerging intersubjective exchange between caretaker and child can be characterized as having narrative traits. In fact, Lüdtke (2012a) argues that the earliest stage of communication development emerges in utero, when mother and child will engage in an "intersubjective exchange of emotionally important proto-narratives" (p. 328), characterized by fetal movements stimulating the mother and triggering a "meaningful attunement from the mother's side […] via permanent monitoring- and evaluating-processes between the real or 'felt' [sic] and virtual or imagined infant and herself." (Lüdtke, 2012a, p. 329).

Right after being born, an infant will typically begin to engage in intersubjective exchange with her or his caretaker(s) as distinguished by the emotionally structured attunement of physical movements and vocal variations (e.g., Lüdtke, 2012a). On a daily basis, the infant will repeatedly participate in these types of interactive routines that socialize it to eventually incorporate culturally accepted, social-emotional interactive practices (e.g., Trevarthen, 2012). As Bruner proposed (1986), this interactive routine can be thought of as having a narrative structure; that is, a narrative of communicative action and not words. This early meaning attunement between child and caretaker by means of facial, gestural, and vocal expression is illustrated in Figure 1.

Similar to a linguistic narrative produced later in life, this co-constructive interactive routine serves as a meaning system for the child based on the sequencing of affective messages in the flow of socio-emotional interaction. The child comes to "know" that "this is what is happening; this is what will happen; and this is how it will feel" (Bruner, 1990, p. 81). This shared meaning system is established long before the child will engage in a narrative of words; in fact, it has been established that participation in this narrative of affective routines is a prerequisite for learning language (e.g., Trevarthen, 2012).

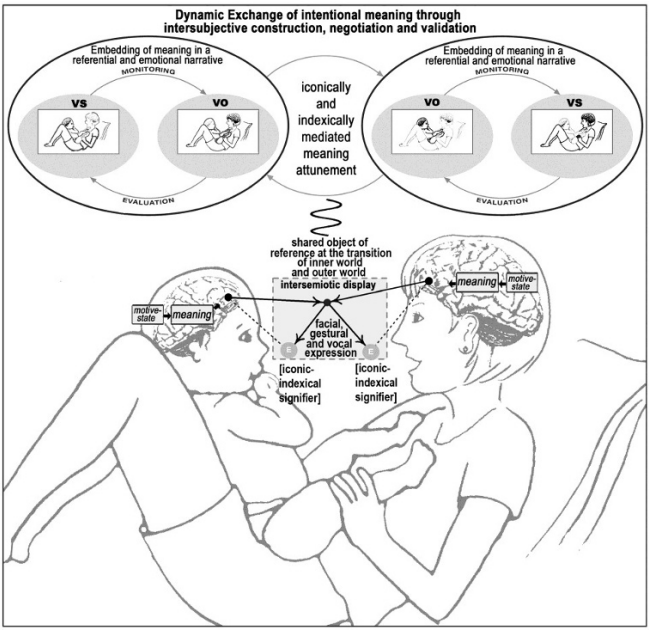

Figure 1. The Infant Stage: Iconically and Indexically Mediated Meaning Attunement (reprinted from Lüdtke, 2012a, p. 330). Copyright 2012 by John Benjamins. Reprinted with permission.

Children can therefore also employ narratives to make sense of experiences and relationships, i.e., "to deal with themes and concerns that preoccupy them emotionally" (Nicolopoulou, 2002, p. 121). For example, from the perspective of young children engaging in verbal discourse, Engel (1995) argued,

> We use stories to guide and shape the way we experience our daily lives, to communicate with other people, and to develop relationships with them. We tell stories to become part of the social world, to know and reaffirm who we are.
>
> (p. 25)

While language in general helps organize experience, the delineation and description of past and/or fantastic scenarios (e.g., in pretend play) takes on an important role in integrating cognitively and socio-emotionally challenging problems, and it can act as a

tool for exploring the boundaries between improbable and probable events (Engel, 2005, 1995).

Narrative as a Form of Decontextualized Extended Discourse

Meanwhile, narrative can also be conceptualized as language "used to describe ideas, emotions, history, and heritage" (Curenton & Lucas, 2007, p. 378). More specifically, the historic, yet pervasive classification in child language research put forth by sociolinguist William Labov defines a narrative as describing a (single) event or experience that contains at minimum "a sequence of two clauses which are temporally ordered" (Labov, 1972a, pp. 360-361). In this capacity, narrative skills refer to the comprehension and production of socially and academically fundamental discourse-level language abilities as expressed in at least two cohesive utterances which, at their core, represent an action or a series of actions or events (Abbott, 2002), either real or imagined. Accordingly, instead of being streams of unrelated words or sentences, oral narratives can be characterized as coherent linguistic structures created by several linked utterances that refer to the production of a fictional or real account of an experience or an action (e.g., Berman & Slobin, 1994).

While narrative is generally referenced as a type of discourse in accord with conversation and exposition, it can be distinguished from the other two because it involves the monological production of multiple topic-centered and cohesive utterances (De Fina & Georgakopoulou, 2011; Justice, Bowles, Pence, & Gosse, 2010). More specifically, narratives are a form of decontextualized extended discourse (Dickinson & Tabors, 1991), as the ability to produce a narrative demonstrates a child's ability to sustain a discussion about the world beyond the here and now (Snow, Tabors, Nicholson, & Kurland, 1995).

In this capacity, oral narrative production can be treated as source of information about discourse level organization as well as productivity, word, and sentence level organizational skills of children (e.g., Justice et al., 2010). A narrative construction can be described in terms of the global structure of the entire narrative (often referred to as macrostructure) and at the level of discrete language skills, such as specific lexical and morpho-syntactical types the speaker chooses to compose the narrative (often referred

to as microstructure). Another special emphasis can be given on the linguistic means chosen to express the main character's viewpoint (often referred to as evaluative language use; for a detailed discussion of all three aspects, see section 3.3). The analysis of specific aspects included in narrative discourse has commonly been used in clinical and educational environments to track children's narrative development and to examine the role of influencing factors, such as expressive language and home language environment, on narrative production (for a review, see sections 2.2 and 3.4 in this work).

In summation, viewing narration as a mode for establishing and representing meaning, is an important vehicle for children in making sense of the world, establishing and maintaining relationships, and expressing their thoughts and feelings about important topics (e.g., Bruner, 1990, 1991). While recognizing the value of this perspective, the current work will be more concerned with the complexity and specific linguistic features expressed in independent oral narrative production of young DLLs, rather than focusing on the distinctive functional aspects of child narrative discourse or an in-depth analysis of the interactive practices framing this process[4]. Overall, the current work focuses on the child a narrator during the preschool years and is dedicated to the premise that even the most 'simple' of stories is embedded in a complex network of emerging cognitive, language and literacy skills.

Types of Narratives Produced by Preschool-Aged DLLs

Four basic types of oral narrative discourse have been identified in differential distribution across preschool-age children from different cultural and linguistic backgrounds, including DLLs (for an overview, see Goldstein, 2000; Heath, 1986; Hedberg & Westby, 1993; Hughes, McGillivray, & Schmidek, 1997). These types include accounts and recounts of a salient personal experience (personal narratives), the narra-

[4] Also, while the current work acknowledges and highlights the socio-emotional function of narrative as an inherently interactive language practice, it is neither the goal nor a side quest of the current work to take a definitive stance on the controversy surrounding "narrative-as-knowledge and narrative-as-interactive moves" (cf., Bamberg, 1997, introduction), as it is beyond the scope of the discussion. It is however acknowledged that narratives, just as other communicative acts, cannot be viewed as independent from the narrator's social context (cf. Shiro, 2003).

tion of what-is-going-to-happen or what-is-currently-happening in pretend play (event cast; also see Melzer & Palermo, 2015), the verbalization of routine series of events (script narrative), and the construction of a made-up story[5], following the format of a storybook, fairy tale, myth, or fable (fictional narrative). Figure 2 presents all types, including examples for prompts, which might elicit these types of narrative and first sentences of narratives, respectively.

Through the exposure to and active engagement with narratives in these contexts, the child starts to acquire the pragmatic rules and organizing patterns that govern the use of the language outside of clear shared conceptual contexts (Ezell & Justice, 2005). Gradually, the child moves beyond the use of "exophoric or deictic devices used to ground reference and predication in the immediate perceptual context" towards "endophoric devices for grounding her acts of reference and predication in already recounted parts of the narrative" (Tomasello, 2003, p. 271).

Recount	**Account**	**Event Cast**	**Script Narrative**	**Fictional Narrative**
Prompted personal narrative	Unprompted reminiscing/ spontaneously produced personal narrative	"Broadcasting" or directing during pretend play activities	Verbalization of routines and common events/ activities	Made-up story
(e.g., "Tell Grandma what you did at preschool today.")	*(e.g., "Something similar happened to me yesterday. I went...")*	*(e.g., "You are going to be the teacher who leads the class. First, you will...")*	*(e.g., "What do you usually do when you arrive at preschool?")*	*(e.g., "Once, there was a boy and he had a pet frog. Suddenly,...")*

Figure 2. Types of Oral Narratives Produced by Monolingual and DLL Preschool-Age Children. Overview adapted from Goldstein (2000) and Hughes et al. (1997). Own examples were included.

[5] From a general linguistic standpoint, it is important to distinguish between story referring to "all the events that are to be depicted" (Cobley, 2001, p. 5) and narrative as "the showing or telling of these events and the mode selected for that to take place" (Cobley, 2001, p. 6). However, in language acquisition research, the two terms narrating and storytelling have been used simultaneously (e.g., McCabe, Bliss, Barra, & Bennett, 2008). In fact, Heath (1986) referred to stories as a subtype of narrative (see Fig. 2), e.g., fairy tales or other fictional narratives that include fictionalized accounts of characters attempting to carry out a goal. Therefore, the terms story and storytelling will be applied here as a synonym in reference to fictional narratives.

This acquisition process is met by a gradual sophistication of early narratives with child narratives becoming increasingly more complex, both linguistically (Peterson & McCabe, 1983; Shapiro & Hudson, 1991) and socio-cognitively (Curenton, 2004, 2011). The child begins to realize that narratives are built around characters that encounter specific problems and that a narrative is embedded in a particular place or setting and has a linguistically expressed sequence (Vukelich & Christie, 2009).

2.1.2 The Emergence and Development of Narrative in a Socio-Emotional Context

Due to its reliance on lexical, morpho-syntactical and pragmatic skills, the development of narrative discourse abilities is a complex area of language acquisition. Therefore, much like other complex developmental areas, oral narrative competence does not emerge suddenly or automatically, but rather is acquired gradually in the context of socially and emotionally scaffolded[6] interactions. Still, it is remarkable how it only takes a few years for a typically developing child to advance from an engagement in preverbal interactions to the active use of sophisticated linguistic structures that allow for the construction of coherent stories in uninterrupted monologue at the end of the preschool period. The process framing this achievement is detailed below.

From a social-interactionist point of view (e.g.[7], Bruner, 1983, 1990; Papoušek, 1994; Tomasello, 1992, 2003; Tomasello & Farrar, 1986; also see section 7.2 in this work), a substantial body of research has sought to specify the interactive practices most effective in promoting and facilitating the development of linguistic skills. The main focus has been on features of adult-child interaction (in practice, most often mother-child interaction). Around the age of 2, parallel to the emergence of simple pretense play (e.g., Bretherton, 1989; Engel, 2005), children begin to talk about events outside of ongoing actions (Alamillo, Colletta, & Guidetti, 2013) in the context of early face-to-face conversations with their caregivers. Typically, these first narrative constructions

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[6] In his original description, Bruner (1975) used the term "scaffolding" in reference to interactions between a parent and a child or between a tutor and a tutee, where the more knowledgeable partner (i.e., parent, tutor) provided just enough support based on the progress made by the child on an ongoing basis.

[7] Note that an ubandance of literature has been produced on this topic and only a selection of sources can be credited here.

involve single-phrase two-word utterances that are autobiographical in nature (McCabe, 1997), covering events in the recent past of the child while the interactional context is predominantly characterized by short conversational turns and frequent turn taking (Nelson, 2007; Ninio, 1988). As both elicitation and maintenance of early narratives rely heavily on scaffolding through prompts, hints, and questions (Miller & Sperry, 1988; Reese & Fivush, 1993), this emergent narrative practice has also been characterized as joint reminiscing (Fivush & Vasudeva, 2002; Tulviste, Tõugu, Keller, Schröder, & de Geer, 2016). Consequently, first linguistic narratives are in situ interactive efforts that bear more traits of social-emotional co-constructions (also see Sperry & Sperry, 1996) than independent performances. With conversational partners further providing structure through linguistic and/or emotional scaffolding, children gradually develop competency in extended speaking turns (Kelly & Bailey, 2012), also referred to as discourse, as characterized by multiple contingent sentences (Lucero, 2015; Pearson & de Villiers, 2005). Accordingly, this acquisition process can be conceptualized as not being simply governed by maturation, but rather by exposure to more sophisticated discourse models in scaffolded interactional spaces.

Researchers like Nicolopoulou (2002) have argued that this "one-sided picture of the "social context" [sic] of development must be expanded to take systematic account of the complementary role of children's peer relations" (Nicolopoulou, 2002, p. 119). As will also be argued later in this work, the notion of peers actively scaffolding each other's narrative acquisition process is one that should not be overlooked. This perspective is illustrated by excerpts from transcripts based on video recordings of DLLs co-constructing fictional narratives at their ECEC institution (see Examples 1 and 2; both appear in Licandro, 2014, p. 335)[8]:

Two 4-year-old girls, Selma and Yade, are sitting next to each other and flipping through the pages of a picture storybook. Both children both come from Turkish speaking families and are German language learners. In the recorded scenes, they only converse in German.

[8] Both examples were videotaped outside of the reported studies in this work. Pseudonyms have been assigned to the children. Direct translations to English were added by the author.

Shared book reading example 1

Selma:	Hey!
Yade:	Und die Stuhl is(t) dann kaputt!
	[And then the chair is broken!]
Selma:	(blickt zu Yade) Ja.
	[(looks over to Yade) Yes.]
Yade:	Dann is(t) sie auch traurig.
	[Then she is sad, as well.]
Selma:	Und und der weint jetzt.
	[And and he is crying now.]
Yade:	Ja und hier ist auch da kaputt.
	[Yes and here is also broken there.]
Selma:	Ja, da muss da da muss einer das heile machen. (blickt zu Yade)
	[Yes, there someone has to there there has to fix it. (looks over to Yade).]

Selma initiates the turn with the exclamation "Hey!" which can be seen as a token to direct her partner's attention to a special feature of the story and/or a prompt to elaborate on the event. Yade reacts by picking up the cue and addressing the special event in the picture: the broken chair. Selma frequently looks over to Yade, perhaps in anticipation of a reaction to her own statement, as an indication that her turn is finished, or awaiting Yade's following turn. Using the term "Yes," Yade confirms Selma's statement, either formally or on the content-level, before conceptually expanding on the previously given information. In response, Selma reciprocally confirms Yade's notion of the broken chair, before moving on to suggesting a solution ("someone has to […] fix it").

The second example includes the same girls looking a different picture storybook depicting two children who are baking cookies.

Shared book reading example 2

Selma:	Aber die die kann man jetz(t) essen!
	[But you can eat them them now!]
Yade:	Nein, erst mal backen!
	[No, first baking!]

Selma: Im Ofen, ne? (blickt zu Yade)
[In the oven, right? (looks over to Yade)]
Yade: Ofen, ja.
[Oven, yes.]

Yade, who mentions that the cookies have to be baked first, rejects Selma's initial statement that the cookies are ready to eat. This example provides a glimpse into a process of active negotiation, which results in the co-creation of a new meaning. To sustain their interaction, Selma acknowledges her partner's prompt and formulates her question of where the cookies are going to be baked to either obtain her partner's concurrence regarding her statement, or, again, as a means of engagement. Yade directly repeats the lexical notion of "oven," accompanied with an agreement token, to display her concurrence. The narrative co-construction provides a space that "allows them to try out what they know and confirm and disconfirm use through peer assistance" (Philp, Adams, & Iwashita, 2014, p. 23). The girls pool their knowledge and negotiate content and lexical information as they jointly construct the story. This is a behavior can frequently be observed in the realm of peer interactions in ECEC settings (e.g., Küntay & Şenay, 2003).

Through continuous exposure and practice to a variety of narratives in scaffolded conversations and shared storybook reading at home and in ECEC (e.g., Collins, 2010; Justice, Kaderavek, Fan, Sofka, & Hunt, 2009; Küntay & Şenay, 2003), children become increasingly competent at organizing monologic utterances into coherent and cohesive messages. As a result, their narratives grow progressively more complex in terms of length and topics, and they depend less on assistance from a conversational partner (Pearson, 2002). As can also be seen in the example stories, children start including the internal states (i.e., references to emotions, cognitions, intentions, and physical states) of main characters (Yade mentions the character being "sad"). Starting around the age of four, children typically become increasingly proficient in expressing characters' perspectives through these means (Aksu-Koç, 1994; see Flavell & Miller, 1998 for a review).

In summation, in their first years of life, children venture beyond personal accounts and begin to tell stories in play (Stadler & Ward, 2005), verbalize routines, and retell and relay (fictional) third-person accounts, including others' perspectives. Each of these types of narratives can be found in the preschool-aged DLL's repertoire, as further specified in the upcoming section.

2.1.3 On the Importance of Fictional Narrative Production in Early Childhood

In addition to contextualized language skills (i.e., referring to the here-and-now), it is also crucial for preschool-aged children to acquire decontextualized language skills (i.e., referring to the there-and-then) to be equipped for the linguistic challenges of conversational language use. This classic proposition was explicated by Snow (1991):

> One major function language serves is to enable negotiation of interpersonal relationships; the skills relevant to interpersonal negotiation are honed through face-to-face conversations in which speakers and hearers may draw upon such resources as shared knowledge, gesture, interactive negotiation of meaning, and listener feedback. These physically, socially, and historically *contextualized* [sic] uses of language contrast with uses of language to convey novel information to audiences who are at a distance from the speaker and who may share only limited amounts of background knowledge with the speaker
>
> (p. 7)

This type of *decontextualized* language can typically be found in expository and literary contexts. The production of oral narrative is therefore one central component of early literacy, which has been defined to consist of "the skills, knowledge, and attitudes that are presumed to be developmental precursors to conventional forms of reading and writing […] and the environments that support these developments" (Whitehurst & Lonigan, 1998, p. 849). For example, fictional storytelling underpins a large part of school curricula related to the teaching and practice of literacy skills and is commonly prevalent in, but not limited to, classroom activities that involve storytelling, summarizing, and retelling—both orally and written.

Narratives can serve as an effective teaching context that provides the opportunity to acquire decontextualized language skills for young children (Westby, 2005). As children learn to decontextualize their thought process from the immediate here-and-now

to mental representations of the there-and-then, fictional narratives also expose them to extended, cohesive, and predominantly decontextualized discourse units characteristic of written language. Linguistic areas fostered during the preschool period, including phonology, semantics, morphology, syntax, morphology, and pragmatics/discourse, all must interlink for literacy, i.e., activities and skills associated with print (Snow, 1991), to emerge (Dickinson & Porche, 2011). It can be argued that narratives form a bridge from oral language to literacy (Westby, 2005). In turn, narrative skills in the language of instruction are an important precursor and facilitator of skills related to academic learning (for a simplified model of this relationship, also see Figure 3 in section 2.2).

This transition from using contextualized speech to understanding and producing decontextualized language is especially prevalent in the comprehension and production of fictional narratives. While the organization of event sequences in script narratives and event casts can be characterized as more contextualized, as the structure is clearly laid out, the nature of a fictional narrative is more decontextualized. For one, it is decontextualized in the spacio-temporal domain; in other words, the production of a successful story requires the cognitive coordination and linguistic explication of a series of events that happened in the past or which are purely made up. Also, fictional narratives are usually decontextualized from personal experience, which requires the narrator to not only emphasize with the character(s) to understand their (hypothetical) motives, goals, and feelings, but to also linguistically convey their perspective through the use of evaluative language (Griffin, Hemphill, Camp, & Wolf, 2004; also see section 3.3).

All children entering the educational system have to expand their language skills towards the mastery of decontextualized language features, but those entering the German education system with little or limited previous exposure to German and those who continue to speak a home language other than German are faced with an especially considerable challenge. Limited receptive and expressive skills in the area of contextualized and decontextualized language can affect children's social, emotional, linguistic, cultural, and academic development (e.g., Mehta, Foorman, Branum-

Martin, & Taylor, 2005). For example, the comprehension and production of narratives has shown to be a reliable skill to distinguish typically developing mono- and dual-language learning children from those with language impairments (Cleave, Girolametto, Chen, & Johnson, 2010; Fey, Catts, Proctor-Williams, Tomblin, & Zhang, 2004; Gagarina et al., 2012; 2015; Paradis, Schneider, & Duncan, 2013). In turn, difficulty in mastering narrative skill can be viewed as a risk factor for academic failure (Curenton & Justice, 2004; Greenhalgh & Strong, 2001; also see section 2.2).
For these reasons, the current work will henceforth focus on the production and support of oral fictional narrative abilities in young DLLs. In so doing, it is crucial to put forth a more detailed definition of the term *fictional narrative*.

Fictional Narratives in Preschool-Age Children – A Working Definition

As presented earlier, generally speaking, a fictional narrative can be viewed as a made-up story (for example, the response to pictorial stimuli as found in a picture storybook). Drawing on the theoretical and empirical background reviewed in this chapter, a *fictional narrative*, in the context of the current work, will be characterized via the following definition:

The term fictional narrative refers to the generation of a story produced in decontextualized discourse, in response to pictorial stimuli in a wordless picture book, which consists of at least two topic-centered utterances[9] *and may contain evaluative language features.*

In this capacity, preschool fictional narrative skills provide insight in both quantitative and qualitative aspects of connected language production, which reflect and promote socio-emotionally and academically important outcomes, and thus can also inform about aspects of intellectual and emotional development. During the preschool age, this type of narrative becomes especially important because of its role in the develop-

[9] It is important to consider that young children, especially DLLs with limited L2 language skills, might not (yet) be able to express temporal and/or causal relationships, while still trying to linguistically convey a sequence of events. Therefore, determining a minimal fictional narrative was based on at least two utterances linked by the same topic rather than by a conjunction.

ment of decontextualized oral language skills and its central part in school curricula (for both, see section 2.2). Accordingly, the more advanced and elaborative a child's skill to structure and to provide descriptive details about past experiences or fictional accounts, the better the child is equipped to perform successfully in various academic areas.

After having presented a generalized account on children's narrative production over the preschool period, it is further important to specify the acquisition process for fictional narrative skills.

2.2 Emerging Fictional Narrative Skills in Child Language Development: From Decontextualized Language Use to Academic Language Skills

Telling a story requires the narrator to move beyond the observable and to create meaning by coordinating, integrating, and encoding large amounts of information solely through language. As Tomasello conceptualizes, the child has to create a linguistic framework whereby "the immediate context in which a given utterance must be grounded is not the surrounding nonlinguistic context but rather the linguistic context formed by the rest of the narrative" (Tomasello, 2003, p. 244). Thus, constructing a narrative represents a sophisticated communicative task that requires a grasp of cognitive, cultural, and complex linguistic features in the varied domains of language, especially when the narrator cannot rely on the audience having had the same experiences to aid them comprehend the narrative; as such, the language must be even more complex.

While there is abundant evidence linking early language abilities to children's emergent literacy skills (e.g., Dickinson & Porche, 2011), researchers are still trying to disentangle the entrenched relation between fictional narrative abilities and the development of complex ways of linguistic expression as well as of academic language skills.

Throughout child development, the demands of oral language use change with an increasing emphasis on more complex and literate language forms (Snow & Uccelli, 2009). To be well equipped for the linguistic requirements in school, conveying the distinct from context, children need to have acquired some previous level of print, alphabet, phonological, as well as vocabulary knowledge, and a fundamental interest to

use literacy, because decontextualized and sophisticated oral language is a cornerstone of and a prerequisite for the successful participation in daily instructional activities in the classroom (e.g., Pearson, 2002; Snow, 2010; Snow, Burns, & Griffin, 1998). Fictional narrative production reflects these demands of academic language use, as it challenges a preschool-aged child to use longer and more complex linguistic forms in contrast to utterances produced in conversational speech (Hadley, 1998), personal narratives (Purcell-Gates, 2001), or explanations (Peets & Bialystok, 2015).

To successfully describe one or more events and to distinguish them from the ongoing present, a child has to combine its lexical-semantic and morphological knowledge (McCabe & Rollins, 1994; Melzi & Caspe, 2008) and produce the most complex syntactical constructions on hand (Tomasello, 2003, 2008). By tapping into multiple language features and organizational abilities simultaneously (e.g., McCabe & Bliss, 2003; Ukrainetz, 2006), oral language discourse offers comprehensive insight into a child's verbal expression skills.

By inferring information implicitly, the narrator weaves interconnections between different story parts and thus manages, as Montanari puts it,

> to interpret the characters and their relations in time and space, to view the onset events as the cause of the protagonist's development of a goal and a goal plan, to understand the protagonist's failures as relevant to the goal, and finally, to interpret his/her success as the end of the story.
>
> (2004, p. 456)

Putting it broadly, fictional narrative production—or storytelling—is characterized by a considerable cognitive demand: To tell a story draws on the child's ability to remember, and to temporally, spatially, and sequentially organize events (Norbury & Bishop, 2003) while taking into account the listener's knowledge and perspective. Ultimately, the narrator has to cognitively and emotionally distance his/herself from the immediate to explore the remote. Through the repeated engagement in (interactive) narrative practices, the development of higher-level metalinguistic, metacognitive, and conceptual operations is promoted (Nelson, Aksu-Koç, & Johnson, 2001).

It is therefore not surprising that research on monolingual children revealed that the extent to which a child can produce a coherent and cohesive narrative not only predates, but also predicts successful adaptation to academic literacy practices. In fact,

early cross-sectional work found a strong relationship between narrative comprehension among monolingual kindergartners and other measures of early literacy (Dickinson & Snow, 1987). Also, longitudinally, the narrative skills of monolingual preschool-age children have long been identified as one of the best predictors of later school achievement for children at risk for language and academic problems (Bishop & Edmunson, 1987; Paul & Smith, 1993; also see Figure 3).

Furthermore, a growing body of research has demonstrated that early oral narrative skills are linked with emergent literacy outcomes in preschool children (Dickinson & McCabe, 1991) and moderately to strongly predict later reading and writing performance. For example, Griffin and colleagues (2004) found that the ability to use evaluative story components at age 5 predicted children's reading comprehension and written narrative skills at age 8 (for further research evidence, also see Curenton, Craig, & Flanigan, 2008; Fey et al., 2004; Gardner-Neblett & Iruka, 2015; Neuman & Dickinson, 2011; Reese, Suggate, Long, & Schaughency, 2010; Speece, Roth, Cooper, & De La Paz, 1999; Storch & Whitehurst, 2002; Tabors, Snow, & Dickinson, 2001). In addition, later mathematical ability was also linked to preschool narrative competence (O'Neill, Pearce, & Pick, 2004).

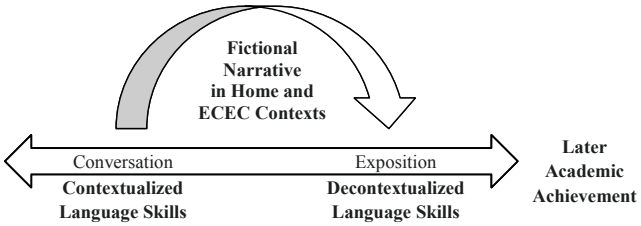

Figure 3. A Simplified Model of Narrative Discourse Fostering Decontextualized Language Use Central for Later Academic Achievement

In a large-scale study with DLLs, Miller and colleagues (2006) followed 1,531 Spanish-English learners from ECEC through third-grade and found that early lexical skills and grammatical complexity displayed in an oral narrative retell task accounted for a

significant amount of variance in both comprehension and decoding within and across languages.

In conclusion, command of the language of instruction including its decontextualized components is the foundation for reading and overall academic success (Dickinson & Porche, 2011). Based on the reviewed evidence, there is reason to argue that to improve educational outcomes for DLLs, an emphasis should be put on activities featuring and fostering decontextualized language use, ideally beginning before entry in formal schooling. Building on this broader introduction on the development of fictional narrative skills, the following sections will be devoted to explore more closely the specific ways to collect and analyze fictional narratives in preschool-aged DLLs, followed by an in-depth study of current research literature on the fictional narrative skills of DLLs across and within languages as well as in comparison to their monolingual peers.

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-

U. Licandro, *Narrative Skills of Dual Language Learners*, Diversität in Kommunikation und Sprache / Diversity in Communication and Language,
DOI 10.1007/978-3-658-14673-3_3

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.

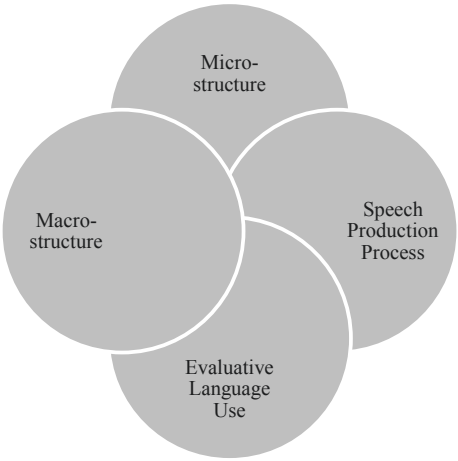

Figure 4 Interconnected Layers of Fictional Narrative Production and Analysis

[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

[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).

[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).

[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

[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.

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 nonverbal 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-

[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;

[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 multidimensional 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?*

4 Methods Study I

This chapter first details the selection and characteristics of participants in this study[19], followed by a description of the test instruments and the procedure including a detailed explication on how the main variables were quantified, and concludes with a presentation on the strategy governing the data analysis.

4.1 Participants

All participants were recruited through ECEC institutions[20] from districts with high percentages of DLL children in a large German city. The heads of ECEC institutions were contacted by telephone and asked a), if they had more than one DLL Turkish-German child in their institution and b), if they would be interested participating in a research project. If they answered "Yes" to both conditions, brochures were sent out detailing the primary aims of the study as well as its requirements for participation. One to two weeks later, the institutions were contacted again and asked if they were still interested in participating. If so, the institutions were visited to talk through the timeline of the assessments and to clarify any questions.

To be eligible to participate in the study, the children had to meet the following criteria:

- Be between 3 and 6 years of age
- Be DLLs[21] of both Turkish and German, as well as having been systematically exposed to German for at least 10 months
- Are developing at a typical level according to parent(s) and ECEC report(s)

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[19] Data collection was funded by a research grant by Niedersächsisches Institut für Frühkindliche Bildung und Entwicklung (nifbe) awarded to Ulrike M. Lüdtke and Ulla Licandro, née Grube (nifbe Az. FP 01-12). The author served as the principal investigator and has no financial or nonfinancial relationships relevant to the content of the study.

[20] All ECEC institutions were monolingual German (i.e., all ECEC practitioners exclusively conversed in German).

[21] For the purpose of this study, to be classified as a DLL the children needed to have systematic language contact with German for at least 10 months, attend a German ECEC institution, and produce output in both languages daily (in families who conversed in Turkish exclusively, this criterion was limited to weekdays–when German was spoken in the ECEC institution).

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DOI 10.1007/978-3-658-14673-3_4

- Are not receiving speech and language services at the time of their participation in the study (according to parental report)

To adhere to current research ethics, written informed consent was obtained from both parents/guardians as well as each child prior to the start of the study, as detailed below.

Informed Consent and Child Assent

To collect parental consent, bilingual (Turkish and German) study information and consent forms were given out to the primary caregivers of potential participants. Questions concerning the study were answered via telephone and/or at a meeting, either in Turkish or in German, depending on the parents' language of choice. Signed consent forms were collected prior to the start of the study. Families did not receive compensation for their participation.

To make allowance for the children's wishes in regard to potential research participation (Dockett & Perry, 2011), child assent was obtained in the ECEC institutions in the following manner: After a familiarization period characterized by engagement in joint play, the examiner sat down with each child individually and walked them through a document that stated the goals and means of the study using child-appropriate language and pictures. Children were then asked if they wanted to participate and, if so, to sign their name or draw a picture on the bottom of the form.

Parental Report on Home Language Use and Proficiency

To profile each participant's language exposure and proficiency (e.g., Guitiérrez-Clellen, Simon-Cereijido, & Wagner, 2008) and to collect further home language data, a parental questionnaire was designed. It consisted of 31 items, which were partly drawn from the bilingual parental questionnaires designed by Asbrock and colleagues (Asbrock, Ferguson, & Hoheiser-Thiel, 2011), Chilla and colleagues (Chilla et al., 2010), and the Alberta Language Development Questionnaire (ALDeQ; Paradis, Emmerzael, & Duncan, 2010). The first part of the questionnaire targeted basic child data (i.e., birthdate, date of joining an ECEC institution, family size). Parental education (here: measured in years) is one factor associated with the family's socio-

economic status which has previously shown direct correlations with children's linguistic and cognitive performance (e.g., Gathercole, Kennedy, & Thomas, 2015; Hair, Hallo, Terry-Humen, Lavelle, & Calkins, 2006) and was therefore included in the questionnaire and used as a demographic control variable (also see Aukrust & Rydland, 2011; Rydland, Grøver, & Lawrence, 2014a, 2014b). To track home language practices, parents were asked to give an hourly breakdown of input in both languages on typical weekdays and weekends. This account included listing all members of the household with whom the child interacted on a regular basis, and a report on each of those person's language abilities (either Turkish only, German only, or mixed)[22]. Furthermore, home literacy practices were addressed by estimating the amount of books in the household and the frequency of shared storybook reading activities. Finally, parents rated their own as well as their child's proficiency in both Turkish and German on a scale from 1 (limited) to 4 (fluent).

A Turkish-German bilingual/bicultural research assistant arranged a meeting with the parent at the child's ECEC institution and administered the questionnaire interview-style in either German or Turkish, depending on the parent's preference. The completion of the questionnaire took around 20 minutes and, except for two cases where the father answered the questions, was conducted with the mother.

Child Demographics

In total, written consent was collected for 56 children, and of those, 5 were excluded from further analyses. Four children did not complete the testing battery (2 children did not participate in any assessment due to repeated absence from the ECEC institution, and 2 children failed to complete the language assessment). Furthermore, one case was eliminated because the child did not have the narrative sample available due to failure of recording equipment.

[22] This detailed breakdown of communication partners was collected because bilinguals may not always consciously notice which of their languages is being spoken (Guiterrez-Clellen & Kreiter, 2003).

The final study sample consisted of 51 Turkish-German DLLs from 15 ECEC institutions in central Germany, all of which enroll large numbers[23] of bilingual children. On average, children were 58 months old (M = 4.83 years, Mdn = 4.75 years, SD = 0.61) and had a mean systematic exposure to German, as assessed by parental report, of 32 months (SD and ranges appear in Table 3). Of the sample, 61% of the children were female (n = 31) and 39% were male (n = 20). Paternal education[24] widely varied across the sample. While six (12%) of the participants' mothers and fathers had no or basic education (i.e., up to four years), the majority had participated in formal schooling for ten years (mothers: n = 24; 47%; fathers: n = 20; 39%). Three mothers (6%) and six fathers (12%) had obtained a university degree. Information on parental education was missing for two children.

While all children were born in Germany and had been living in the country since then, the majority of the children came from successive language backgrounds (i.e., no systematic exposure to German before their third year of life (Chilla, Rothweiler, & Babur, 2010): Forty-five percent of the children learned German and Turkish from age 2 or earlier and 55% of the children started learning German at age 3 or later. The range of language input and output values indicated that the children were spread across the full range that was considered DLL for this study.

Although children were experiencing variation in how much Turkish and German was spoken in their homes, all attended German-only ECEC institutions. While all children had been exposed to Turkish from birth on and were currently exposed to both German and Turkish, at the time of testing, children's language practice spanned the full range from predominant Turkish use to predominant German use.

Based on the children's contact months as well as family and ECEC exposure to each language and the children's patterns of language output, 34% of the children were deemed Turkish dominant (using Turkish over 60% of the time), 32% of the children were balanced bilinguals (using Turkish and German 40 to 60% of the time), and the

[23] At the time of the study, participating institutions enrolled at least 50% DLLs with various language and cultural backgrounds, as reported by the heads of the institutions.

[24] Education in the home country was included in this calculation.

remaining 34% of the children were German dominant (using German over 60% of the time). The average exposure to German was 2 years and 7 months. Forty-five percent of the children were systematically exposed to both Turkish and German before their third year of life, and 55% of the children started learning German at age 3 or later.

Table 3. *Summary Characteristics of Child and Family Demographics*

Variable (*N* = 51)	**Mean (*SD*)**	**Range**
Age in months	57.82 (7.24)	44-72
Mother's education in years [a]	9.82 (3.21)	0-17
Father's education in years [b]	9.96 (3.74)	0-17
Family size (total number of children)	2.22 (1.07)	1-6
Mother's self-rated proficiency in German [c]	2.35 (.64)	0-4
Father's self-rated proficiency in German [c]	2.43 (.65)	0-4
Mother's frequency of language mixing [a]	1.53 (1.24)	0-4
Father's frequency of language mixing [c]	1.40 (1.33)	0-4
Number of persons addressing the child in Turkish [c]	6.25 (2.01)	1-10
Frequency of shared storybook reading	1.92 (0.94)	1-3
Months of systematic exposure to German	32.04 (14.89)	10-68
ECEC participation in months	17.85 (11.87)	1-49
Parental rating of child language skills [b]		
- **Turkish**	2.70 (1.13)	1-4
- **German**	2.90 (1.02)	1-4
Average language input patterns		
- **mainly Turkish**	*n* = 18 (35.3 %)	
- **approximately balanced**	*n* = 16 (31.4 %)	
- **mainly German**	*n* = 17 (33.3 %)	

Note. Systematic exposure to German was determined by exposure rates of at least 20 % per week-day. All children were exposed to Turkish from birth. Language input patterns were derived from parental questionnaires as specified in section 4.2.
[a] *n* = 49, [b] *n* = 50, [c] *n* = 48.

4.2 General Procedure and Test Instruments

All assessments were administered in two separate sessions in their ECEC institutions. Children were tested individually while sitting at a table with a female examiner. Prior to the assessment sessions, the examiners had visited the children in their ECEC institutions on one or more occasions to establish familiarity. The entire session was audiotaped. As part of the test battery, children completed a standardized German receptive and productive language assessment, a nonverbal intelligence screen (means and *SD*s for the standardized assessments are reported in Table 4), and produced a narrative sample based on a wordless picture book (Frog Story, see section 4.3). Furthermore, the children's parents completed a questionnaire about family background data, including the child's level of exposure to Turkish and German.[25] The contents, administration, and scoring for all standardized assessments and the parental report are specified in the following sections.

German Language Assessment

Children's language abilities in German were measured via the standardized test 'Linguistische Sprachstandserhebung—Deutsch als Zweitsprache' (Lise-DaZ) *[Linguistic language assessment for children with German as a second language]* (Schulz & Tracy, 2011). LiSe-DaZ was chosen for the current study, as it contains culturally and linguistically appropriate items and was normed on a DLL population (norm data exist for successive bilingual children aged 3;0 to 7;11 years and children aged 3;0 – 6;11 years growing up with German as their first language), both of which are central aspects to consider in the assessment of DLLs (e.g., Paradis et al., 2010). Using a picture-with-question-design, LiSe-DaZ assesses receptive language skills via three subscales: *Verb meaning*, *wh-questions*, and *negation*. Productive language abilities are elicited via an elicited production task using a picture sequence and assessed on further sub-scales: *Word classes* (conjunctions, prepositions, focus particles, main verbs, auxiliary and modal verbs), *case marking*, *sentence structure*, and *subject-verb agreement*.

[25] Also, ECEC practitioners filled out a questionnaire on children's language and literacy behaviors in the ECEC institutions (Sismik; Ulich & Mayr, 2003), which was not included in the current investigation.

To establish the children's level of language ability in German, all participants[26] of the current study completed LiSe-DaZ. However, for several important reasons, the current study used raw scores instead of operating with T-scores. As previously discussed, children growing up with more than one language, even if coming from the same linguistic and cultural backgrounds, constitute a very heterogeneous population, which was reflected in the study's participants. Therefore, the study sample was not entirely representative of the standardization sample, which includes only two main exposure groups (German as a first language and exposure to German after the second year of life). Furthermore, the goal was not to compare the participants to a statistically determined norm, but rather to compare them within the study population. Therefore, the current study applied raw scores in consideration of children's age, the exact number of contact months as well as language input patterns in further analyses.

To reduce item dimensionality, raw score sums were calculated for both expressive[27] as well receptive language subtests. Both individual composite scores yielded Cronbach's α values higher than 0.7 and stayed above this level when applying an 'alpha if item deleted' analysis. In accordance with Kline (1999), it was determined that an alpha value of at least 0.7 indicates good reliability and both composite scores were applied in further analyses.

Table 4. *Summary of Standardized Child Assessments*

Variable (*N* = 51)	**Mean (*SD*)**	**Range**
Expressive language German[a]	30.24 (14.52)	3-59
Receptive language German	21.86 (6.01)	8-34
Raven CPM	16.10 (3.96)	8-28

Note. Scores reported for expressive and receptive language German are sums based on LiSe-DaZ subtests; CPM, Coloured Progressive Matrices; provided data are raw scores.
[a]*n* = 50.

[26] One child did not complete the expressive subtests of the LiSe-DaZ.

[27] The subtests *sentence structure* and *subject-verb agreement* were not included in the expressive language composite score, because they yield group assignments instead of raw scores.

Nonverbal Intelligence

To assess the children's nonverbal intelligence potential, the book form of the Raven Coloured Progressive Matrices (CPM) (Raven, 1995) was administered. Because verbal instruction is kept to a minimum, the test can be considered a culturally fair measure of intellectual function and was previously used in studies with preschool-age DLLs (e.g., Scheele, Leseman, & Mayo, 2010). The CPM consists of 36 perceptual and conceptual matching exercises in which the child is required to complete a pattern by pointing to the correct picture out of six pictures. The German version includes norm data for children aged 3;9 to 11;8 years of life (Raven, Raven, & Court, 2010). The child was given a score for each correct answer and testing ended when children failed five consecutive items. The raw score sum (maximum score: 28) for each participant was further analyzed in this study.[28]

4.3 Narrative Sample Collection, Transcription, Coding, and Scoring

The following sections serve to substantiate the choice of the narrative prompt, the procedure for collecting narrative samples, as well as to provide detailed information on transcription, coding, and narrative analysis procedures.

Narrative Prompt

When it comes to selecting the type of stimulus for the assessment of fictional narratives of preschool-age children, pictures are commonly the prompt of choice. While single-pictures might elicit short and unelaborated stories and yield inconsistent output across children (Kaderavek & Sulzby, 2000; Shapiro & Hudson, 1991), the highly structured stimuli of a sequence of pictures are supportive of narrative organization (Eisenberg et al., 2008; Hedberg & Westby, 1993). Indeed, clearly sequenced illustrations with high episodic complexity will likely elicit elaborate and complex narratives from young children (e.g., Curenton & Justice, 2004; Fiestas & Peña, 2004). These

[28] Three children from the sample were 3;8 years of age, which is one month younger than the starting range of standardization. However, as the children were able to complete the test and raw scores rather than standardized ranks were applied for further analyses, the application of the assessment for all children was deemed acceptable in this study.

types of picture sequences typically can be found in picture books. Referential and communicative context information offered by a picture story is rather clear and can provide a developmentally appropriate stimulus for the generation and structuration of rather rich fictional narratives (Bamberg, 1987). Furthermore, the given (temporal) flow of events encourages the production of substantial and connected output allowing for further multifaceted analyses (Reese, Sparks, & Suggate, 2012). For these reasons, the current study utilized a wordless picture book to elicit narrative productions.

Specifically, to examine the participants' narrative competence, the children were presented with the wordless picture book "Frog, Where Are You?" (Mayer, 1969), which has also been commonly referred to as the 'Frog Story.' The book depicts the story of a boy and his dog whose pet frog escapes at night. On their search for the frog, the boy and the dog enter a forest where they encounter different animals that in some way interfere with the search. Eventually, they find the frog surrounded by his family and walk away with a baby frog as their new pet. Besides including the global search theme and a series of temporally sequenced and causally linked events, the plot line offers plenty of opportunities to make inferences about the characters' relationships, thoughts, feelings, and motivations. Therefore, while being cognitively challenging, the prompt is suitable for child narrators. For this reason, the Frog Story has been applied extensively as a narrative stimulus across typically and atypically developing monolingual and DLL populations[29] (e.g., Colle, Baron-Cohen, Wheelwright, & van der Lely, 2008; Curenton & Justice, 2004; Greenhalgh & Strong, 2001; Justice et al., 2010; Mills, 2015; Reilly, Losh, Bellugi, & Wulfeck, 2004; Montanari, 2004; Peets & Bialystok, 2015; Tager-Flusberg & Sullivan, 1995) as well as in cross-linguistic work (e.g., Berman & Slobin, 1994; Fiestas & Peña, 2004; Montanari, 2004; Verhoeven & Strömqvist, 2001), including preschool-age children acquiring Turkish (Aksu-Koç, 1994) and German (Bamberg, 1987; 1994) and Turkish children in Germany (Pfaff, 2001). Importantly, previous work on child narrative skills using the Frog Story yielded high productivity rates in young DLLs as needed for productivity and complexity

[29] In fact, De Fina and Georgakopoulou argue that the Frog Story is the best known prompt for elicitation of narratives, used in „at least 150 studies in fifty languages" (2011, p. 13).

measures (e.g., Bedore, Fiestas, Peña, & Nagy, 2006; Lofranco, Peña, & Bedore, 2006).

A critical issue in any narrative investigation is that the examiner has "obtained a valid representation of the subject's generative processes in narrative production" (Liles, 1993, p. 877). In general, while eliciting the narrative probe without a model ensured that the collection of child stories occurred without any influence or imposition of a certain style, telling stories from wordless picture books can pose specific challenges to children, especially those who may not be familiar with the demands of such a task. However, as preschool-age children attending ECEC institutions are familiar with shared picture book reading and storytelling (e.g., van Kleeck, Stahl, & Bauer, 2008; Wasik & Bond, 2001) and all participants had attended ECEC for at least 10 months, the task was deemed appropriate for participating children.

Procedure

All narratives were collected in a quiet room of the children's ECEC institution, and they were seen individually by an examiner they were familiar with through previous warm-up and assessment sessions. The picture book was new to all participants, and they were not told about the story beforehand. Fictional narratives were elicited following the protocol developed by Berman and Slobin (1994). Children were given time to first view the whole book in silence to get a sense of the plot, before telling the story in their own words based on the illustrations, going page by page. In eliciting the spoken narrative, the examiner instructed the child, „Ich habe dir ein Buch mitgebracht. Es erzählt die Geschichte von einem Jungen, einem Hund und einem Frosch. Als Erstes möchte ich, dass du dir alle Bilder anschaust. Schau dir jedes Bild genau an. Danach sollst du mir die Geschichte erzählen." *[I brought you a book. It tells the story of a boy, a dog, and a frog. First, I would like you to look at all the pictures. When you are finished looking at all the pictures, I would like you to tell me the story.]* When the child indicated that she or he was ready to tell the story, the book was flipped back to page one. At this point, the examiner remained silent except to demonstrate interest using a selected array of minimal prompts and backchannel responses such as nodding,

"yes," "mhm," "anything else?", and "continue." No time limit was given to the narration. When the child arrived at the end of the book, the examiner asked if he or she wanted to add anything, or if they were finished telling the story. When children indicated that they were finished, the recording was stopped. All samples were audiotaped using a digital voice recorder (Olympus DM-650) for later transcription.

Transcription, Coding and Narrative Analysis Procedures

All digital sound files were transferred to a computer and were transcribed while using headphones. While the transcription of oral narratives is not standardized (Pavlenko, 2008), in keeping with common practice in child language research (e.g., Peets & Bialystok, 2015), the entirety of each narrative was transcribed using the Codes for the Human Analysis of Transcripts (CHAT) system developed as part of the Children's Data Exchange System (CHILDES) (MacWhinney, 2000). Mainly following Justice et al.'s (2010) transcription rules, the transcription process started with the examiner's prompt and ended after the child had indicated she or he was finished telling the story. While incomplete and uninterpretable verbal utterances were also transcribed following the conventional use of the CHAT symbols, only complete and intelligible child utterances were included in later analysis. Discourse by the examiner and all child utterances unrelated to telling the story (e.g., questions about other books and comments about the room) were transcribed, but excluded from the analysis reported here, similar to child repetitions of examiner recasts. If a child self-corrected, the corrected form was scored. Also, as preschoolers do not yet reliably produce conventional features of stories such as formal endings, e.g. 'the end' (Cain, 2003), they were not included in further analysis.

In accordance with Alamillo and colleagues, sentences, which might be a suitable descriptive unit for written texts, or "utterances," which are frequently used for transcribing very young children's speech, were considered too imprecise a definition to be able to undertake corpus annotation and quantitative analyses (Alamillo, Colletta, & Guidetti, 2013). Also, when assessing syntactic complexity in utterances longer than three words, the traditional measure of mean length of utterance (MLU) does not deliver an accurate estimate of syntactic skills in children (Scarborough, Rescorla, Tager-

Flusberg, Fowler, & Sudhalter, 1991). Therefore, utterances were segmented into communication units (C-units; Loban, 1976), a conventional procedure designed to organize and analyze children's narrative productions in meaningful and grammatical utterances (Hughes et al., 1997; Retherford, 2000). Based on these authors, C-units were defined as syntactic units consisting of one main clause and any dependent constituents, including subordinated clauses and phrases, to achieve a better estimate of children's syntactic skills. Accordingly, dependent clauses were transcribed in one C-unit, while series of successive main clauses as well as clauses connected by a coordinating conjunction were segmented in different C-units. Because single-word utterances and/or utterances lacking clausal structure are quite common in the narratives of younger children and those with limited previous second language exposure (e.g., Bedore et al., 2006, Strömqvist & Verhoeven, 2004), they were included in the analysis. A narrative had to consist of at least two C-units, following Labov's (1972a) definition of a minimal narrative.

Furthermore, in accordance with Gagarina et al. (2012), all filled pauses, repetitions, reformulations, and disfluencies were considered mazes. They were transcribed accordingly, but excluded from further analysis (except for the measures on percentage of maze use). This resulted in the elimination of 8.16% word tokens (*SD* = 6.48) from the language samples.

By reducing inflectional forms and derivationally related forms of a word to their word roots, a process referred to as lemmatization, it was ensured that measures of word use were not inflated by the presence of multiple forms of single words. Accordingly, verb forms were linked to their word roots. For example, kommt [*comes*] and kam [*came*] were both linked to kommen [*to come*]. This process was deemed especially important working with language samples of young DLLs who regularly produce "creative but wrongly inflected verb forms or plural forms" (Bedore, Peña, Gillam, & Ho, 2010, p. 504), which could lead to inflated lexical diversity measures. To adequately account for compound words, which commonly occur in the German language, credit was given for the two stem words. For example, Babyfrosch *[baby frog]* was linked to Baby *[baby]* and Frosch *[frog]*.

4.4 Analytical Framework for Narrative Measures

When investigating a child's oral fictional narrative performance, consideration needs to be given to the type of measures that are included. To be able to objectively compare the participants' narrative productions with respect to one another, as well as to derive measures of narrative skill for the examination of relationships between narrative and other indices of child development and family environment, a wide-scoped and integrative narrative scoring system was developed on the basis of current approaches to micro- and macrostructural narrative analysis, as presented in the following sections.

4.4.1 Microstructural Measures of Narrative Performance

As presented in Table 5, for the current profile of oral narrative ability, five transparent, frequently used measures of narrative microstructure known to be sensitive to language ability in young DLLs (e.g., Hipfner-Boucher, 2011; Uccelli & Páez, 2007) were selected from established guidelines on child microstructure analysis (Gagarina et al., 2012, 2015; Justice et al., 2006, 2010). Measures were derived from children's stories based on all complete and intelligible utterances to targeted general productivity, lexical diversity, as well as syntactic complexity and features.

Table 5. *Applied Measures of Narrative Microstructure*

Abbreviation	Narrative Measure	Indicator of
TNW	total number of word tokens without mazes	general productivity
TNCU	total number of utterances (in C-units)	narrative length / verbal productivity
NDW	number of different words (in lemmas)	lexical diversity based on lemmas
VOCD	vocabulary diversity	lexical diversity accounting for sample length
MLCU	mean length of C-units in words	syntactic complexity / grammatical ability

Productivity

Verbal narrative productivity was calculated on the token as well as on the C-unit level. TNW was a sum score of all produced tokens excluding mazes (as specified in section 3.3), while TNCU was a count of all C-units. Both measures were computed using the *freq* command of the Child Language Analysis software (CLAN; MacWhinney, 2000).

Lexical Diversity

Measures of lexical diversity, that is, indicators of how many different words are used in a language sample, are a key feature of the language structure of children's narratives and can be seen as a measure of expressive vocabulary size (Curenton & Lucas, 2007). Two different measures were computed representing lexical diversity: Number of different words (NDW), and the D statistic. NDW[30] is a traditional approach to measuring the range of vocabulary in a language sample; it was calculated by summing up all lemmas produced for one narrative. When comparing samples of different lengths, however, an obvious limitation of this approach is that it does not account for productivity, despite the relation of number of word types and tokens, i.e., the longer the sample, the more tokens it likely contains (Malvern, Richards, Chipere, & Durán, 2004). A simple solution to this problem is to calculate the ratio between the types and the tokens, for example by calculating the historically widely used TTR (division of the number of different word types (here: lemma types) by all the words (here: lemmas) produced). Again, however, this approach bears the inherent flaw of disregarding the overall sample length (e.g., Pavlenko, 2008). This is problematic when comparing multiple samples, as the introduction of new types is substantially affected by sample length and gradually decreases over the sample length. Therefore, the D statistic (henceforth termed VOCD, calculated via the *vocd* command in the CLAN program) was used to compute an additional measure of lexical diversity. Other than the traditional measure of TTR, this newer approach corrects for typical variation in type-token

[30] To avoid inflation of rates, the current study measured NDW in lemmas. The lemmatization process is presented in section 4.3.

ratio over a range of text lengths and is proposed to more robustly measure children's lexical diversity (Malvern et al., 2004). However, as the VOCD computation relies on a certain sample length (Koizumi & In'nami, 2012) and narratives of participating children were likely to greatly vary in terms of productivity, the traditional measure of lexical diversity, NDW (in lemmas), was also computed.

Syntactic Complexity

Mean length of C-units in words was chosen as a well-established measure of syntactic complexity and overall grammatical ability. Because of the previous segmentation of utterances into C-units (i.e., syntactic units consisting of one main clause and any dependent constituents, including subordinated clauses and phrases), the mean length of C-units across a narrative production serves as a good indicator of a child's spontaneous syntactical construction skills in a narrative context. This measure was computed using the *mlu* command of the CLAN program.

4.4.2 Composite Measures of Narrative Complexity

A variety of analyses have been proposed for examining mono and dual language learning children's expression of narrative macrostructure, focusing on story grammar/episodic complexity and organization (Fiestas & Peña, 2004; Liles, Duffy, Merritt, & Purcell, 1995; Petersen, Gillam, & Gillam, 2008; Peterson & McCabe, 1983; Stein & Glenn, 1979), expressive elaboration (Ukrainetz et al., 2005; Ukrainetz & Gillam, 2009), and high-point analysis (McCabe, Bliss, Barra, & Bennett, 2008).

Analytic approaches to child narrative in the story grammar tradition have been criticized for putting a too limited focus on specific episodes and not enough emphasis on higher-level narrative skills (Heilmann, Miller, Nockerts, & Dunaway, 2010). The expressive elaboration dimension (e.g., as expressed by evaluative language use) is especially valuable, though, because when telling a complete story, it is not only important to convey the mere facts on what happened, but also the meaning behind the narrated events. Therefore, to capture higher level narrative skills, inspired by Hipfner-Boucher (2011), the current study employed a scoring rubric based on three different parts: an adapted version of the Index of Narrative Complexity (adapted from Petersen, Gillam,

& Gillam, 2008), a binary decision tree for scoring the overall level of narrative elaboration and complexity (based on Westby, 2005), and a categorical scheme for evaluative language use. The final scoring rubric was termed Extended Index of Narrative Complexity (EINC) (see Appendix B for the complete instrument and Appendix C for a scoring example).

Adaptation of the Index of Narrative Complexity

The Index of Narrative Complexity (INC; Petersen et al., 2008) was developed as a criterion-referenced assessment protocol for the clinical evaluation and investigation of school-aged children's oral fictional narrative productions. Foundational to the INC are the traditional high point analysis of Labov (1972a), the well-known story grammar analysis put forth by Stein and Glenn (1979, 1982), and refinements of Peterson and McCabe (1983). The instrument uses a rubric to assign scores on a scale from 0 to 2 or 0 to 3 to a range of categories related to episodic complexity and narrative cohesion in oral narratives. The derived total score reflects the overall complexity of a narrative referring to central features: *characters, setting, initiating events, internal responses, plans, action/attempts, complications, consequences, narrator evaluations, formulaic markers, temporal markers, dialogue*, and *causal adverbial clauses*. Preliminary analyses of reliability and validity conducted by the creators of the INC yielded high interscorer agreement (90% to 96%), good test–retest correlations with 1 month between testing (.60 to .90), and strong concurrent criterion evidence for validity (.60 to .83) with the standardized assessment Test of Narrative Language (Gillam & Pearson, 2004).

To ensure reliable scoring of preschool-age DLLs' narratives, several modifications and clarifications had to be made to the instrument. Most significantly, the 'narrator evaluations' as well as the 'internal response' categories were eliminated, as they could not be found in the preschool-age DLLs' narrative productions. For the same reason, the highest point category (3) for initiating event, consequence, and knowledge of dialogue was not applied. Instead of formulaic markers, additive markers/conjunctions were included in the analysis, as they are much more common in this

age group's narrations (e.g., Bedore et al., 2010). As character introduction and information on setting were rarely elaborated, only 1 point was granted per category. Furthermore, because none of the children produced more than one causal marker, a maximum of 1 point was granted in this category. Other minor modifications included adding own examples to ease the scoring procedure. Also, following Spencer and Slocum (2010) it was specified that the problem and action/attempt had to be in reference to the main character and not a secondary character. As for temporal markers, only 1 point was assigned for repeated production of dann *[then]*, as it was used excessively by some children and otherwise could have inflated the measures. Redundant mentions of story grammar elements, such as the repeated notion of the consequences that the boy and the dog had found the frog, or recasts of previously mentioned story grammar elements using different words, were net coded twice; only the first instance was coded.

In sum, the instrument yielded an aggregated score of a child's fictional narrative performance on a macrostructure level including aspects of narrative microstructure (i.e., narrative cohesion).

Story Structure Level

For further analysis of narrative macrostructure, a story structure decision tree—a graphic tool for guiding the narrative analysis of children's stories—was chosen: In accordance with recommendations for the assessment of narratives in mono- and dual language learning children (e.g., Gagarina et al., 2012, 2015; Paul, 2007), Westby's (2005) Story Grammar Decision Tree based on Stein and Glenn's (1979) classic description of story grammar (also see Hughes et al., 1997, p. 120) was used for holistically assessing the overall maturity of narrative organization (from descriptive sequence to complete episode) from a goal-directed viewpoint. The decision tree consists of a flow chart containing a series of yes or no questions. Each "yes" answer moves the user to the next question/level, while a "no" response prompts the user to exit the flow chart whereby the narrative sequence level is indicated (see Figure 5). Optionally, scores can be assigned for each level reached.

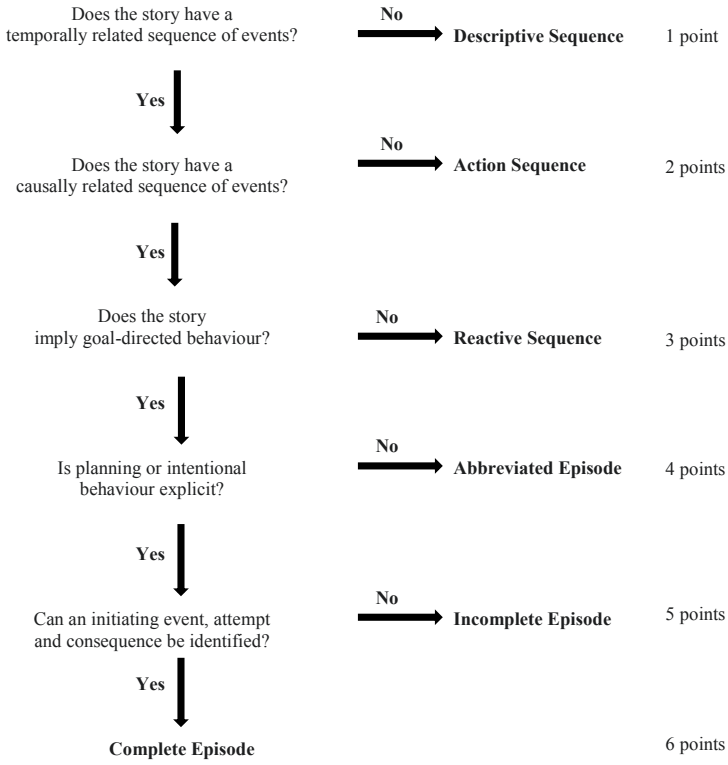

Figure 5. Binary Story Structure Decision Tree. As displayed in Paul (2007, p. 497), also see Westby (2005).

Evaluative Language Features

Furthermore, a categorical matrix for evaluative and literate language use was adopted from Hipfner-Boucher (2011, p. 64), which tallied the absence or presence of the following categories: modifiers (adjectives/adverbs), expression of intent, metacognitive verbs, emotional state terms, physical state terms, and knowledge of dialogue (see Table 6).

Table 6. *Coding and Scoring Procedures for Evaluative Language (Categorical)*

Variable	Description
Dialogue	A score of 1 indicated the presence of character dialogue (both direct and free, see examples). A score of 0 indicated the absence of dialogue. Indirect reports of speech (e.g., *he called for the frog*) were not coded. Examples: - „Jetzt endlich hab ich dich gefunden, Frosch." *["Now I finally found you frog."]* - Und dann rufen er mit dem Hund: „Wo bist du, Frosch?" *[And then he call with the dog, "where are you frog?"]*
Modifiers	A score of 1 indicated the presence of at least one modifier (adjective or adverb). A score of 0 indicated the absence of a modifier. Examples: - Hat er aber ein(en) **richtig schlechten** Tag. *[He had a **really bad** day.]* - Und da riecht ekelig. *[And there smells **disgusting**.]* - Und der Frosch war **immer noch** nicht da. *[And the frog **still** was not there.]*
Expressions of intent	A score of 1 indicated the presence of at least one expression of intent. A score of 0 indicated the absence of an expression of intent. Examples: - Fund die Frosch **muss**. *[Find the frog **must**.]* - Und sie **will** auch in die Baum. *[And she also **wants** to go in the tree.]* - Er **versucht** das zu holen. *[He **tries** to get it.]*
Metacognitive verbs	A score of 1 indicated the presence of at least one metacognitive verb. A score of 0 indicated the absence of a metacognitive verb. Examples: - Er **dachte**, der Hund hat ihn freigelassen. *[He **thought** the dog set him free.]* - Den Frosch **weiß** nicht wo der Wauwau. *[The frog does not **know** where the doggy.]*
Emotional state terms	A score of 1 indicated the presence of at least one emotional state term. A score of 0 indicated the absence an emotional state term. Examples: - Dann wird er **böse**, weil da Hund da ist. *[Then he gets **angry**, because there dog is there.]* - Kriegt er **Angst**. *[He gets **scared**.]* - Dann war der **froh**, weil er ein Babyfrosch bekommen hat. *[Then he was **happy**, because he got a baby frog.]*
Physical state terms	A score of 1 indicated the presence of at least one physical state term. A score of 0 indicated the absence of a physical state term. Examples: - Das **tut** ihm **weh**. *[That **hurts** him.]* - Der war **müde**. *[He was **tired**.]*

Note. Categories and scoring system from Hipfner-Boucher, 2011, p. 64. Own examples were added from narratives produced in this study. The INC category *dialogue* was included here for a more comprehensive picture of evaluative language use.

Combined Instrument – Extended Index of Narrative Complexity (EINC)

The individual parts were each scored[31] manually on a scoring sheet (see Appendix C). A composite score was calculated for all three parts described above, yielding a maximum of 26 points.

Speech Production Process

The speech production process/verbal fluency in narrative production was targeted via maze use (i.e., disfluencies such as false starts, filled pauses, repetitions, and revisions). More specifically, by dividing the number of maze tokens over the number of word tokens without mazes, the proportion of maze tokens was obtained.

4.4.3 Reliability for Transcription and Narrative Measures

A consensus procedure was used for transcription and segmentation in C-units. Following initial transcription by a trained research assistant, a second research assistant examined[32] the transcript in its entirety for errors in the area of spelling, to ensure accurate word counts, and in the area of utterance segmentation, to ensure accurate TNCU and MLCU calculations. Finally, language transcripts (100%) were reviewed by the author. Three remaining cases of disagreement with respect to C-unit segmentation and two cases with respect to maze use were resolved by listening to the audio recording and by discussion.

Lemmatization, i.e., reducing inflectional forms and derivationally related forms of a word to their word roots, was performed by transferring the CLAN list of words computed by the *freq* command into an Excel-worksheet and manually sorting the tokens into the following lexical categories: nouns, verbs, adjectives, adverbs, articles (definite and indefinite), pronouns, prepositions, conjunctions, and numerals. Twenty per-

[31] Bearing in mind concerns expressed by Muñoz and colleagues (2003), O'Neill, Pearce, and Pick (2004), and in accordance with Hipfner-Boucher (2011) a child-based approach rather than a text-based approach (e.g., Berman & Slobin, 1994) was adopted in scoring macrostructural aspects. As such, children were given credit for the inclusion of story grammar elements that were particular to the story they chose to tell; in this way, children were not evaluated on the basis of their ability to match the story intended by the examiner, but on their ability to generate a well-structured story.

[32] If in doubt, the research assistant listened to the audio recording while simultaneously checking the transcript.

cent of the stories were then randomly selected by a second research assistant for reliability purposes. Interrater reliability was very good overall, as measures for each word category (tokens) and NDW measure based on lemmas exceeded 90%.

To determine EINC rating consistency, a research assistant who was blinded from participant information was trained on the coding system and independently re-coded 41% of the narrative samples according to the procedures outlined above. Cohen's κ revealed high interrater agreement, $\kappa = .84$.

Finally, maze use was calculated by removing all transcription conventions for mazes from the transcripts and rerunning the CHAT *freq* count. This procedure was repeated by a research assistant for a random sample of 20% of the transcripts. To obtain an interrater agreement score, the total number of agreements was divided by the total number of item comparisons and multiplied by 100. The mean reliability score was 98.5% (ranging from 90.9% to 100%). Any disagreements were resolved through discussion before data analysis. The reliability was not counted for TNW and MLCU because the CLAN software automatically calculated these values.

4.5 Analytic Strategy

In response to the study's main research aim—to examine the fictional narrative skills of preschool-age DLLs—three research questions were derived. Analyses specific to each research question are detailed below.

After preliminary analyses for sex differences, as an initial step, descriptive analyses were run on all study measures to determine mean performance on the various narrative microstructure and macrostructure measures for the entire sample of children ($N = 51$). Then, to determine associations between narrative indices and other measures, correlations were run and analyzed for significance, directionality, and strength. Spearman rank correlation tests were computed, because this procedure does not require assumption of normality and is less sensitive to bias due to the effect of outliers, which were likely to occur in the current sample. Two-tailed correlations were run because they are more conservative than one-tailed tests, thus accounting for the limited sample size in the present study. Cohen's (1988) standard was followed to evaluate the correlation coefficient to determine the magnitude of the effect size, or the

strength of the relationship. Coefficients between .10 and .29 represented a small association, coefficients between .30 and .49 represented a medium association, and coefficients above .50 represented a large association (Cohen, 1988, pp. 77-81). Furthermore, following Rosenthal's (1996) suggestions, an effect size equivalent to or greater than r_s = .70 was considered very large (also see Ellis, 2010; Grissom & Kim, 2005). Finally, to identify factors contributing to complexity in narrative generations, univariate and multiple regression analyses were computed through the generalized linear model options in SPSS. For all analyses, potential impacts on study findings and interpretations are discussed in the results section (see section 6.6 specifically for statistical considerations).

5 Results Study I

In this section, following preliminary analyses for sex differences, all results will be displayed in regard to the specific research questions.

To investigate the first research question, *Which characteristics of narrative skills can be identified in generations of German fictional narratives by Turkish-German preschool-age DLLs?*, the descriptive statistics for microstructural narrative measures, including specifications for lexical composition, will first be presented, followed by the descriptive statistics of the macrostructural measures and the speech production process. The results are presented per category, starting with a table displaying the observed microstructure scores. To pursue the second set of research questions, *Do narrative measures correlate within narrative samples?* and *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?*, two-tailed Spearman correlation coefficients were computed and will be presented, including corresponding *p*-values, for all categories. Finally, to examine the third research question, *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?*, the outcome of a univariate and multiple regression model will be presented.

5.1 Preliminary Analysis for Sex Differences

To identify any sex differences, a Mann-Whitney U test was conducted comparing boys' ($n = 20$) and girls' ($n = 31$) ages (in months), German contact months, mothers' education in years, as well as scores on the language assessment and the Raven CPM, and all measures derived from the narratives (for means and standard deviations, see Table 7). As none of the measures yielded significant differences between female and male participants, gender was not included as an independent variable and all further analyses were conducted on the group of participants as a whole.

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DOI 10.1007/978-3-658-14673-3_5

Table 7. *Analysis of Sex Differences*

	Female		Male		
	Mean	***SD***	**Mean**	***SD***	***p***
Age (months)	57.10	7.35	58.95	7.19	.353
Contact months German	30.32	14.65	34.70	15.25	.267
Expressive language	28.07	15.20	33.50	13.15	.238
Receptive language	20.97	6.58	23.25	4.85	.275
Raven CPM	16.32	4.58	15.75	2.81	.705
Mothers' education	10.34	3.28	9.05	3.03	.390
EINC	11.45	6.64	12.55	4.95	.364
TNW	156.68	176.17	122.50	77.83	.758
TNCU	34.10	28.76	24.15	12.04	.120
NDW	41.71	28.34	40.70	21.08	.736
VOCD	17.36	10.48	20.00	6.61	.253
MLCU	4.11	1.35	4.78	1.51	.109
Maze Use	9.22	7.48	6.52	4.17	.349

Note. Scores reported for expressive and receptive language are sums based on LiSe-DaZ subtests (Schulz & Tracy, 2011); CPM, Coloured Progressive Matrices; provided data are raw scores; mother's education was measured in years. EINC = Extended Index of Narrative Complexity; MLCU = mean length of C-unit in words; NDW = number of different words in lemmas; TNCU = total number of utterances in C-units; TNW = total number of words; TTR = type-token ratio; VOCD = vocabulary diversity.

5.2 Narrative Characteristics in Generations of German Fictional Narratives by Turkish-German Preschool-Age DLLs

To examine the first research question, descriptive statistics for all targeted aspects of narrative microstructure, narrative complexity, and the speech production process were computed.

5.2.1 Descriptive Statistics for Microstructural Measures

In keeping with standard practice, the following measures were obtained for the analyzed data set: The total number of words as well as utterances in C-units as measures of narrative productivity, the number of different words and VOCD as measures of lexical diversity, and the mean length of C-units in words as a measure of syntactic complexity. For the measure of VOCD, nine children's stories precluded computation because of limited story length. Table 8 displays the mean score and standard deviation for each variable for the entirety of the sample. Inter-individual variability was pronounced for all variables. Additionally, one narrator produced an exceptionally long story (i.e., consisting of almost 1,000 words), resulting in greater variability for the group as a whole.

Table 8. *Performance on the Narrative Microstructural Sample Measures*

Measure	*M*	*SD*	Range
TNW	143.27	145.63	11-998
TNCU	30.20	23.99	7-172
NDW	41.31	25.52	4-120
VOCD[a]	18.30	9.28	1.50-46.23
MLCU	4.38	1.44	1.00-7.75

Note. $N = 51$. MLCU = mean length of C-unit in words; NDW = number of different words in lemmas; TNCU = total number of utterances in C-units; TNW = total number of words; TTR = type-token ratio; VOCD = vocabulary diversity.
[a] $n = 42$.

5.2.2 Descriptive Statistics for Narrative Complexity Measures

Children's EINC scores (maximum score: 26) ranged from 3 to 26, with a mean score of 11.88 ($SD = 6.00$). To gather a more detailed picture of child performance, the individual components of the EINC will also be presented.

Story Grammar

Overall, the EINC included six story grammar components. Character and setting were scored categorically (present or absent), as displayed in Figure 6.

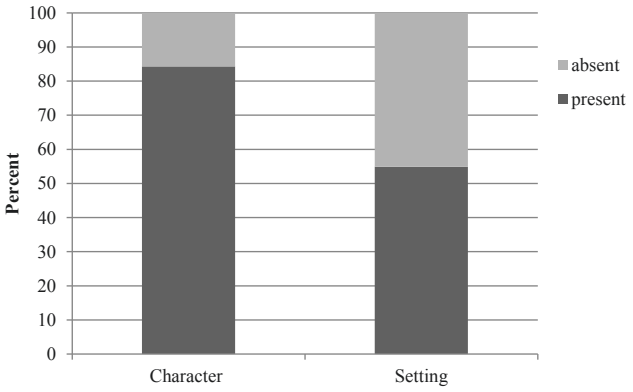

Figure 6. Relative Frequency of the Inclusion of Character and Setting Information ($N = 51$)

More specifically, the majority of children (84.3%) made direct references to the main character(s), i.e., the boy and/or the dog (see Bamberg, 1994), for example[33], „Da war so ein Frosch mit ein Hund und mit ein Junge. Die haben gespielt." *[There was a frog with a dog and with a boy. They were playing.]*. Meanwhile, information on the setting of the story, for example, „Ein Junge schläft mit den Hund. Das ist in der Nacht." *[A boy sleeps with the dog. It is in the night.]*, was only included in about half of the narratives (54.9%).

As displayed in Figure 7, the remaining story grammar components, which serve to elaborate the episode system, were assessed on a scale from 0 (absent) to 2 (elaborated) for a maximum total score of 10. Children's scores covered the whole range from 1 to 10, with a mean score of 5.41 ($SD = 3.48$). The inclusion of an initiating event (initial and elaborated, overall 58.8%), e.g., „Da ist der Frosch einfach abgehauen" *[There the frog simply ran off],* was usually tied to an elicited response from the character(s) (elaborated, 52.9%), e.g., „Die suchen Frosch" *[They are looking for frog]*. Also,

[33] All examples were taken from stories produced in the current study.

while 7.8% of stories were purely deictic and did not include any mention of actions or attempts taken by the main character(s), for example, „Da Junge. Die Hund. Zwei Biene." *[Boy there. The dog. Two bees.]*, the majority of children included actions in their stories; even if in only 45.1% of the stories included actual attempts, that is, actions taken by the main character(s) that were directly related to the initiating event (see previous example).

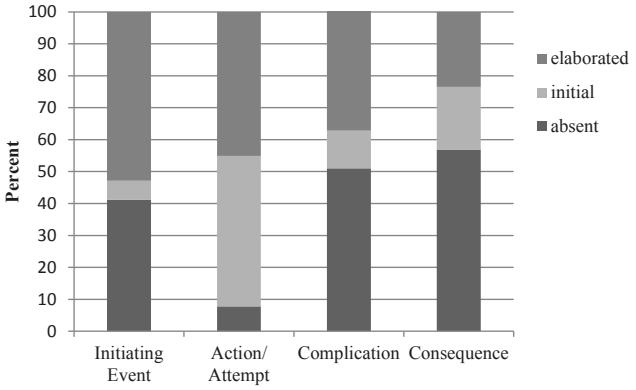

Figure 7. Relative Frequency of the Inclusion of Story Grammar Components ($N = 51$)

Approximately half of the stories (51.0%) did not include mentions of a complication, i.e. an event that prohibits the execution of a plan or action taken in response to an initiating event, while 11.8% children included one and 37.3% made mention of two complications (e.g., „Er suchte den ganzen Schnee durch, aber er hat ihn nicht gefunden. […] Und dann ist er runtergefallen und er ruft noch mal. Und er findet nicht." *[He searched through the whole snow, but he did not find him. […] And then he fell down and he calls again. And he does not find.]*). Finally, consequences—meaning instances related to the initiating event resolving the problem (or not)—emerged in 43.1% of narratives, while 23.5% even included two consequences, for example, „Und da haben sie die Frösche gefunden. […] Und dann hat ein Frosch von den Kleine genehm(t) mit." *[And there they found the frogs. […] And then one frog of the little ones took with them.]*.

Conjunctions and Markers

In the area of connectivity, the use of additive, temporal, and causal markers was targeted. Of the 51 participants, 6 children (i.e., 11.8%) did not produce any markers, while the majority of narrators (88.2%) used at least one additive marker (see Figure 8).

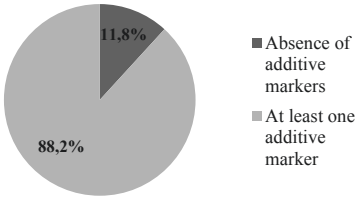

Figure 8. Relative Frequency of Use of Additive Markers ($N = 51$)

As displayed in Figure 9, conjunctions and markers referencing temporality were used by 66.7% of the children, with almost 40% of the DLLs using two or more temporal markers.

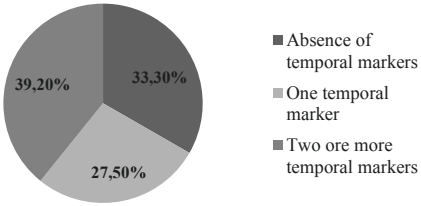

Figure 9. Relative Frequency of Use of Temporal Markers ($N = 51$)

Finally, almost 10% of the children used causal markers in their narrative productions (see Figure 10).

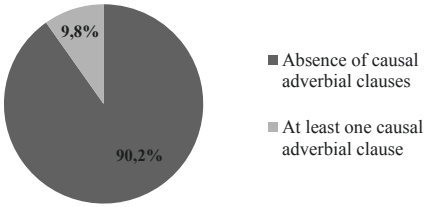

Figure 10. Relative Frequency of Use of Causal Markers ($N = 51$)

Overall Story Structure

Based on the binary decision tree structure (see section 4.4.2), narratives were scored holistically on their story structure level ranging from 1 (descriptive sequence) to 6 (complete episode). Figure 11 presents frequency distributions of the six categories across the sample.

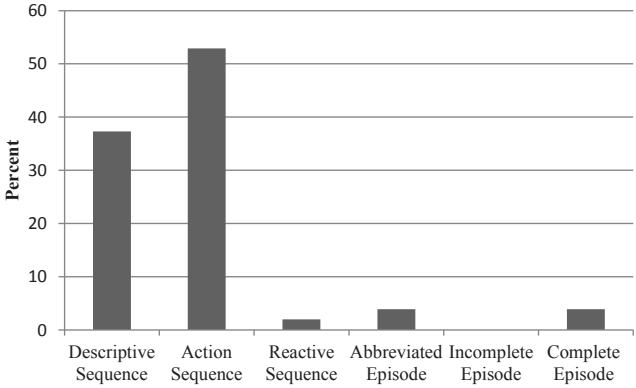

Figure 11. Relative Frequency of Story Structure Levels ($N = 51$)

The first two categories, descriptive and action sequences were clearly overrepresented in the sample. Most children produced action sequences (52.9%), that is, a narrative structure featuring a temporal cohesion, but no causally related sequences. More than one-third of the narratives were deemed descriptive sequences where a clear connec-

tion between the pictures was not elaborated. Only two children (3.9%) produced complete episodes which featured both goal-directed and intentional behavior as well as initiating event, attempt, and consequence.

Evaluative Language Use

The use of evaluative language aspects, as displayed in Figure 12, was differentially distributed across categories. By far the most commonly produced elements were modifiers (i.e., adjectives and adverbs), which serve to elaborate noun phrases (e.g., Frosch ist immer noch nicht da. *[Frog is still not there.]*; Und da riecht ekelig. *[And there smells gross.]*).

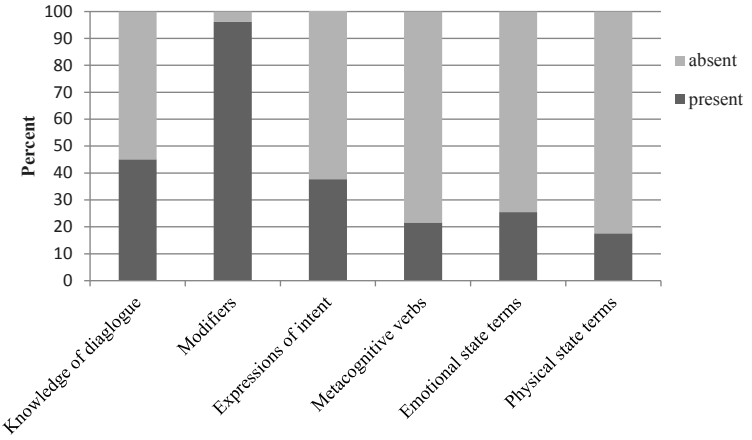

Figure 12. Relative Frequency of Use of Evaluative Language Aspects ($N = 51$)

Furthermore, 45.1% of children included dialogue, i.e., a comment or statement made by a character or by characters engaging in conversation (e.g., Und der sagt: „Das stinkt." *[And he says, 'That smells'],*) in their Frog Story narrations. The dialogue was introduced primarily using the verb sagen *[to say]* and primarily consisted of one line. Expressions of intent, which further help to convey the character's perspective, e.g., Und der will den finden *[And he wants to find it]*, was present in 37.3% of the stories. Further internal state terms were only included in a minority of the narrative samples

(metacognitive verbs: 21.6%, emotional state terms: 25.5% and physical state terms: 17.6%).

In conclusion, it can be summarized that many children used evaluative language in their narratives. While little spontaneous mention of mental state terms were observed, modifiers were included in almost all stories, followed by dialogue included in almost half of the stories.

Speech Production Process

Maze use widely varied between children (0.00 to 24.32) with a mean percentage of 8.16 of maze-words per story (*SD* = 6.48).

After this descriptive overview of produced aspects of microstructure, macrostructure, evaluative language use, the combined score of narrative complexity, and the speech production process, the following steps of the analytical process explores how they are related to one another, with concurrent child assessments as well as with aspects from participants' home language and literacy environment.

5.3 Correlational Analyses

To address the second set of research questions, regarding which narrative measures were significantly correlated within narrative samples and to what extent measures of narrative ability correlated with age, in addition to the concurrent measures of linguistic skills as well as characteristics of the home language environment, Spearman correlations were calculated.

5.3.1 Correlational Patterns Between Narrative Measures

Among the microstructural variables, for measures of narrative productivity (total number of words (TNW) and total number of C-units (TNCU)), the highest correlations emerged with a measure of lexical diversity, specifically the number of different words in lemmas (NDW, r_s = .81 to .92). For syntactic complexity (mean length of C-unit, MLCU), the strongest correlations emerged with TNW (r_s = .79) and NDW (r_s = .75). Also, indices of narrative microstructure and macrostructure were clearly

related to another; the correlations for all domains of narrative microstructure (TNW, TNCU, NDW, VOCD, MLCU) and narrative complexity (EINC) were positive, significant, and high in strength (r_s = .62 to .85), as displayed in Table 9. Maze use was the only exception and was not correlated with any of the other narrative measures.

Table 9. *Two-tailed Spearman Rank-Correlations between Narrative Performance and Child Measures*

Variable	1	2	3	4	5	6	7	8	9	10	11
1. Age	—										
2. Ex. lang.[a]	.42**	—									
3. Rec. lang.	.48**	.55**	—								
4. CPM	.32*	-.56	.30*	—							
5. TNW	.42**	.49**	.52**	.29*	—						
6. TNCU	.26	.41**	.41**	.14	.90**	—					
7. NDW	.38**	.55**	.57**	.27	.92**	.81*	—				
8. VOCD	.27	.50**	.52**	.06	.49**	.38*	.74**	—			
9. MLCU	.46**	.44**	.47**	.36**	.79**	.46**	.75**	.28	—		
10. SG Score	.49**	.47**	.58**	.28*	.73**	.58**	.80**	.53**	.68**	—	
11. EINC	.53**	.59**	.68**	.29*	.77**	.63**	.85**	.62**	.71**	.93**	—
12. Maze use	-.13	.01	.05	-.27	.16	.22	.15	.09	.02	.15	.08

Note. N = 51. Expressive and receptive language are raw scores sums based on LiSe-DaZ subtests (Schulz & Tracy, 2011); nonverbal intelligence based on Raven Coloured Progressive Matrices (CPM) (Raven, 1995). EINC = Extended Index of Narrative Complexity; MLCU = mean length of C-units in words; NDW = number of different words in lemmas; SG Score = story grammar score; TNCU = total number of utterances in C-units; TNW = total number of words; VOCD = vocabulary diversity. Maze use was calculated by dividing all words containing disfluencies, such as false starts, filled pauses, repetitions, and revisions over total number of words.
[a] n = 50.
* p < .05. ** p < .01.

5.3.2 Correlational Patterns Between Narrative Measures and Further Child Data

Further correlation analyses targeted relations between measures of narrative abilities and further child data, including age, concurrent measures of linguistic skills, as well

as the exploration of relations between narrative sample measures and variables of the home language environment.

Age in Months

For the quantitative measures of narrative productivity, age was significantly and moderately correlated with TNW (r_s = .42, p < .01), but not with TNCU (r_s = .26, p = .069). For the lexical diversity measures, only one variable was moderately correlated with age, namely number of different words (in lemmas) (r_s = .38, p < .01), while no correlations were found between age and the D statistic (r_s = .27, p = .079) in this group. Age was also moderately correlated with MLCU (r_s = .46, p < .01). Also, positive correlations emerged between age and macrostructure (Story grammar (SG) score, r_s = .49, p < .01) and narrative complexity (EINC, r_s = .53, p < .01). The percentage of maze use at the word level, i.e., the measure of speech production, was not correlated with age (r_s = -.13, p = .734).

German Language Skills

Correlations between expressive and receptive language and all measures of narrative microstructure and narrative complexity were positive, significant, and moderate-to-high in strength (r_s = .41 to .68), with the strongest correlations surfacing between expressive and receptive language and lexical diversity (NDW and VOCD, r_s = .50 to .57) as well as expressive and receptive language and narrative macrostructure and narrative complexity (SG score and EINC, r_s = .47 to .68). No significant correlation emerged between German language skills and the percentage of maze use at the word level (expressive language skills, r_s = .01, p = .932; receptive language skills, r_s = .05, p = .734).

Language Contact

The average language contact of a child during the week (mainly Turkish, approximately balanced, or mainly German) was positively and moderately correlated with German expressive language measures (r_s = .30, p = .032), such that the more exposure to German children had over a typical week, the higher their expressive language

scores. However, for receptive language, the relationship was not significant (r_s = .23, p = .111). In relation to narrative measures, the only significant correlations were small-to-medium in magnitude and emerged with lexical diversity (NDW, r_s = .30, p = .032, macrostructure (SG score, r_s = .29, p = .028), and narrative complexity (EINC, r_s = .31, p = .028).

Turkish Language Skills

Participants' Turkish language skills were assessed via parent rating. While not being correlated with age in months (r_s = -.17, p = .249), the proficiency level of Turkish skills in children was negatively correlated with standardized measures of German expressive language (r_s = -.46, p < .01) as well as German receptive language (r_s = -.43, p < .01), indicating that children who were rated as having higher Turkish language skills achieved lower raw scores on the German language assessment. Furthermore, Turkish proficiency ratings were correlated with the average language input patterns over the course of a week, such that the more German was used, the lower Turkish ratings were (r_s = -.50, p < .01). Also, there was a small but significant correlation between the amount of different speakers of Turkish in a child's environment and that child's individual Turkish skills (r_s = .29, p = .044).

In relation to narrative measures, most significant correlations were negative and emerged with lexical diversity (NDW, r_s = -.30, p = .033), syntactic complexity (MLCU, r_s = -.30, p = .028), and narrative complexity (EINC, r_s = -.32, p = .025), such that the higher the child's Turkish skills, the lower the number of different words produced, the lower the mean length of C-unit, and the lower the narrative complexity in the children's German Frog Story productions. Also, Turkish language proficiency and the overall number of speakers in the home environment addressing the child in Turkish were positively and moderately correlated with maze use (r_s = .38, p < .01 and r_s = .41, p = .01, respectively), such that children whose Turkish proficiency was rated higher and who were exposed to more Turkish-speaking interlocutors, produced more maze-influenced words in their German narratives. Meanwhile, maze use was not correlated with the amount of language mixing by primary caregivers (mother's frequen-

cy of language mixing, $r_s = .12$, $p = .404$; father's frequency of language mixing, $r_s = .09$, $p = .516$).

Home Literacy Environment

While the number of books in the home (both Turkish and German) was correlated with the frequency of shared book reading ($r_s = .46$, $p < .01$), no other significant correlations emerged with respect to measures of the home language environment, child measures, or measures of narrative ability.

5.4 Regression Analysis

The final research question was posed to explore whether chronological age, LiSe-DaZ expressive vocabulary scores, and performance on the CPM—or all three together—could predict the complexity of children's narrative generations (as measured by EINC), and how much of the variance they predict. These predictors were chosen for specific reasons, as outlined below.

Previously discussed in chapters 2 and 3, the production of a successful fictional narrative requires the cognitive coordination of a story's global organization (macrostructure) and linguistic explication (microstructure) of a series of made-up events. In DLLs, macrostructure was found to be largely language-independent, as research findings indicated that early literacy skills and narrative macrostructure components are more likely to be associated between the two languages of DLL children than more language-specific lexical and morphosyntactic oral language abilities that come to play in narrative microsturcure (e.g., Cárdenas-Hagan et al., 2007). However, research including DLLs with varying skill levels in their respective languages revealed that both narrative coherence and linguistic expression might suffer when the learner's array of linguistic devices in the respective language is very limited (Montanari, 2004). Furthermore, the notion that narrative expression improves with chronological age is well documented in research with typically developing children (e.g., Berman & Slobin, 1994; Hughes et al., 1997). For these reasons, it was expected that age in months (independent variable 1), expressive language (independent variable 2), and nonverbal intelligence (independent variable 3) would all significantly predict and account for a

high amount of variance in DLLs' narrative complexity (as measured by EINC, dependent variable).

As displayed in Table 9, correlations (Spearman, two-tailed) between predictor variables (age in months, expressive language, and nonverbal intelligence) were small to moderate, with none above 0.50, suggesting that the variables were representing reasonably separate aspects contributing to narrative complexity. As to be expected, the correlation between the nonverbal intelligence measure and the expressive language score was not significant. Univariate regression analyses were performed first to identify the contribution of individual factors to the multivariate model. When tested individually, age, expressive language, and nonverbal intelligence all contributed significantly to the variance of the outcome. Table 10 summarizes the results of the univariate and multiple regressions. When computed by multiple regression, the model with the same three independent variables predicting narrative complexity was statistically significant: ($F(3, 46) = 18.14$, $p < .01$, $R^2 = .54$, $R^2_{Adj} = .51$).

Table 10. *Summary of Regression Analyses for Variables Predicting Narrative Complexity*

	Univariate analysis		
Factor	***B***	***SE B***	***β***
Age	0.46	0.10	.54**
Expressive language[a]	0.26	0.05	.62**
Nonverbal intelligence	0.53	0.20	.35*
	Multivariate analysis		
Factor	***B***	***SE B***	***β***
Age	0.17	0.10	.21
Expressive language[a]	0.22	0.05	.53**
Nonverbal intelligence	0.41	0.16	.28*

Note. $N = 51$. Expressive language is a sum based on LiSe-DaZ expressive subtests (Schulz & Tracy, 2011); nonverbal intelligence is based on Raven Coloured Progressive Matrices (CPM) (Raven, 1995). Provided data are raw scores. Reported are Spearman's correlation coefficients (two-tailed).
[a] $n = 50$.
* $p < .05$. ** $p < .01$.

The three independent variables accounted for 54.2% of variance in the narrative complexity. More specifically, the standardized discriminant coefficients for the multiple regression model revealed that the strongest predictor was expressive language. Accordingly, it should be noted that expressive language contributed more to the EINC score variance than the other two predictors in terms of the relatively higher beta coefficient, explaining a significant proportion of variance in narrative complexity. Nonverbal intelligence was the second highest contributor, while age was the smallest.[34]

[34] Note that the EINC score included story grammar, connective devices, and evaluative language use (see Appendix B). As the latter two aspects were possibly also heavily influenced by language skills, an additional multiple regression analysis was conducted, which only targeted narrative macrostructure (as measured via story grammar score, i.e., the sum of used story grammar elements). Results were comparable to the EINC model: The model with age in months, expressive language, and nonverbal intelligence predicting narrative story grammar was statistically significant ($F(3, 46) = 12.85$, $p < .01$, $R^2 = .46$, $R^2_{Adj} = .42$). The three independent variables accounted for 45.6% of variance in the expression of narrative story grammar. Similar to the analysis featuring the EINC score, expressive language emerged as the strongest contributor. For further information, see Appendix E.

6 Discussion Study I

The current study examined one specific type of narrative, namely fictional narrative generation, based on a wordless picture book, told by Turkish-German DLLs who were on average 4 years and 8 months old. Based on theoretical and empirical underpinnings presented in chapters 2 and 3, research objectives and questions were derived to extend the knowledge base on narrative skills in preschool-age children to DLLs of Turkish and German, who represent an understudied group. For the purpose of this study, to be classified as a DLL, the children needed to have systematic language contact with German for at least 10 months, attend a German ECEC institution, and produce output in both languages daily (in families who conversed in Turkish exclusively, this criterion was limited to weekdays, when German was spoken in the ECEC institution). The primary objective of this research was to generate insight into German narrative skills of typically developing German-acquiring children in the preschool age, who have had varying exposure to the Turkish language. To accomplish this objective, narrative productions were first examined using a multifaceted approach to narrative indices. Second, this study examined patterns of associations among narrative skills, standardized developmental measures, as well as aspects regarding participants' home language and literacy environment. Finally, by conducting univariate and multiple regression analyses, predicting factors of narrative complexity were explored.

The first section in this chapter offers a detailed discussion of the study results, organized by the three research questions under examination. In the second section, the study limitations will be carefully discussed while also pointing to considerations for future research. Finally, the third section presents a general discussion of the main findings.

6.1 Turkish-German DLLs' Fictional Narrative Productions

Despite the fact that the production of narratives is sometimes conceptualized as a single skill level, it comprises multiple aspects. Therefore, the analysis targeted a variety of narrative sub-skills relevant to the narrative acquisition process in reference to each

U. Licandro, *Narrative Skills of Dual Language Learners*, Diversität in Kommunikation und Sprache / Diversity in Communication and Language,
DOI 10.1007/978-3-658-14673-3_6

other and further child data. The forthcoming sections discuss the results of the analyses conducted in reference to the current research literature.

6.1.1 Characteristics of DLLs' Fictional Narrative Productions

The first research question was aimed at exploring the various aspects expressed in the German narrative productions by providing descriptive statistics for all obtained measures.

Narrative Microstructure

Among the examined microstructural aspects were narrative productivity (total number of words, number of C-units), lexical diversity (number of different words in lemmas, D-statistic), and syntactic complexity (mean length of C-unit).

Overall, microstructural measures of the current sample were comparable to results reported by previous research[35]. Bedore and colleagues' study (2006) examined spontaneous Frog Story narratives of typically-developing DLLs (M_{age} = 5 years, 9 months) who were, similar to participants in the current study, exposed to varying levels of a language (Spanish) different from the main language in ECEC (English). They reported a similar total number of C-units produced (M = 33.77, SD = 12.32). Furthermore, in the Bedore study, the mean length of C-units was slightly higher (M = 5.11 words, SD = 0.96) as was the number of different words, but mind the mean age difference of roughly a year and, of course, the fact that different linguistic systems were at play.

Lofranco et al. (2006) used a different story than the Frog Story to assess fictional story generation in DLLs, and participating children were considerably older (M_{age} = 7 years, 7 months) than children in the current study. However, the average productivity based on the mean total number of words in the current study (M = 143.27,

[35] Preferably, the narrative productions would be compared to those of preschool-aged children of Turkish-German backgrounds. As these data, to my knowledge, do not exist (or are not published), reference data from studies including DLL children from other linguistic and cultural backgrounds (mainly English and Spanish, also see Table 2) are used. As narrative construction is influenced by the linguistic structure of the language children speak, for example, when marking aspect (for example, see Berman & Slobin, 1994), caution needs to be applied when comparing computed measures.

SD = 145.63) was comparable to the mean number of words reported in the Lofranco study (*M* = 129.50, *SD* = 38.31), so that further comparisons were drawn. Notably though, the number of C-units differed, such that children in the Lofranco study produced on average only a mean of *M* = 17.13 (*SD* = 2.23) C-units; the mean number of C-units produced by children in the current study was *M* = 30.20.(*SD* = 23.99). However, this is not surprising, because of the age difference of roughly three years in the children. The older children in the Lofranco study likely embedded their lexical choices in more advanced syntactical constructions, such as subordinate clauses, which affected the overall number of C-units.

Finally, Fiestas and Peña (2004) analyzed the spontaneous English-language Frog Story generations of 4-to 6-year-olds who were exposed to Spanish at the home environment, and found productivity rates (total number of words: *M* = 186.83, *SD* = 76.40; number of C-units: *M* = 33.75, *SD* = 9.99) and syntactic complexity rates (mean length of C-unit: *M* = 5.44, *SD* = 0.78) quite similar to the ones in the current study.

Overall, when drawing these comparisons, it should be considered that the cultural and linguistic backgrounds from the children differed, so that no definite conclusions can be drawn. Still, these results can be viewed as an indication that the current sample is representative of preschool-aged DLLs' narrative ability on the microstructure level. Furthermore, the pronounced variability in all targeted variables of microstructural expression (i.e., productivity, lexical diversity, and syntactic complexity), as indicated by large standard deviations, should be noted. In the light of previous research, this outcome is not surprising. Kupersmitt and colleagues (2014) reported large standard deviations to be particularly present in narrative productions of 6-year-old DLLs, pointing to a high inter-group variability among young language learners. Similarly, in Uccelli's and Páez's (2007) study, fictional narratives produced by 5-year-old DLLs in response to a picture sequence were characterized by large variability in productivity (total number of words was 0 to 70). Furthermore, Muñoz and colleagues (2003) reported high inter-individual differences in narrative productivity and sentence organization in preschoolers' Frog Story generations. On the one hand, these differences likely reflect children's developing levels of skill in learning how to tell a story, but,

on the other hand, they also suggest that, taken by themselves, microstructural measures may not generate a clear picture of narrative ability in young DLLs. Especially in this population, narrative expression on the microstructure level may develop well into adolescence (Gámez et al., 2015).

Narrative Complexity

This section will summarize and discuss the findings in the targeted areas of narrative complexity.

Extended Index of Narrative Complexity (EINC)

Narratives productions covered the whole range from initial narrative attempts, reaching only minimal levels of narrative complexity to full-blown elaborated stories reaching the highest possible scores. Individual aspects of the EINC will be discussed in more detail below.

Story Grammar

In the current study, most children introduced the main character(s) with a direct reference (story element: character), while only about half of the children anchored their story plot in space and/or time (story element: setting). Almost 60% of children made explicit reference to the initiating event, which inaugurates the event sequence constituting the story. However, a direct mention of a complication was still missing in approximately half of the narratives. Also, about half of the participants treated the final pictures of the story as scenes disconnected from the rest of the story and thus did not explicitly mention a consequence.

These results are comparable to prior research on story grammar expression in preschool-aged children, suggesting that an inclusion of the full range of main story grammar elements, especially of consequences, cannot be reliably expected before the school-age (e.g., Berman & Slobin, 1994; Fiestas & Peña, 2004; Peterson & McCabe, 1991) and that preschool-aged DLLs may exhibit considerable inter-individual variability in expressing story grammar elements (e.g., Muñoz et al., 2003).

Conjunctions and Markers

The developmental shift from using intra- to inter-sentential devices is crucial for expressing complex relationships in a narrative context. Participants of the current study most often expressed inter-clausal connectivity by linear chaining events in applying connectors such as *and*, and *then*: Additive markers were present in almost 90% of the narratives, making them the most ubiquitous conjunction used. Also, roughly two-thirds of the children in the current study already used temporal markers to relate sequences. Only 10% of the produced stories included subordinated sentence structures with causal connectors.

These results falls in line with previous research on monolingual children (Peterson & McCabe, 1991) and DLLs (Kupersmitt & Berman, 2001), where coordinating conjunctions were posited as the earliest and most ubiquitous markers of connectivity in children's narratives.

Story Structure Level

Overall, as already established by research on monolingual child narrators of the Frog Story from different cultural and linguistic backgrounds (e.g., Berman & Slobin, 1994) as well as DLLs (Kupersmitt & Berman, 2001), fictional generations in this population and age group were found to be in the earliest stages of complexity (also see conjunctions and markers). For example, Berman and Slobin (1994) reported that children beginning at 5 to 7 years of age will construct narratives around an action structure, i.e., produce an internally coherent narrative that consists of an initial goal, attempts to reach the goal, and an outcome.

Still, two children in the current study already displayed this type of advanced fictional narrative (including temporal and causal references). Unsurprisingly, they were among the oldest (aged 4 years, 9 months and 5 years, 2 months, respectively) and among those reaching the highest raw scores of German language skills as well as nonverbal intelligence. The overwhelming majority of children produced narratives at a much lower complexity level. When holistically assessing the overall maturity of narrative organization, more than one-third of the children produced descriptive sequences; i.e.,

treating each picture as an isolated event by describing the contents of each picture at a local level. In almost 53% of the produced narratives, temporal referencing was present, so that produced stories could be characterized as action sequences.

Evaluative Language Use

The use of evaluative language aspects was differentially distributed across categories. While little spontaneous mention of mental state terms was observed, modifiers (i.e., adjectives and adverbs) were included in almost all stories, followed by dialogue, which was present in almost half of the stories (see section 5.2.2).

Curenton and Justice (2004) examined the use of evaluative language features in monolingual preschoolers' ($N = 67$) Frog Story generations in the United States. Similar to the current study, they found frequent inclusions of adverbs (in around one-third of all C-units) and lower incidences of mental state terms (mental and linguistic verbs, in around one-tenth of C-units). Furthermore, Ukrainetz and colleagues (2005) examined spontaneous narrative constructions by 5-to 6-year-old monolingual English speaking children ($N = 32$) in the United States based on a five-picture sequence. Similarly, the most used type of evaluative language was modifiers, by a wide margin. While dialogue was present in about 25% of narrative productions in the Ukrainetz et al. study (2005), participants in the current study included dialogue in almost half of their narrative productions. Finally, Ukrainetz et al. (2005) reported internal state words[36] to form the lowest category of mentions; they were present in about 20% of the narratives. For participants in the current study, internal state terms also reached the fewest mentions. Important exceptions were expressions of intent, which were present in over one-third of the stories. Keep in mind though, that the Frog Story was considerably longer than the picture sequence used in the Ukrainetz et al. (2005) study. Also, a comparison between DLLs and monolinguals is not ideal, because it typically occurs to the detriment of DLLs. However, in the area of internal state term use, Blom & Boerma (2015, July)

[36] The specific descriptions of those terms was: "Words that reflected intentions and thoughts (e.g., decided, thought), emotional motivations and reactions (e.g., depressed, sad, angry), and physical states (e.g., tired, exhausted)" (Ukrainetz et al., 2005, p. 1368), so that they fit exactly four of the categories selected for analysis in the current study: Expression of intent, metacognitive verbs, emotional state terms, and physical state terms.

reported 5-to-6-year old sequential DLLs to produce even higher numbers of internal state terms in a self-generated fictional narrative than monolingual children.

Speech Production Process

To gain insight into the internal process of language formulation, the current study also targeted a measure specific to the speech production process: maze use. Children's overall maze use, which was computed by calculating the percentage of maze words over total number of words, varied widely, from 0.0% to 24.32%. On average, children produced 8.16% of maze-influenced words per narrative.

This percentage is considerably lower than the one reported by Fiestas and colleagues (2005), who reported an average maze use of 14% in functionally monolingual and 20% in functionally bilingual children, respectively, who were on average 6 years old. It should be noted, however, that the Fiestas study was based on a smaller sample ($N = 30$). Moreover, it is important to consider that DLLs who participated in the current study were younger overall ($M_{age} = 4$ years, 8 months), and that the ability to revise produced speech acts might increase with age (Gámez et al., 2015)[37]. The capacity to monitor and repair own language acts in the realm of storytelling may also be connected to the typical advances in the formulation, i.e., complex language use. For example, Bedore et al. (2006) reported positive correlations between productivity (number of words), syntactic complexity (mean length of utterance), and utterance-level maze use.

As age-related growth in narrative microstructure has been reported in DLLs (e.g., Bedore et al., 2010; Laurent et al., 2015; Muñoz et al., 2003), the higher production of mazes in Fiestas et al.'s study might have been connected to longer and more syntactically elaborated narrative productions. However, this notion could not be verified, as Fiestas and colleagues (2005) did not report microstructural measure.

[37] However, the current study found no correlations between maze use and age.

Subsummary

Much information can be drawn from the descriptive results; however, a direct comparison to prior research is limited insofar that the current study is the first to date to include the particular participant group. In gross terms, narrative measures were within age-appropriate expectations. Similar to previous research focusing on young children, both mono- and dual-language learners have shown a large variability in oral narrative performance on the microstructure level (e.g., Justice et al., 2006; Liles et al., 1995). Also, unsurprisingly, high inter-individual variations between children emerged on the content-level, as produced stories represented the whole continuum of what can be thought to be a fictional narrative: While most children produced simple narratives that lacked semantic richness and omitted important story elements, some children's narratives were rich in both linguistic expression and narrative content. To fully understand these distributional patterns, further investigation is needed.

In light of these results, the considerable demand of creating extended discourse under these circumstances should be acknowledged. After all, drawing on research on monolingual children, Berman (2001) reasons that

> "[…] structured tasks such as elicitations based on picture-series or picturebooks of the kind favored for both clinical and research purposes yield well-structured narratives only at relatively late preschool age or beyond."
>
> (p. 424)

Beyond the characterization of narrative abilities displayed by preschool-age DLLs, the next step in the analyzation process targeted relations between narrative variables and other child data to gain further insight into narrative production skills.

6.1.2 Relations between Narrative Performance, Language Skills, and Measures of the Home Language Environment

To gain insight into relations of child narrative and other measures, two-tailed Spearman correlation analyses were conducted.

Intercorrelations of Narrative Measures

As reported by previous studies, positive and high correlations emerged between the narrative measures (except for maze use, see section 5.3.1). For example, Bedore et al., (2010) found lexical diversity to be highly correlated with syntactic complexity.

Narrative Microstructure

First, clear patterns between children's age and narrative performance emerged. Older children tended to produce longer stories and used a larger variation of words. Those words were not spread out over more C-units, as no significant correlations arose between age and total number of C-units, but seemed to be used to construct more complex C-units (moderate correlations between age and MLCU). The finding that older children will tell stories which are more well-elaborated and well-constructed falls in line with previous research reporting age-related growth in narrative development. For example, Terry and colleagues (2013) reported that the number of C-units in Frog Story retells of preschool-age children decreased over a school term while indexes of other narrative micro- and macrostructure measures increased. Furthermore, other longitudinal studies also reported an age-related increase in total number of words, number of different words, and mean length of utterance in DLL's fictional narrative productions (Bedore et al., 2010; Laurent et al., 2015; Miller, et al., 2006; Uccelli & Páez, 2007). Muñoz and colleagues (2003), however, found similar measures of productivity (total number of words) and lexical diversity (number of different words) in 4-and 5-year-old DLLs' Frog Story generations, which the authors mainly contributed to high inter-individual variability on these measures. Similarly, the current study found pronounced differences between participants (see section 5.2.1), so caution must be applied when inferring solely from productivity to narrative competence. Measures of sentence structure, such as the mean length of C-units, may be a better indicator of developmental progress (also see Muñoz et al., 2003).

Second, microstructure measures were also related to the German language skill-level, as indicated by significant correlations which were moderate to high in strength. This result was well-expected, as microstructure measures heavily draw on the narrator's

lexical and morpho-syntactical knowledge in the target language. For example, Bedore and colleagues (2010) reported that in preschool-age children's English-language narratives (who were Spanish-English DLLs), levels of language ability were correlated with targeted microlevel narrative abilities, specifically MLU (as a measure of grammatical complexity) and NDW (as a measure of lexical diversity).

Furthermore, a medium correlation related more exposure to German at home to higher lexical diversity scores (NDW). This finding is not surprising, as vocabularies of children receiving a higher input in another language (here: Turkish) are typically distributed across languages (e.g., Core, Hoff, Rumiche, & Señor, 2013; Hoff & Core, 2015; Rydland et al., 2014a).

Narrative Macrostructure and Complexity

Similar to most microstructure measures, age was also positively correlated with story grammar use and overall story complexity (as measured by EINC). Again, these results support prior longitudinal research, suggesting an age-related (and, one may argue, experience-related) growth in complexity on the content-level (e.g., Laurent et al., 2015; Melzi et al., 2013; Montanari, 2004; Uccelli & Páez, 2007). For example, Montanari (2004) found narrative complexity to increase with age across and within DLL's languages.

Also, while not all previous studies reported an influence of the amount minority language use at home on the expression of macrostructure in another language (Hipfner-Boucher et al., 2015), the current study found correlations, albeit small to moderate in effect, between the average language contact during the week and the story grammar score as well as EINC, such that a higher exposure to German was related to higher scores in the areas of narrative complexity and macrostructure. One possible explanation for this relation is that the amount of German contact was also positively and moderately correlated with expressive language skills ($r_s = .30$, $p = .032$), which in turn were moderately to highly correlated with narrative macrostructure (story grammar) and narrative complexity (EINC). Uccelli and Páez' (2007) reported a similar relation. In their study, expressive vocabulary was positively and moderately associat-

ed with narrative macrostructure in both of young children's languages (Spanish L1 and English L2), such that DLLs with larger L2 vocabularies reached higher narrative quality scores for their L2 narratives. For an in-depth discussion of the importance of DLLs' language skills for the expression of narrative complexity, see sections 3.4 and 3.5.

Speech Production Process

Generating a fictional narrative posits a considerable challenge to preschool-aged children, especially to DLLs, which may be due to the "formulation, monitoring and repair of language to meet the demands of storytelling" (Fiestas et al., 2005, p. 739). The current study investigated the relations between maze use, narrative skills, German language skills, nonverbal intelligence, as well as measures of the home language environment. The finding that percentage of maze use on the word level was positively and moderately correlated with Turkish language skills and the number of Turkish language interlocutors (see section 5.3.2), but no other measure of narrative skill or further child data, suggests that children with higher Turkish knowledge were likely to produce higher numbers of mazes.

These results fall in line with findings of Bedore and colleagues (2006), who reported that speakers with larger vocabularies (as determined by parental and teacher report) used higher amounts of mazes. Furthermore, Lofranco, Peña, and Bedore (2006) found that higher levels of exposure to Filipino and a lower number of years of exposure to English yielded high maze use in narrative retells of 6- and 7-year-old DLLs of Filipino and English. Also, while overall maze use was not different between groups, Fiestas and colleagues (2005) descriptively reported repetition rates in English-language narratives to be lower in Spanish-English DLLs who were dominant English speakers, as opposed to Spanish-English DLLs with higher abilities in Spanish.

Interestingly though, in contrast to Bedore and colleagues (2006), the current study did not identify maze use as a function of narrative productivity. It is important to acknowledge differences in participants, as DLLs in Bedore et al. (2006) were roughly balanced, whereas DLLs in the current study varied in their previous exposure to and linguistic competence in their different languages and were also younger in age. The

current study did not find correlations between maze use and any measures related to German language skills, such as receptive and expressive language skills, or systematic exposure to German (i.e., contact months German, ECEC participation in months, or language input at home). Therefore, it may not be the lack of syntactical and lexical knowledge, but rather the higher proficiency in another language evoking lexical competition and thus leading to higher uncertainty in word selection resulting in higher maze use. Also, the current sample size was smaller than in the reported studies (except for Lofranco et al., 2006), so that significant correlations may not have surfaced due to lack of statistical power.

Taken together, the current study extends the literature of maze use in the area of narrative production to preschool-aged Turkish-German DLLs and supports previous research findings indicating that children's higher language proficiency in another language may impact verbal fluency when producing a narrative.

Frequency of Shared Book Reading

It was surprising that, despite the well-established link between narrative skills and shared book reading (Harkins, Koch, & Michel, 1994; Lever & Sénéchal, 2011; van Kleeck, 2004; Zevenbergen, Whitehurst, & Zevenbergen, 2003), no significant correlations emerged between the frequency of shared book reading and any narrative measures. The lack of influence in the present study could possibly be due to the following factors: the three-way scale of reading frequency was too imprecise, parental self-report inflated results, and/or that the sample size was too small for significant correlations to emerge.

However, although an Indian study found a relationship between children's English literacy skills and their mothers' book reading practices in English (Kalia & Reese, 2009), a US-American study by Hammer, Miccio, and Wagstaff (2003) found no relationship between Spanish-English DLL children's emergent literacy abilities in Head Start and literacy events in the home. While participating mothers in the Indian study had a college education on average, similar to the Hammer et al. (2003) study, parents in the current study averaged less than 12 years of education (mothers: $M = 9.82$,

SD = 3.21; fathers: *M* = 9.96, *SD* = 3.74), which might have contributed to less supportive home reading practices (also see Hammer et al., 2014). Along those lines, it may have been more informative to focus on the quality instead of the quantity of the book reading interactions. A study by Sénéchal and colleagues (2008) focusing on shared book reading of parents and their mono- and dual-language-learning 4-year-old children also did not find any correlations between shared reading frequency and targeted child narrative measures (here: number of words, number of different words, type-token ratio, mean length of utterance, number of connectives, and story grammar). The authors hypothesized that the pure exposure may not enough for increasing narrative skills, but that instead "parental support is necessary to provide young children with external prompts that would allow them to gain experience at structuring narratives" (Sénéchal, Pagan, Lever, & Ouellette, 2008, p. 42). They also argued that a heightened frequency of shared reading may negatively impact parental reading style. Sure enough, the current study did not control for the quality of shared book reading interactions.

6.1.3 Predicting Factors of Narrative Complexity

As a final step, to get better insight into the factors playing into preschool-age DLLs' expression of narrative complexity, a multiple regression featuring narrative complexity (as measured by EINC) as the dependent variable was conducted. As presented in section 4.4.2, the EINC score targeted the use of main elements contributing to narrative complexity, i.e., story grammar elements, story structure level, use of cohesive devices, and evaluative language aspects, and thus represented a comprehensive and multi-faceted instrument to assess narrative skills.

The three independent variables—age in months, expressive language, and nonverbal intelligence—yielded a statistically significant model, which accounted for 54.2% of variance in the EINC. More specifically, the standardized discriminant coefficients indicated that expressive language contributed more to the EINC score variance than the other two predictors in terms of the relatively higher beta coefficient, explaining a significant proportion of variance in narrative complexity, followed by nonverbal intelligence. Despite a moderate correlation between age and narrative complexity, with

a beta coefficient of .21, there was a trend for age in months to have the weakest and only marginally significant influence in the model[38].

Also, note that, besides targeting story grammar, which has been previously posited as an area of narrative expression relatively language-independent (e.g., Gagarina et al., 2015), the EINC composite score also included elements of cohesion and evaluative language, whose expression arguably more depends on target language skills. Therefore, the analysis was also run with only story grammar as the dependent variable, keeping the independent variables constant. The yielded results, however, remained approximately the same; expressive language was the biggest contributor, nonverbal intelligence was the second biggest, and age in months did not emerge as a significant contributor (Appendix E).

The lack of influence of age as a predictor of the EINC seems counterintuitive, given that age-related growth is well documented in overall language and DLL's narrative development (e.g., Bedore et al., 2010; Laurent et al., 2015; Miller et al., 2006; Muñoz et al., 2003; Uccelli & Páez, 2007). One possible explanation could be that age range of the sample was limited (M_{age} = 57.82 months, SD = 7.24). However, especially at this young age, children can display rapid developmental growth in their narrative competencies (e.g., Laurent et al., 2015; Muñoz et al., 2003). Meanwhile, these results also may suggest that increasing child expressive language and cognitive skills mediate the effect of age in fictional narrative production of DLLs.

The contribution of nonverbal intelligence to narrative complexity is likely contingent to the fact that the production of a complex story requires not only the linguistic explication, but also the cognitive coordination of a series of events. More specifically, to tell a story draws on the child's ability to remember and to temporally, spatially, and sequentially organize events (Norbury & Bishop, 2003) while taking into account the character's perspective and the listener's knowledge and perspective.

[38] When interpreting the results, it is important to consider the small sample size of N = 51. For example, the marginal contribution of age might not verifiably result from a lack of impact, but might have been emerged significantly in a bigger sample. Therefore, the findings will be discussed from an exploratory standpoint and will have to be replicated in studies with a larger set of participants.

Overall, the results emphasize the role of linguistic expression required for storytelling performance. Previous findings of studies targeting the influence of vocabulary skills on the use of narrative macrostructure were mixed[39]. While Montanari (2004) emphasized the importance of expressive language abilities for DLLs' narrative constructions on the macrostructural level, Hipfner-Boucher and colleagues (2015) yielded differing findings. They compared narrative retells of three groups of four- to five-year-olds: Monolingual English speakers, DLLs who mainly used English at home, and DLLs who mainly used a minority language. Even though vocabulary scores and microstructure measures (number of different words, sentence length, and grammaticality) were significantly lower in minority language users, no group differences were found in the area of narrative macrostructure, speaking for a lower influence of vocabulary skills in the target language on the expression of narrative macrostructure.

Contrary to those findings, the correlations found in the current study between lexical diversity (number of different words in lemmas and VOCD) and macrostructural measures (story grammar scores and EINC) were high to very high (r_s = .53 to .85). These findings fall in line with previous research by Heilman, Miller, Nockerts and Dunaway (2010) who examined the relations between macrolevel skills[40], lexical performance (number of different words), as well as grammatical performance (mean length of utterance in morphemes) in narrative retells of monolingual five- to seven-year-olds (N = 129) and found significant correlations between the measures (r = .58, and r = .44, respectively). Furthermore, in a hierarchy regression model, Heilmann and colleagues found vocabulary to be the only unique predictor of macrostructure-level skills. Similarly, the current study found expressive language skills to be the strongest predictor of story grammar use and narrative complexity (EINC). Thus, a "special and important relation between narrative organization and vocabulary skills that emerges

[39] As always, keep in mind that differences in findings may at least partly be due to differences in methodology, languages investigated, and degree of language exposure.

[40] Macrolevel skills were assessed via the Narrative Scoring Scheme, yielding a composite score which includes measures of story grammar elements, mental state terms, and cohesion (Heilmann, Miller, Nockerts, & Dunaway, 2010), similar to the EINC applied in the current study.

prior to children becoming literate" (Heilmann, Miller, Nockerts, & Dunaway, 2010, p. 161) was also found for the preschool-age DLLs in the current study.

Furthermore, prior research including DLLs suggested that transfer of narrative structure may be contingent to the child having attained a threshold level of proficiency in the target language (Guttiérrez-Clellen, 2002; Montanari, 2004; Viberg, 2001). This finding is further underlined by research in the area of narrative retell. In the Terry et al. (2013) study, seventy-six 3-to 5-year-old African American children retold the Frog Story at the beginning and at the end of pre-kindergarten. Vocabulary, oral productivity, and syntactic complexity at the start of pre-K predicted narrative ability at the macrostructure and microstructure level at the end of the term. Note, however, that these participants, albeit coming from diverse backgrounds, were not considered DLLs. Also, Lucero (2015) reported vocabulary to be a significant predictor of macrolevel expression in retells of on average 7-year-old DLLs.

In summation, the current study underlines the importance of linguistic skills for the expression of narrative complexity and macrostructure, extending the current research literature to preschool-age DLLs of Turkish and German. In other words, if a narrator's linguistic array is (currently) too limited in the target language, sophisticated narrative elaborations, which are needed for a complex narrative macrostructure and corresponding qualitative elements (such as evaluative language use), cannot be expressed easily, and this may result in limitations of narrative expression. Along these lines, Allen and colleagues reported that preschool- and elementary school-aged children with more advanced syntactic abilities also displayed a more sophisticated use of narrative structure in fictional story productions (Allen, Kertoy, Sherblom, & Pettit, 1994). On a more general level, expressive language development is central for DLLs for successful classroom performance and thus academic achievement (e.g., August, Carlo, Dressler, & Snow, 2005). Furthermore, traditional models of age-based developmental stages of narratives[41] developed based on monolingual samples should be applied with great caution when it comes to assessing DLLs' narrative skills. Instead,

[41] For a general critique on conceptualizing narrative development in stages, also see Andresen (2013).

the findings of the current study underline the importance of both nonverbal intelligence and, even more so, expressive language skills, for producing elaborated and rich narratives.

6.2 Study Limitations and Considerations for Future Research

There are several limitations of the current study. Such limitations apply to the interpretation of study findings and thus warrant discussion while also identifying areas for future study. One global aspect to consider is that the current study used a convenience sample of children, parents, and ECEC institutions volunteering for participation. However, the fact that the child participants and their families represented a wide range of DLL and home language environments, suggests that the results may be representative of the larger population. The upcoming sections will further focus on considerations specific to statistical procedures and study instruments.

Discussion of Study Limitations

Statistical considerations presented here refer to the sample size as well as the choice of the statistical methods (two-tailed Spearman rank correlations and regression analyses).

First, it should be noted that the sample size precludes a wide generalization of results and rather warrants a cautious interpretation. Second, the cross-sectional design does not allow for a direct evaluation of the interactions between targeted domains. As always with correlational results, caution must be exercised in the interpretation, because the direction of the influence cannot be established and further research is needed before causal relationships between the measures can be inferred. Research using longitudinal methods is needed to examine DLLs' developmental trajectories and growth patterns of narrative competence as well as into the direction of causality and the size of the actual effect of additional measures, such as expressive language skills (e.g., Miller et al., 2006). Finally, a regression analysis was computed despite the considerably small sample. For this reason, only three variables were entered as independent variables. Nonetheless, as the analysis delivered an outcome large in effect and three chosen variables age, expressive language, and nonverbal intelligence accounted

for a high percentage of variance in the dependent variable, narrative complexity (54.2%), the procedure was deemed robust. At the same time, the amount of explained variance in this sample might have been due to only a minimal influence of confounding variables, so that, again, future research will have to replicate current findings, ideally based on a bigger sample size.

In the realm of further study limitations, aspects referring to study instruments, and therefore the construct of variables, should also be considered.

The current study applied an adapted and extended version of the Index of Narrative Complexity (Petersen et al., 2008). Although making modifications is never an optimal procedure, these adjustments made it possible to score younger children's narratives reliably. Thus, this was an appropriate methodological decision given the study goal (i.e., to investigate preschool-age DLL's fictional narrative productions).

Also, the current study relied on parental rating of child Turkish language skills, rather than on a standardized language assessment. Although parental report carries risk of bias, it should be noted that previous research suggest that parental estimates can be an informative and accurate source in determining language proficiency. For example, in their study with DLL second-graders, Gutiérrez-Clellen and Kreiter (2003) found that parental ratings of the children's language proficiency were significantly and highly correlated ($r_s = .75$, $p < .01$) with grammatical performance in the target language. Comparably, in the current study, parental judgement of child German skills was significantly and highly correlated with both child receptive ($r_s = .55$, $p < .01$) and expressive ($r_s = .64$, $p < .01$) German language skills. Also, parental rating of child German skills was positively correlated with measures of lexical diversity (NDW, $r_s = .38$, $p < .01$; VOCD, $r_s = .40$, $p < .01$). Nonetheless, it would have been preferable to draw on a less subjective measure of the children's language skills in their additional language and future studies should seek to replicate these findings utilizing a standardized language assessment of the children's first language. Similarly, the current study relied on parents' self-report in the assessment of home language environment and language use, so a potential report-bias could not be ruled out. However, while observation methods provide greater validity and therefore should preferably be used, previous

studies have found parent reports to be reliable sources in explaining variance in child language outcomes (e.g., Mancilla-Martinez & Lesaux, 2011; Simón-Cereijido & Gutiérrez-Clellen, 2009; Willard et al., 2015).

Keeping these limitations in mind, to fully understand the relationship between Turkish-German DLL's fictional narrative skills and corresponding areas of development, future studies should not only aim to replicate the current findings, but also address further research areas in the field, as presented in the following section.

Aspects for Future Research

Thanks to the wealth of information obtained in narrative samples, further developmental language areas might be investigated. For example, Anstatt (2008) found differences in the tense use in German Frog Story narratives of DLLs of Russian and German in comparison to their monolingual German peers. Also, an analysis of the amount and types of grammatical errors produced (e.g., Bedore et al., 2010; Peets & Bialystok, 2015; Resendiz et al., 2014; Westerveld & Gillon, 2010) will provide further insight into the learner language.

Furthermore, while cross-language comparisons were not among the goals of the current study, it could still be considered a caveat that no narrative samples were collected and analyzed in the DLLs' other language, Turkish. To ensure a faithful account of children's emergent narrative skills, future studies on narrative development in DLLs should ideally include all of a child's languages. However, insight into DLLs' German-language skills is important. Providing assessments and, if necessary, empirically validated intervention approaches (which target all of a child's languages), would be ideal (e.g., Ebert, Kohnert, Pham, Disher, & Payesteh, 2014; Kohnert, 2010; Restrepo, Morgan, & Thompson, 2013), because—in SLP reality—clinician-client-mismatches frequently occur (Licandro & Lüdtke, 2012; McGregor, 2000; Pham, Kohnert, & Mann, 2011; also see discussion Study II, section 10.3). Also, studies allowing comparisons within and across languages would allow further insights into the interaction of linguistic systems in oral narrative production.

6.3 Conclusions Study I

Narrating a story posits a considerable challenge to the developing child, as Shiro (2003) elaborates:

> The child, while acquiring the ability to produce fictional stories as narrative genres, needs to develop those skills that will enable her to produce the appropriate language whereby narrated worlds are created according to the requirements of each genre.
>
> (p. 176)

The successful application of narrative skills to a picture storybook stimuli requires a child to coordinate comprehension and expression of narrative macrostructural and microstructural elements, including the expression of evaluative language features to delineate depicted events as a globally integrated whole.

Focusing on the structural organization of oral fictional narratives in DLL preschoolers, the current study was the first to examine directly fictional narrative generation of Turkish-German DLLs with varying amounts of previous German language experience—reflecting the reality of DLLs in ECEC—and thus extending the current research base to preschool-age children growing up speaking Turkish and German.

In all areas of narrative microstructure, macrostructure, and narrative complexity, pronounced inter-individual variability emerged. Still, age-related narrative development was evident, leading to a more sophisticated linguistic expression and more content-related elaborateness with growing experience. Next, univariate regression models were explored to address the question of which combination of child variables converge with narrative complexity scores as measured by the EINC. The goal of the multiple regression analysis was to determine a parsimonious model that explained a high variance in the dependent variable containing a low number of independent variables. It was predicted that age, expressive vocabulary, and nonverbal intelligence would all predict the EINC score. Findings of the regression analysis also suggested that a comprehensive measure of narrative complexity was not as much influenced by age as it was by expressive language skills in the target language, as assessed by a standardized language assessment. Nonverbal intelligence, tapping into a skillset available across languages (e.g., Ebert et al., 2014), also emerged as a significant contributor to narra-

tive complexity. Hardly included in narrative research to date, this aspect should be further considered in future research.

The current study's results also highlight how various aspects of children's linguistic environment may be interrelated with narrative expression. For example, the speech production process, as assessed via the percentage of maze use, was correlated with children's Turkish language proficiency as well as with the availability of Turkish-speaking interlocutors in the child's environment, supporting previous research suggesting that higher skills in an additional language may promote maze use in a narrative production task.

In summary, like previous research, the current study found an inherent variability in oral narrative performance. Furthermore, this study found that expressive language skills played a central role in DLLs' narrative performance not only on the microstructural, but also on the macrostructural level. The results provide support for the concept that a threshold in linguistic ability has to be established to fully express narrative complexities. Also, the role of nonverbal intelligence was underscored.

These findings are specific to DLLs of Turkish and German aged 3 to 6. This study contributes not only to the existing literature on the influence of dual language learning on fictional narrative production but also to a growing body of research investigating the developmental trajectories of dual language learners. For a population known to be at risk for later academic language problems and academic delays, understanding factors influential to children's narrative productions is inherently relevant. In an effort to change the developmental trajectory and reduce negative impacts of limited narrative skills, we need to invest in identifying key mechanisms that impact language learning and growth for dual language learning children.

Overall, the strength of the results lies in the detailed information provided about multi-faceted indicators of narrative skills, including their relations to other language-relevant areas. For now, these results suggest that fictional narrative productions provide useful information concerning the linguistic and narrative development of DLLs. However, keep in mind that the conclusions drawn in this study are limited because of

the limited sample size and only one specific linguistic area under study. Further research would shed light on the generalizability of this study's findings to other populations. Because of the various factors influencing DLLs' narrative development (e.g., Muñoz, 2003), there is also a need for further research that considers both the contexts in which children acquire narrative skills and their actual narrative expression.

Finally, further research examining children's narrative language skills in conjunction with measures of language and literacy socialization is needed to more fully understand connections between the emergence and development of narrative language skills and children's linguistic and sociocultural experiences. Further theoretical, clinical, and educational implications will be discussed together with findings from Study II (see chapter 11).

7 Theoretical and Empirical Underpinnings for the Role of Peer Interactions in Language Learning and a Conceptualization of Peer-Assisted Learning in Early Childhood Education and Care

For children in the preschool-age, the repeated engagement with narratives provides opportunity to actively engage in and to develop higher-level language skills even before they become fluent readers through school literacy instruction. It has been the aim of the first study to examine the capacity to produce fictional narrative in DLLs with various language socialization patterns and language exposure. Beyond the in-depth analysis of the state and relating factors of DLLs' emergent fictional narrative skills, attention should also be directed at the kinds of interactions that support struggling DLL narrators to acquire communicative competence in the complex area of narrative.

"Opportunities to engage in frequent naturalistic and meaningful interactions with literacy-related artifacts enhance children's literacy knowledge in an implicit manner" (Powell & Diamond, 2012, p. 198) and thus are an important part of early language and literacy support in ECEC. Those sheer opportunities, however, may not be sufficient to successfully acquire decontextualized language skills, such as narrative skills, for children at risk for successful language and literacy development, be it because they come from underprivileged family backgrounds, have developmental delays or impairments, or are DLLs (Hair et al., 2006). Therefore, to meet the needs of all learners, more explicit learning approaches should also be provided in ECEC environments, which not only feature the modeling of a target skill, but also offer ample opportunity for children to practice and consolidate the newly acquired knowledge (Phillips, Clancy-Menchetti, & Lonigan, 2008) in an engaging setting (Justice, Chow, Capellini, Flanigan, & Colton, 2003). Theoretical and empirical appropriations suggest that peers may act as linguistic informants, who provide valuable and engaging models in narrative language learning. Therefore, the second study of the current work will explore a peer-assisted approach in ECEC to support and enhance emerging narrative skills in DLLs.

U. Licandro, *Narrative Skills of Dual Language Learners*, Diversität in Kommunikation und Sprache / Diversity in Communication and Language,
DOI 10.1007/978-3-658-14673-3_7

Correspondingly, the central goal of the present chapter is to derive the scope and role of peer interaction for language acquisition, by first exploring how peers can create fruitful environments for language and early literacy learning. This approach will be theoretically and empirically explored in the following sections:

To understand the potential of peer-assisted learning approaches for the support of DLLs' emerging narrative skills in ECEC, it is imperative to first delineate and discuss theoretical and empirical underpinnings of peer interactions in ECEC as an environment for the language acquisition of children. In pursuing this goal, first, the definitions of central terms, such as *peers*, *peer interactions*, and *peer relationships in ECEC,* and an overview of the emergence and main theoretical strands guiding research regarding the meaning of peers for early child development will be given (see section 7.1).

Based on a *social-interactionist perspective*, the role and scope of ECEC peer experiences for language development in establishing and maintaining linguistic interactions with their peers, is then considered (see section 7.2). Through the analysis of both, *observational and longitudinal research evidence*, interactional language spaces between children as well as long-term peer effects on language acquisition are targeted, while special attention will be paid to children growing up with more than one language (see sections 7.2.1 through 7.2.5).

Didactically, peers have been included in learning contexts in the realm of *peer-assisted learning activities*, such as *peer tutoring*. After defining such learning settings (see section 7.3.1) and reflecting on their value through the theoretical appropriation of the *relational didactics* framework (see section 7.3.2), a review of the research literature is presented, focusing on peer-assisted learning in the context of language support. Special focus will be given to contextual factors when applying peer-assisted learning in ECEC settings (see section 7.3.3). The present chapter will be concluded by drawing *consequences for the current study* (see section 7.4).

7.1 Exploring the Nature of Peer Interactions in ECEC

Before exploring the role and scope of peers in language development in ECEC, a definition of the term *peer/peers* will be put forth, including a differentiation between the terms *peer interactions* and *peer relationships*.

7.1.1 Delineation of a Working Definition *Peers in ECEC*

The term *peers* encompasses a wide range of ages, capacities, and interactional spaces, which makes it especially ripe for examination. Etymologically, the term peer was originally used to collectively refer to a member of a class of the British nobility, who was also entitled to a seat in the House of Lords of the British Parliament (Simpson & Weiner, 1989). Nowadays, it is typically employed as a colloquial expression in reference to children, adolescents, or adults, who are similar to each other in age. Beyond age, close proximity in social status, ability, and/or knowledge further determines the boundaries of a group of peers, so that, accordingly, peers can be defined as "individuals of similar age, social status, and interest" (Hamit, 2011, p. 1073; also see von Salisch, 2000), which makes the term appropriate for children in ECEC environments.

In contrast to adult-child relationships, which are characterized by unilateral asymmetries in knowledge, skills, authority, and power, peer relationships are set apart by the relative equality of the agents in terms of maturity and ability (Kupersmidt & Dodge, 2004), contributing to more balanced, symmetrical roles. The resulting parallel developmental trajectories generate commonalities in cognitive and socio-emotional competence, communication style, and interest, which make preschool-age peers attractive play partners to each other, and, as they grow older, often more preferable interaction partners than their family members (Rubin, Bukowski, & Laursen, 2009).

Youniss, McLellan, and Strouse (1994) argue that peer relationships have a special potential for child development, as they "are marked by use of symmetrical reciprocity and guided by the overarching principle of cooperation between equals" (p. 102). The approximate symmetric nature of their status does not imply instant cooperation, but also leads to considerable challenges for children, such as the negotiation of resource allocation and activities, as well as a more active role in initiating in sustaining rela-

tionships. Peer conflicts are therefore common among preschoolers, as children have to negotiate complicated, yet central concepts related to power distribution (e.g., Chen, Fein, Killen, & Tam, 2001; Ladd, 2005; Laursen, Finkelstein, & Betts, 2001).

Drawing on these explications, peers in ECEC will be defined here as individuals of similar age, maturity, ability, and social status, who face similar developmental tasks and challenges, share main interests, and who uniquely contribute to each other's development.

7.1.2 Peer Interactions and Peer Relationships in Early Childhood[42]

Toddlers are already capable of coordinating their behavior with other children through initiation, imitation, sharing, and adapting their own response to their partners' expression. They especially enjoy participating in "reciprocating imitative acts" (Eckerman & Peterman, 2001, p. 332) with their peers, both verbally and non-verbally, which ultimately forms the foundation for more elaborated modes of peer communication. With growing age and experience, the amount of attention directed at peers continues to grow in frequency and quality (Dunn, 1993). After the third year of life, children start directly increasing amounts of attention to peers, and spend increasing amounts of time with them, especially if enrolled in child care settings (Kernan, Singer, & Swinnen, 2011). Naturally, entry into ECEC provides a dramatic shift in peer relations, as children begin spending considerably extended time periods with their peers in a variety of scaffolded (e.g., circle time, group activities) and unscaffolded settings (e.g., free play) (Singer & de Haan, 2007). Children's peer relationships further evolve, shifting toward increasing levels of complexity and integration, and quickly, peers turn into one of children's main social reference groups.

In the realm of peer encounters in ECEC, it is reasonable to differentiate between *peer interactions* and *peer relationships*. According to Ladd (2005), the "behavioral processes, such as the sequences of physical or verbal exchanges that occur between

[42] As is the case with many other research areas on human development, the explications on peer interactions and relationships are mainly based on literature from Western cultures. The role of culture and cultural differences in peer relations is less well researched, but see Ladd, Herald, & Andrews (2013) for an overview.

members of a friendship or a peer group" (pp. 6-7) can be characterized as a *peer interaction*; for example, two children looking through a picture book together and talking about the depicted scenes. In this sense, peer interactions represent communicative actions between two or more peers (Blum-Kulka & Snow, 2004), which are often targeted at establishing, expressing, and maintaining friendships, negotiating equality, approaching reciprocity, and establishing solidarity, but also can encompass peer learning scenarios (Philp et al., 2014). Especially in childhood, these interactions are characterized by a high dynamic and complexity (Blum-Kulka & Snow, 2004).

In contrast, a *peer relationship* builds on peer interactions and can be characterized by the "type, nature, and duration of the interactions that occur between children" (Ladd, 2005, p. 7), such that social and communicative encounters between the same peers occur on a regular basis over a period of time. Usually, the nature of those interactions is reciprocal and independent from other relationships (Naylor, 2011, p. 1075), for it is also distinguished by a relatively stable emotional quality, such as unilateral or mutual affection, but also dislike (Ladd, 2005).

While peer interactions and relationships are often dyadic in nature, in institutional settings such as ECEC, they are also embedded in and influenced by a larger *peer group*. Therefore, Howes (2009) distinguishes between "informal" (e.g., friendships, as characterized by the centrality of the relationships) as well as "formal" (e.g., all children belonging to an ECEC classroom) dimensions of peer group experiences (p. 182). While informal groups and, for example, their creation of shared symbolic spaces in play, have a unique quality, they cannot be viewed as being independent from the realm of the larger formal (i.e., institutional and cultural) context in which they occur[43]. In this sense it is important to acknowledge the complexity of influencing factors on peer interactions and relationships, among which are "individual characteristics, social interactions, dyadic relationships, and group membership and composition" (Rubin, Bukowski, & Parker, 1998, p. 573).

[43] As with any area of complex socially-motivated behavior, the development of peer interactions and relationships is a dynamic process, changing and developing over the preschool years. While younger children establish peer relationships based on concrete (play) activities and thus choose playmates who are in physical proximity, with increasing age, children are more drawn to peers with similar interests and cultural identities (e.g., Newcomb & Bagwell, 1995).

7.1.3 Historical Outline of Research on Peer Interactions in Preschool-Age Children

The extension of ECEC in Western countries in the 1970s led to a dramatic change in the life of young children. Organized ECEC settings have since become significant environments of children's day-to-day interactions and experiences (Kernan, Singer, & Swinnen, 2011) and may, when providing high-quality services, promote children's language and academic development (e.g., Dickinson & Porche, 2011; Vandell et al., 2010). Passing a significant amount of their day in ECEC institutions also means that "children of all ages spend extended periods of time in dyadic, multi-party, mixed-age or same-age interactions with their peers" (Cekaite et al., 2014, p. 3). Therefore, while historically[44] research in the area of child development mainly focused on the importance of adult-child-interactions, the body of research on the peer relations of young children has been increasing rapidly, striving to study childhood "from within" (Cromdal, 2009, p. 1473) and progressively leading to a radical change in the view of the meaning of peer interaction in early childhood.

While some researchers studied peer interactions and relationships based on attachment theoretical approaches and focused on the role of parent-child and ECEC practitioner-child relationships for the child's establishment and maintenance of peer experiences (e.g., Howes & Ritchie, 2002), other researchers, building primarily on the pioneering theoretical approximations of Piaget and Vygotsky, brought into focus the child's active role in their development and world appropriation process (e.g., Berndt & Ladd, 1989; Corsaro, 1985; Hartup, 1983; Krappmann & Oswald, 1995; Youniss, 1980):

Coming from a background in developmental psychology, Piaget (e.g., 1926; 1932; 1978) shaped cognitivist theories of child development, conceptualizing the child's learning process as an active acquisition of (sensomotor) structures and schemes in dependency of its developing cognition. With respect to peer interactions, he identified the developmental symmetry of the interacting agents as provoking socio-cognitive

[44] For a more detailed historical overview of the emergence of research on peer interactions and relationships, see for example Rubin, Bowker, McDonald, and Menzer (2013) as well as Rubin, Bukowski, and Parker (1998).

conflict, and therefore acting as a key factor for stimulating cognitive-moral development in the child. In accordance with this notion, researchers such as Sullivan (1953) and later Youniss (e.g., 1980) took up on this notion, arguing that in interaction with peers, children could experience "a sense of equality, interpersonal sensitivity, the need for intimacy, and mutual understanding" (p. 29).

Meanwhile, Vygotsky (e.g., 1967; 1978; 1986/1934) saw slight developmental disparities between peers as ideal triggers for stimulating developmental growth, where the child experiences his or her peer as a model at a level of its own proximal development. Establishing a cultural-historical activity theory, positing the active appropriation of cultural developmental targets, such as language use, in social situations at the core of the child's acquisition process, Vygotsky inspired research exploring the social co-construction of shared meanings, and the role of social interaction partners, such as a teachers or peers, in child learning (Singer & de Haan, 2007) by exploring the developmental space where the transition from interpsychological to intrapsychological functioning occurs. Accordingly, the learning process was posited as an in situ interactive accomplishment, such that the idea of learning as a social process can be conceptualized as not being simply governed by maturation, but rather by exposure to more sophisticated models in scaffolded interactional spaces that tackle the learning space Vygotsky coined—and what came to be his most widely known and most appropriated idea—the *zone of proximal development* (ZPD). According to Vygostky, interactions that target

> […] the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers
>
> (1978, p. 86)

support the learner to actively integrate the skills necessary to expand his or her own productions. Finally, the ZPD can also be interpreted as the space where social agents support each other in "going beyond" (Lindfors, 1999, p. 14) what they already know and/or can do. This process, as Wertsch (1985) reasoned, is "a property neither of the child nor of interpsychological functioning alone" (p. 71), but rather "jointly deter-

mined by the child's level of development and the form of instruction involved" (pp. 70-71).

Vygotsky further argues that "the only good kind of instruction is that which marches ahead of development and leads it; it must be aimed not so much at the ripe as at the ripening functions" (Vygotsky, 1986/1934, p. 188). By internalizing the involved processes in the jointly-accomplished task (Schneider & Watkins, 1996) through (repeated) participation in such interactions, children become eventually proficient in carrying out similar activities independently. While some authors argue that it may be difficult to train students to provide appropriate assistance for each other (O'Donnell & Hmelo-Silver, 2013), it has also been suggested that peers may be ideal learning partners because, "as joint participant[s] in everyday activities" (Schneider & Watkins, 1996, p. 158), they may act naturally in each other's ZPD, and thus offer appropriate learning models for the acquisition of narrative skills (e.g. McGregor, 2000; also see section 7.3.3).

Nicolopoulou (2002) cautions that Vygotsky's views have often been interpreted too narrowly in the realm of the potential of peer interaction for child learning: "[…] peer relations have usually, in effect, been conceptually assimilated to the dyadic adult-child model, being treated as another case of expert-novice interaction" (p. 120; also see Nicolopoulou, 1993). Rogoff (1990), however, explicated that the roles in the realm of the ZPD as a jointly constructed space are not firmly set, but rather that learners can transition in and out of the expert and novice status. This phenomenon has been confirmed by research. For example, observing children's early literacy interactions, unilateral flow of knowledge from assumed experts (older peers) to novices (younger peers) was not evident; rather, children naturally shifted roles (Christie & Stone, 1999).

From a broader view, the notion of the child as an active agent in its learning process and the emphasis of social co-construction for child learning can be seen as main common denominators for Vygotsky's and Piaget's work[45] (e.g., Youniss & Damon,

[45] For an overview and critical discussion on Piagetian and Vygotskian contributions for the theorization and empirical study of peer interaction and relationships, see Tudge & Rogoff (2014).

1994; also see Lüdtke, 2012a); a view which is also shared by social-interactionist and relational theories of language acquisition (see sections 7.2 and 2.1.2)[46]. Inspired by these theoretical conceptualizations, works positing the child as a creative and active social agent engaging in actions unified with social, emotional, and cognitive processes, gained momentum in the 1980s and 1990s, resulting in an increase in scholarly attention to child-child-interaction (e.g., Berndt & Ladd, 1989; Corsaro, 1985; Hartup, 1983; Krappmann & Oswald, 1995; Youniss, 1980). Overall, these theoretical and empirical advances led to a shift in the view on children and peer relations, away from seeing children as mainly passive recipients of adult-shaped worlds. On the contrary, for example, Corsaro posited the child as not only being "involved in appropriating information from his or her environment to use in organizing and constructing his or her own interpretations of the world" (2011, p. 12). In fact, from a sociological view, the notion arose that peers actively negotiate and co-construct their own culture, i.e., "a stable set of activities or routines, artifacts, values, and concerns that children produced and share in interaction with peers" (Corsaro & Eder, 1990, p. 197), "while simultaneously contributing to the production of adult societies" (Corsaro, 2011, p. 4; also see Naylor, 2011). This recognition further established the importance and development promoting qualities of peer interactions entirely unique from adult-child-interactions.

Socio-emotionally, from the child's perspective, the most enjoyable aspect of ECEC is engaging in play and other activities with his or her peers (Hännikäinen, 1999), where they discover and express similarities. The establishment and cooperative expression of shared interests—that is, the "joint experience of interests, ideas and actions" (Degotardi & Pearson, 2014, p. 95), creates a sense of belonging and togetherness. For example, Haun and Tomasello (2011) found that 4-year-olds were not only sensitive to their ECEC group mates' verbal statements, but were also likely to publically adjust their proclamations to conform with their peers, even if it meant going against their own judgment. Research in the area of developmental psychology has long established

[46] For an overview and classification of main strands of language acquisition theory, see Lüdtke (2012b).

the integration of a child in a peer group as a marker of social competence (Ladd, 2005), and it continues to view the quality of children's peer relationships as one of the main criterion variables for social adaptation (Rubin et al., 2009) and emotional well-being (Brendgen et al., 2013). Furthermore, a substantial body of research reflects that both successful and difficult childhood peer relations modulate children's socio-emotional development (Gagnon, Nagle, & Nickerson, 2007) and are strong predictors of adjustment later in life (Howes & Phillipsen, 1998; Mercer & DeRosier, 2008).

Overall, the study of early child peer interaction has focused considerable attention on the emergence, maintenance, and changes in peer acceptance and social status, but relatively little research has targeted the role of peers in language development. Before analyzing theoretical and empirical foundations for including peers in didactic settings, such as peer tutoring—one main aspect in the empirical part of this work—the specific contributions of peers to each other's first and second language acquisition in the ECEC context will be further examined in the following sections.

7.2 On the Role and Scope of Peers in Language Acquisition in Early Childhood Education and Care – A Social-Interactionist Perspective

The notion of the child as an active creator and the emphasis of the role of intersubjective co-construction for learning process, as identified in Piagetian and Vygotskian appropriations to the role of peers interactions in child development and discussed previously, is shared by a *social-interactionist viewpoints on language acquisition* (e.g.[47], Bruner, 1983, 1990; Papoušek, 1994; Tomasello, 2003; Tomasello & Farrar, 1986; also see sections 2.1.2 on the emergence and development of narrative in a socio-emotional context and 7.3.2 on the 'relational didactics' framework). One of the basic premises is the understanding that language learning is a fundamentally socio-emotional process, so that the child's social environment, comprising peers, and its role in stimulating language development receive special attention.

[47] Note that an abundance of literature has been produced on this topic and only a selection of sources can be credited here.

By focusing on the establishment of intersubjective interactions that a child will engage in and that present him or her with opportunities to both hear and actively use language, language learning is conceptualized as a process shaped by temporal, spatial, socio-cultural, and emotional factors. Thus, linguistic environments (e.g., in the home and in ECEC) need to provide language exposure, feedback, and practice opportunities through which a child can engage in "frequent, relatively well-tuned, affectively positive verbal interaction" (Chapman, 2000, p. 43) to foster fundamental skills for language development, including decontextualized and narrative skills. In turn, children's participation in social interactions is mediated by their learning and application of language, with peers mediating each other's learning.

Furthermore, from the viewpoint of relational-intersubjective approaches to language acquisition, the role of emotions is emphasized as a significant component in language learning, such that co-constructed relationships between agents, such as peers sharing narratives, is located at the core of any instance of language learning (Lüdtke, e.g., 2005, 2006, 2012a, 2015). Moreover, linguistic meaning is posited as intersubjectively co-constructed and emotionally marked, such that the emotional quality directly mediates intersubjective exchange and is thus central for any successful language acquisition (for an illustration, see Figure 1). Relational emotions and their intersubjective mirroring are seen to drive and regulate language acquisition. This position is supported by research evidence on the unique contribution of intersubjectivity, as mediated by the relational emotional quality, such as expressed in parental sensitivity, to young children's language acquisition (e.g., Bansner & Lüdtke, 2014; Pungello, Iruka, Dotterer, Mills-Koonce, & Reznick, 2009; Raviv, Kessenich, & Morrison, 2004; also see Lüdtke, 2005, 2012a).

While the contribution of adults, such as parents and ECEC practitioners, to child language development is undeniable and well-documented (e.g., Spilt, Koomen, & Harrison, 2015), Rydland and colleagues (2014a) lament a "pronounced emphasis on the adult's role in shaping children's learning trajectories" (p. 354), because of the lack of research efforts dedicated to the peers' role in each other's language development. Indeed, the vast majority of research focusing on meaningful interactions for language

and literacy learning of preschool-aged children has targeted parent-child (in practice, mainly mother-child) as well as ECEC practitioner-child interactions.

Similarly though, in the realm of peer interactions, the successful establishment of intersubjectivity has been constituted as the foundation for any developmental progress, as Tudge and Rogoff (2014) reflect in respect to Piagetian and Vygotskian theorizations of peer interactions:

> It is unlikely that merely sitting next to another person will enhance a child's skills. Neither cognitive conflict nor joint problem solving could function to enhance a child's skills or change a perspective unless the partners establish some degree of intersubjectivity, allowing opportunities for exchange of ideas or for active observation or joint involvement in a task.
>
> (Tudge & Rogoff, 2014, p. 35)

Accordingly, the meaning-making process in language learning and teaching is embedded in and negotiated through intersubjective discourse, which can be seen as the "co-construction of information bearing and meaningful verbal and non-verbal signs, generated, regulated and processed by affects, and their exchange in all codes and modalities" (Lüdtke, 2012a, p. 334). Communicative exchanges between peers reflect their relationships including specific emotional timbres, and aspects of emotionally relevant cultural belonging. Emerging intersubjective co-construction and negotiation processes, which are affected by emotions, lie at the heart of language acquisition in the realm of peer interaction and are intrinsically motivated by a mutual desire for peer exchange (Licandro & Lüdtke, 2012).

The notion of peer relationships forming a part of a learning environment for intersubjective exchange and thus a context for child language development, next to other socio-emotional relations such as in the family[48], also becomes evident when considering the unique contributions peers make to each other's language learning environments.

[48] It is fully recognized that children's peer interactions and relationships cannot be seen as entities entirely separate from those within the family and with other adults, such as ECEC practitioners (e.g., Corsaro, 2011), but rather operating within complex socio-emotional networks. For the purpose of the current work, children's interactions and relations with peers are therefore considered in the context of other important relationships (also see Hay, Payne, & Chadwick, 2004).

> Their special kinds of humor and disagreements, the topics about which they talk, and their explicit socialization about language provide communicative experiences that no doubt complement those experienced with adults.
>
> (Bryant, 2009, p. 352)

The role of peer interactions in creating a "significant context for language acquisition" (Hoff, 2006, p. 70) has a much larger importance than previously anticipated, and research efforts to date have not paid justice to this fact.

Similar to the emergence of developmental psychological and sociological studies of peer interactions and relationships, socio-linguistically motivated research on peer-to-peer talk in ECEC settings arose in the 1970s (e.g., Keenan, 1974), most of which being exploratory and descriptive in nature. To date, one of the most ubiquitous and relatively well-studied areas of preschool peer interaction and peer talk is play activity (for early work, see Corsaro, 1985; for a review, see Blum-Kulka & Snow, 2004; also see Kyratzis, 2004). For example, Andresen (2005) emphasized peer-to-peer role play as a privileged activity in the context of which preschool language abilities develop (also see Pramling Samuelsson & Asplund Carlsson, 2008). Certainly, in these interactional spaces, as Andresen (2005) puts it, "language serves as the central means to create fictitious meanings and plots" (p. 388), provoking rich verbal interaction. However, despite the importance of role play for enhancing emerging language skills, among other aspects of child development, "it cannot be held accountable as the only sort of interaction with significant impact or influence over it" (Branco, 2005, p. 422).

More recent work has shown that preschoolers interacting outside of play settings also independently engage in extended conversations with their peers. For example, O'Neill and colleagues found that the majority of 3- to 5-year-olds' interactions during snack time were linguistic in nature and included various conversation initiations as well as topics different from typical adult-directed turns (O'Neill, Main, & Ziemski, 2009). Also, while adults may not always be available to listen to children's everyday stories, especially in large ECEC institutions—where teacher-directed activities may not occur often throughout a typical day—peers (more) frequently engage in verbal interactions throughout the day. These interactions are also special because preschool-age peers can be, as Bryant (2009) puts it, "[…] relatively uncooperative conversation-

al partners" in comparison to adults. Children are thus required "to deal with participants' limited background knowledge and to be assertive and clever in finding ways to participate," which, in turn, "contribute[s] to the pressure preschoolers feel to communicate more clearly and effectively" (2009, p. 351). Preschoolers will respond to about two thirds of their peers' communicative initiations, as observational studies document (Schuele, Rice, & Wilcox, 1995).

By now, it has been well established that, already in the preschool-age, peers' interactions can have a "frequent, sustained and emotionally engaging" (Bryant, 2009, p. 351) quality, building the foundation for the negotiation of meaning in everyday conversations and shared literacy activities. Consequently, peers do not simply constitute a group of additional interlocutors in the ECEC environment. Despite (or maybe even because) not bringing the same sophisticated linguistic repertoire to the table adults do and possessing overall differences in interactional quality, both cross-sectionally and longitudinally, research evidence has shown that peers' verbal interactions shape their use of linguistic features and directly influence children's language development, as reviewed in the following sections.

A caveat concerning qualitative studies and studies that are small in scope, focusing "on the learning potentials and processes associated with language use in social practices with peers rather than on the outcome of such processes" (Cekaite et al., 2014, p. 4), lies in the mainly descriptive research approaches, such that the types of interactions in young children's peer encounters including the required skills are well documented, but cannot be analyzed in relation to the development of measures of language skills. Meanwhile, a limitation of large-scale quantitative studies is that they cannot take into account individual children's performances or offer satisfactory explanations for the nature of detected peer effects. Therefore, to gain further insight into the role and scope of peer effects on language learning in ECEC, evidence from both approaches to research will be reviewed and discussed, starting with qualitative and observational studies to provide an overview over forms of language behaviors in peer interactions.

7.2.1 Observational Studies Targeting Language Behavior in Peer Interactions

When speaking to peers, children themselves offer forms of communication different from those of adults (e.g., Blum-Kulka & Snow, 2004; Ely & Gleason, 1995) and thus they contribute uniquely to their each other's language development. For once, peer interactions offer a platform for language learners to play and experiment with language (Cekaite, Blum-Kulka, Grøver, & Teubal, 2014), that is, "to try out what they know and confirm and disconfirm use through peer assistance" (Philp et al., 2014, p. 23), as illustrated by the examples of two peers co-constructing a story in section 2.1.2 of this work.

Children may also engage in communicative interactions through repetitions of overheard content. Importantly, as Johansen (2010) emphasizes, children may act as a "creative imitator[s]" (p. 764) when shifting between their roles of overhearer and speaker. Cross-sectional data accumulated by McGregor (2000, study 2) illustrates how preschool-aged children draw on each other's language models in a prompted storytelling activity. Twenty-six African American preschoolers aged 3 to 4 were randomly grouped into 13 pairs. For each pair, one child (e.g., Child A) narrated a familiar story from a book to their peer partner (e.g., Child B). Subsequently, the narrator and the listener exchanged roles (e.g., Child B told the same story to Child A). Within-pair and across-pair comparisons of narrative microstructure (percentage of shared lexical types) and macrostructure (percentage of shared story grammar elements) indirectly assessed to which extent Child B had "borrowed" Child A's story schema. As both measures were significantly higher within pairs, McGregor concluded that preschoolers' narrative models may immediately influence their peers' story generations.

Furthermore, although children are not equally skilled interlocutors as adults, peers do correct each other's language behavior. For example, preschool-age peers can frequently be observed in assessing, criticizing, correcting, and directing one another's actions and language use. In fact, emphasizing the symmetrical nature of peer relationships, Corsaro (e.g., 2011; Corsaro & Eder, 1990) posited the negotiation of conflicts and social status at the core of the establishment of peer cultures, characterized by the regulation of relationships and development of routines among the children. Duchesne,

McMaugh, Bochner, and Krause (2013) delineate important reasons for the higher likelihood of negotiations to occur in peer-peer versus peer-adult interactions:

> First, peers are more willing to challenge one another's ideas than they are the views of an adult. Second, children are particularly motivated to resolve the difficulties as they form part of their relationships – whether it is a matter of being right, of maintaining a friendship, or of keeping the interaction going. (p. 75)

Also, peers frequently engaging in interaction also show a tendency to adjust their spoken language usage to each other. This is a phenomenon well-established for school-age children (Eckert, 2003), but has also been shown for an even younger age[49]. Wyatt (1991) observed ten 3-to 4-year-old dialect-speakers in preschool and found that children differentiated in their use of dialect-influenced forms when addressing adults or peers. When conversing with adults, children used more aspects of the mainstream speech register, but switched to use more dialect features in interaction with their peers. A more recent French study followed 4- to 5-year-olds' spontaneous peer group interactions longitudinally over the time course of one year and reported that frequent and regular peer contact in an ECEC setting led to converged use of selected sociolinguistic speech variants. These effects were unaffected by aspects like ECEC practitioner's speech and child peer acceptance (Nardy, Chevrot, & Barbu, 2014).

Furthermore, early literacy and narrative activities may be developmental areas especially well-supported by peer interactions. Drawing on Vygotsky's (1967) remarks on the role of play in child development, Nicolopoulou (2002) delineates parallels between play and narrative, such that they "represent the union of expressive imagination with rule-governed cultural form" (p. 121), and both can be explored and consolidated in extended peer interactions. This theoretical position is supported by a body of research suggesting that early literacy activities such as joint book reading and storytelling provide a fruitful platform for supportive interactive peer behavior. In a mixed- age (5 to 8 years old) classroom, both younger and older children naturally engaged in multi-directional modeling, assisting, directing, tutoring, negotiating, affirming, and

[49] Note, that Labov argued early on (1972b), that children as young as 3 years of age may follow their peers' sociolinguistic expressions.

contradicting each other in literacy activities (Christie & Stone, 1999; Stone & Christie, 1996; also see Cekaite & Björk-Willén, 2013). Along those lines, children aged 4 to 5 were observed to use rich linguistic array and thus to have the ability to act as "linguistic informants" (Neuman & Roskos, 1991, p. 233) in print-enriched play environments in US-American preschool classrooms.

7.2.2 Longitudinal Evidence for Peer Effects in Language Learning

Besides targeting child behavior (Barbu, 2009), large-scale longitudinal studies have investigated the importance of classroom peer effects[50] on child language growth (Henry & Rickman, 2007; Justice, Petscher, Schatschneider, and Mashburn, 2011; Mashburn, Justice, Downer & Pianta, 2009; Schechter & Bye, 2007).

For example, Henry and Rickman (2007) tested the ability level—i.e. "what a child knows and can do that may influence her peers" (Henry & Rickman, 2007, p. 103) — of children's peers in 119 US preschool classrooms to estimate the effect of peers on 630 4-year-olds' developmental progress. Of the sample, 5.9% were Hispanic (range across classrooms: 0.0%-60.0%), while no information was provided on DLL status. Targeted areas were: cognitive skills, receptive language, and early literacy skills—as assessed via the Peabody Picture Vocabulary Test (PPVT), the Story and Print Concepts assessment, and the Woodcock-Johnson Letter Word Recognition assessment (WJ-LW)—and expressive language, as assessed by a subtest of the Oral and Written Language Scales (OWLS). The scores for children's peers within the classroom were averaged and included as the measure of classroom level peer characteristics. Strongest peer effects emerged for measures of cognitive skills, early literacy abilities in story comprehension and print awareness, and receptive vocabulary, after controlling for program characteristics, child and family characteristics, and pretest scores (Henry & Rickman, 2007).

Furthermore, applying a quasi-experimental design, Schechter and Bye (2007) found the growth in vocabulary (as measured via PPVT) from fall to next spring—

[50] Drawing on Hanushek, Kain, Markman, and Rivkin (2003), Henry & Rickman (2007) define peer effects "as the effects of the ability of peers on an individual child." (p. 103).

controlling for fall scores—in 4-year-old US-American children from low-income families who attended ECEC programs with peers from economically diverse families (n = 35, DLLs among those: n = 19) to be greater than the vocabulary gains in children from low-income families attending ECEC programs that only served children from low-income families (n = 50, DLLs among those: n = 18).

Mashburn and colleagues (2009) found further evidence for peer effects in the area of language development for a sample of 1,812 ethnically and racially diverse[51] 4-year-olds from 453 US-preschool classrooms. Peers' expressive language skills (as assessed by the Oral Expression scale from the OWLS; Carrow-Woolfolk, 1995) made "a unique, albeit small, contribution" (Mashburn et al., 2009, p. 697) to children's receptive and expressive language growth over a school year. Results from further analyses pointed to the fact that children with already advanced linguistic skills may especially benefit from the classroom presence of peers with similarly advanced language abilities. Also, interestingly, peer effects were moderated by the quality of emotional support in the classroom[52], suggesting an at least partial dependence of beneficial peer interactions on a positive and emotionally supportive classroom climate.

Finally, Justice and colleagues (2011) found further evidence for a link between the linguistic progress over a school year of 338 4-year-old children from 49 US-preschool classrooms and the level of language of the peers attending the same class. When analyzing the average peer language level in relation to individual children's language growth over the time course of the ECEC year, they found strong dependencies. Children with low language skills showed a decrease in language ability over the year (on average -1.5 SD), when nested in classrooms in which the average language score was one standard deviation below the mean. In contrast, same-aged children, who also displayed low language skills, but were attending classrooms with average language abilities overall, showed stable language abilities. As such, the results indicated that chil-

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[51] Participants were 52% White, 23% African American, 11% Latino/Hispanic, and 15% other race (Mashburn et al., 2009, p. 691). No information was provided on children's present or past home language use.

[52] The quality of emotional support was assessed by the Emotional Support domain of the Classroom Assessment Scoring System-PreK (CLASS-PreK; Pianta, La Paro, & Hamre, 2008)

dren with stronger initial skills may have peer effects on their initially less-skilled peers, while, in turn, being grouped together with those peers may not lead to detrimental effects in children with initially stronger skills[53]. Importantly, this relation was independent from measures of preschool classroom instructional quality[54]. It should be noted though, that, while participants were ethnically diverse, they came primarily from English-speaking homes: 94% of children spoke the majority language English, while only 6% spoke a language other than English (Spanish) at home.

7.2.3 The Special Role of Peers in Dual Language Learning in ECEC

Especially for DLLs, peer interactions might offer ample opportunities for second language learning. Because of their limited mobility and socio-emotional abilities, young children are encouraged to engage with peers within physical proximity, for example in their ECEC settings, and adapt their language use accordingly, which might lead to a strong motivation to learn the L2 (Jia & Aaronson, 2003). In fact, Fassler (1998), who followed preschool-aged DLLs acquiring English as their second language in an ECEC institution, observed that "many early uses of English were embedded in children's sociability – their eagerness to communicate and their efforts to cultivate friendships" (Fassler, 1998, p. 390).

Long, Bell, and Brown (2004) observed the peer interactions of three Mexican-American 5-year-olds (two boys, one girl) entering an US-American preschool with hardly any previous English contact, over the time course of an academic year. The researchers noted child behaviors such as helping their peers in understanding appropriate classroom behavior and translating and clarifying the teacher's requests, engaging them in side-by-side picture book reading, and praising their peers for display of both Spanish and English language skills. It was concluded that the children were "experts in strategically helping one another" as "they drew from varied cultural experi-

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[53] This finding is especially important, considering concerned parents, who fear that their child's language development may be negatively influenced by the presence of many other children with less advanced skills, e.g., DLLs.

[54] Instructional quality of children's classrooms was assessed in fall and spring by using the CLASS-PreK (Pianta et al., 2008). It should be recognized that the patterns were based on averages, such that they cannot held to be similar for every individual child.

ences to co-create new possibilities for successful participation" (Long, Bell, & Brown, 2004, p. 103)[55].

Focusing on self-organized play activities, Björk-Willén and Cromdal (2009) observed how 4-year old DLLs in preschools in Australia and Sweden took up elements from instructional activities and included them in their in free play, such as object labeling activities, introducing themselves in a different language, and engaging in shared book reading. Moreover, in a video observation study, Cekaite and Björk-Willén (2013) targeted the language interactions of twenty-four 3-to 5-year-olds from English- and Spanish-speaking backgrounds in a Swedish ECEC institution during free play. Children frequently corrected each other's language use in phonetic-phonological and semantic-lexical areas and helped each other in searching for appropriate words. In an observational study with five dyads of English-language learners, Pica and colleagues (1996) noted corrective peer behaviors similar to Cekaite and Björk-Willén (2013), such as the indication of the use of incorrect words.

Meanwhile, Palermo and colleagues (2014) more closely examined the contributions of teacher and peer English exposure on the English vocabulary skills of 4-year-old Spanish-speaking preschoolers ($N = 107$) in ECEC settings in the United States. While no associations emerged between teachers' English use (i.e., frequency of English use during social interactions with the children) and DLLs' English language abilities, preschool observations revealed a significant relation between peer English exposure during the fall and DLLs' expressive vocabulary in the next spring, such that the frequency of children interacting with English speaking peers was related to significant English vocabulary gains over the year (Palermo et al., 2014). In a subsequent study including the same preschool-age Spanish-English participants, Palermo and Mikulski (2014) focused on aspects likely involved in mediating the relation between peer English exposure and vocabulary growth. First, they reported that the support of English vocabulary growth through peer English exposure to may be mediated by English oral proficiency. Second, they also "found support for the idea that children's English oral proficiency facilitates English exposure from peers" (p. 633), such that DLLs with

[55] See Gort (2008) for similar observations of DLLs in elementary school settings.

higher initial English skills were more likely to have access to language-supporting peer interactions. In addition, there was emerging evidence that especially positive peer interactions, i.e., peer interactions characterized by pro-social behavior towards each other, contributed to language learning.

Furthermore, Rydland and colleagues (2014b) examined the vocabulary trajectories of 26 children who were speaking Turkish at home and learning Norwegian as their L2 in preschool and school over the time course of five years. At age 5, when the observations started, children had already around two years of preschool experience. They targeted the amount and richness in vocabulary their peers used when playing together had an influence on target children's vocabulary development. Controlling for children's own vocabulary richness in play activities, maternal education, and teacher-led group talk, growth modeling still revealed an association between "the vocabulary richness of the peers in play […] with higher vocabulary scores for the target children at age five" (Rydland et al., 2014b, p. 222). These peer effects seemed to be especially present in the early years before formal school entry and were not attenuated in the years to come (also see Rydland et al., 2014a).

In turn, as Hoff (2006) points out, the absence of peers as part of the native-speaker input system can contribute to a child not reaching native-like language competence (also see Oller & Eilers, 2002). Still, even when DLLs who share the same language backgrounds engage in play activities, they will often adapt their linguistic expressions to the institutional lingua franca. Björk-Willén and Cromdal (2009) reflect that

> […] such orientation to language choice as a normative feature of the children's conduct during free play […] reveals their sensitivity to the organizational aspects of instructional activities in multilingual educational practice.
>
> (p. 1515)

Another important aspect to consider is that not all children have easy access to peer interactions and struggle to establish relations with their peers. Who those children may be and what consequences may be involved will be discussed in the final section of this subchapter.

7.2.4 Matthew Effects in Preschool Peer Interactions

As discussed in detail in the previous sections, interactions and positive relationships with peers facilitate children's mono- and dual-language development. Yet, it is important to acknowledge the considerable challenges preschool-age children face when interacting with their peer group. Adequate language and behavioral skills can not only be seen being lastingly affected, but also as a prerequisite for initiating and maintaining successful peer interactions and relationships (e.g., Ladd, 2005; Menting, van Lier, & Koot, 2011; Licandro & Lüdtke, 2013; O'Neill et al., 2009).

Multiple studies provide support to the argument that children with low language skills, including DLLs (Gertner et al., 1994), are less likely to establish sustained high quality peer interactions and relationships, and are more likely to be rejected by their peers (Bat-Chava, Martin, & Imperatore, 2014; Conti-Ramsden & Botting, 2004; Gertner, Rice, & Hadley, 1994; Guralnick, Connor, Hammond, Gottman, & Kinnish, 1996; Hadley & Rice, 1991; Menting et al., 2011; Tabors & Snow, 1994; also see Blum-Kulka & Gorbatt, 2014). For example, Tabors and Snow (1994) reported children in US preschools to largely ignore their non-English-speaking DLLs, until they progressed in learning the lingua franca.

Therefore, simply being interested in peer interactions does not ensure successful participation for all children. Those with deviating language development or interaction skills, or simply developmental differences, may already struggle to establish and maintain peer interactions in the preschool-age (Hay et al., 2004). DeLuzio and Girolametto (2011) observed ECEC peer interactions of twelve 3- to 5-year-old children with severe to profound hearing loss, who were equipped with cochlear implants and hearing aids, respectively, and who did not differ from 12 matched control children with typical hearing in terms of frequency of peer initiations, ability to respond to others' initiations, or their skill in maintaining peer interactions. Despite the small sample size, significant differences emerged, such that peers initiated interactions less often with the hearing impaired children than with other typically developing children in the classroom. Also, peer initiations of children with hearing impairment were more often ignored, resulting in overall less access to peer play interactions in the everyday

classroom. This, in turn, may lead to the impediment of language development (Leflot, van Lier, Verschueren, Onghena, & Colpin, 2011), because being exposed to and having the opportunity to practice multi-faceted language skills then is not ensured. Instead, as displayed in Figure 13, children who could well benefit socio-emotionally and linguistically from positive peer interactions may have less access to them. For example, "less proficient L2 learners may have problems becoming ratified participants in the challenging and engaging peer conversations from which they learn" (Rydland et al., 2014b, p. 215), while children with already well-established linguistic skills may benefit even more.

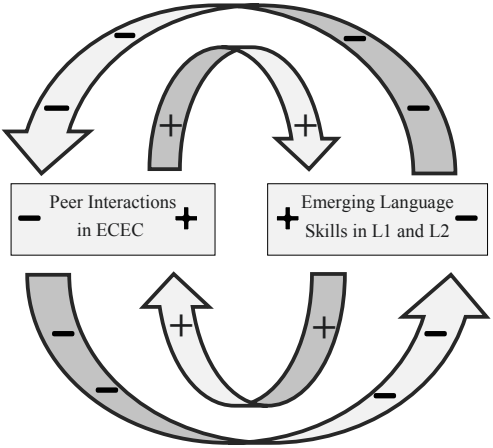

Figure 13. A Simplified Model of the Mathew Effect as Applied to Peer Interactions in ECEC and Emerging Language Skills. Translated from Licandro & Lüdtke (2012, p. 290)

This can be considered an expression of the "Mathew effect" theory (Stanovich, 1986; also see Mashburn et al., 2009; Powell & Diamond, 2012), i.e., "educational sequences where early achievement spawns faster rates of subsequent achievement" (Stanovich, 1986, p. 381), suggesting that well-established language skills facilitate the access to language-promoting peer interactions, and vice versa. These connections are not to be taken lightly, because besides likely negative consequences for language acquisition,

repeated experiences of socio-emotional isolation due to rejection and being disliked by peers may contribute to socio-emotional maladjustment (Mercer & DeRosier, 2008) and have been connected to the genesis of anxiety and/or depression in children (e.g., Hay et al., 2004).

7.2.5 Subsummary: Peers and Language Learning in ECEC

"Whether children influence one another is no longer in doubt. Critical issues, however, concern the manner in which subject and situational conditions interact with social contingencies in determining outcome'' (Hartup, 1999, p. 172). In summation, there is growing evidence that children strongly influence each other's language learning in a variety of ways in ECEC contexts. Taken together, the previously reviewed studies substantiate the notion of peer effects in ECEC settings on mono- and dual-language learning and provide emerging evidence that those may be most powerful in preschool (cf., Henry & Rickman, 2007), when learning is mainly embedded in individual and multi-party social interactions. In case peers do not share the same lingua franca, "The relative symmetry of peers allows for the possibility of collective scaffolding, in which all participants pool knowledge to express themselves in the target language" (Philp et al., 2014, p. 106). However, children who lag behind their peers in linguistic ability (for example, many DLLs relying on the ECEC environment to develop their second language skills) may also have a more difficult access to peer interactions.

An important remaining question to be targeted in the following sections is, if these naturally occurring effects can be applied didactically—that is, if peer-assisted learning strategies can be successfully applied in the ECEC context to support children who already have low language skills. Among these children are DLLs, who are in the process of developing their language skills in the majority language.

7.3 Theoretical Underpinnings and the Application of Peer-Assisted Language Learning to the ECEC Context

After having explored the potential of naturally occurring peer interactions in ECEC for language and early literacy learning, the current chapter will focus on the didactic approaches to the inclusion of peers in early language and literacy learning. To further

explore this type of didactic approach, the following sections seek: first, to derive working definitions of peer-assisted learning and peer tutoring in ECEC; second, to develop a didactic model of peer-assisted language and literacy learning in ECEC on the theoretical backdrop of the *relational didactics* (Lüdtke, e.g., 2010b, 2012b), and finally, to review research evidence further informing the study presented thereafter.

7.3.1 Delineation of a Working Definition of Peer-Assisted Learning in ECEC

Peer-assisted learning (PAL), can be broadly characterized as

> […] the acquisition of knowledge and skill through active helping and supporting among status equals or matched companions. It involves people from similar social groupings who are not professional teachers helping each other to learn and learning themselves by so doing.
>
> (Topping, 2005, p. 631)

As such, it represents an umbrella term for small-group cooperative learning interventions with peers mediating the subject matter, including the form of PAL applied in the second study of the current work, namely peer tutoring. Peer tutoring (PT)[56] is a classic form of dyadic PAL, in which peers take on the roles of a tutor (who may receive previous training) and a tutee to support each other in working on curriculum contents. Didactic situations are often pre-structured by scaffolding procedures and can either apply to specific materials or regulations for interactive behaviors, independent from the type of material used (Topping, 2005; Topping & Ehly, 2001). Broadly characterized, PT has been posited as a special form of peer interaction (Philp et al., 2014). More specifically, PT can be viewed as an "instructional method of students working in dyads or small groups and systematically presenting their peers with opportunities to practice academic skills" (Axe, 2011, p. 1076). This type of didactic method can be considered as a historically well-established and evidence-based practice for working with DLLs (Institute of Education Sciences, 2010; also see McMaster, Fuchs, & Fuchs, 2006). Different combinations of contextual factors determining the organiza-

[56] While it has often been confused with mentoring, these procedures are inherently different, as mentoring also focuses a one-to-one-relationship, but can be characterized by an open counseling approach through a more experienced worker by means of role modeling, positive reinforcement, and raising professional aspirations (cf. Topping, 2005; Topping & Ehly, 1998).

tional delivery dimension, such as the setting (e.g., (preschool-)classroom-based or outside of the classroom setting), the didactic frame (e.g., reciprocal or set roles), and child characteristics (e.g., familiarity with the peer, task, and the didactic setting, same-age or cross-age peers), generate a multitude of possible peer tutoring programs (Topping, 2005; also see Parr & Townsend, 2002). Accordingly, PT activities can range from facilitating both tutee's and tutor's engagement in a constructive academic activity (e.g., Fantuzzo & Ginsburg-Block, 1998), providing access to the general curriculum and enhancing socio-emotional interaction (e.g., Carter, Cushing, Clark, & Kennedy, 2005; Goldstein, English, Shafer, & Kaczmarek, 1997), to supporting the acquisition of selected academic skills (e.g., Harper, Mallette, & Moore, 1991; Kohler & Greenwood, 1990; Rohrbeck, Ginsburg-Block, Fantuzzo, & Miller, 2003).

Furthermore, as has been established in the previous sections, in contrast to an adult, a peer can be characterized as someone of a similar developmental age, who understands the world in similar ways (e.g., Damon & Phelps, 1989; Kernan & Singer, 2011). For this reason, a peer partner does not bring the sophisticated strategies and knowledge that an adult partner would. Learning with peers can be characterized more heuristic than rule-oriented. Children working together may for example settle for an ungrammatical use of language or may not come to a solution or conclusion simply because they forget to do so (Neuman & Roskos, 1991).

In a meta-analysis of PAL activities, Ginsburg-Block, Rohrbeck, & Fantuzzo (2006) found evidence for PAL interventions to be especially effective for children from low SES-families, in urban educational settings, as well as children from minority backgrounds. Also, for school-age children, they found evidence for PAL to be more effective for children in lower grades (1 to 3) than those in higher grades (4 to 6). Still, the central factors in the learning process between peers are not yet entirely clear. In an attempt to address this challenge, the relational didactics framework is posited as a theoretical frame of reference for peer learning activities, emphasizing the intersubjective socio-emotional exchange as the driving force behind peer learning.

7.3.2 A Theoretical Approach to Peer-Assisted Learning on the Backdrop of the 'Relational Didactics' Framework

The conceptualization of *relational didactics* draws on the main reference disciplines of language teaching theory, namely linguistics, language acquisition theory, and general pedagogy and didactics (Lüdtke, 2010a, 2012b), and is mainly informed by relational-intersubjective approaches to language acquisition (e.g., Lüdtke 2005, 2006, 2012a; also see sections 2.1.2 and 7.1). The acquisition of language, then, is based on the intersubjective construction of meaning and depends on the socio-emotional context, as it emerges in the 'right', emotionally supportive learning atmosphere (Lüdtke, 2015). Accordingly, in peer interactions, the acquisition of linguistic knowledge emerges through a self-organized negotiation process, which can be seen to be less about an optimized linguistic input, but more about intrinsically motivated, emotionally regulated construction processes between children. Ideal linguistic models with a slight developmental difference may thereby promote the emergence of 'correct' linguistic constructions (Licandro & Lüdtke, 2012).

Consequently, adapting the concept for peer learning, the socio-emotional relationship of peers is posited as the central linguistic teaching-learning organizer. The actual language teaching environment, where language teaching and learning is professionally organized, can be illustrated with the *language teaching triangle*[57] (Lüdtke, 2010a, p. 38; also see 2012b), which was modified and expanded to adapt the model for language-focused peer tutoring activities (see Figure 14). The function of the *teacher*, traditionally filled by the educational or speech-language professional, is filled here with a peer. As a tutor, he or she mediates the linguistic material, for example a fictional narrative from a picture book, to the *learner*, in this case also a peer, in the role of a tutee.

Contextual factors play a major role in "enabling children to collaborate with one another" (Philp et al., 2014, p. 109). For example, depending on the developmental level of the children, the role of the educational or speech-language professional can vary in

[57] The language teaching triangle was based on the historic *didactic triangle*, illustrating the relation between teacher, learner, subject matter, and instructional methods (for a review, see Klette, 2007).

intensity and specific function. This is especially true for preschool-aged children, who are still developing their ability to engage in extended reciprocal interaction and who may struggle to stay focused when facing a hard or boring task, or to resolve conflicts with one another. Therefore, young children engaging in peer tasks likely require support by an educational or speech-language professional, for example, in the organization of the task, scaffolding, and—if necessary—mediating and modeling.

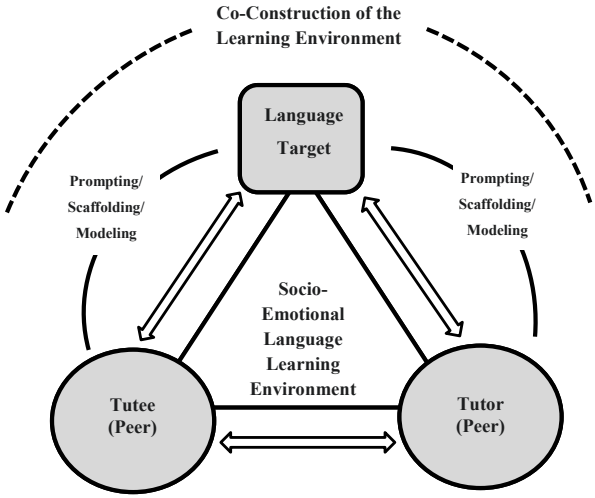

Figure 14. Adaptation of the "Language Teaching Triangle" (Lüdtke, 2010a, 2012b) for Peer-Assisted Language Learning, as Further Developed From Licandro & Lüdtke (2012, p. 293).

This broad characterization with the assignment of the classic roles of teacher and learner does not imply, however, that only one agent (i.e., the learner) can benefit from the interaction and the active engagement with the topic of interest. A historic view of tutors as being surrogate teachers along with a linear transmission of knowledge from the teacher to the tutee through the tutor, alongside with possible negative learning effects on the tutor, has long been superseded (Topping, 2005). Children serving as tutors have demonstrated increased attention to and improved performance in academic tasks as well as improved social interactions (Cushing & Kennedy, 1997; Hunt,

Staub, Alwell, & Goetz, 1994; also see Ginsburg-Block et al., 2006). In cases of prompting, scaffolding, and/or modeling of an educational or speech-language professional, preschool-age peers may further benefit (e.g., McGregor, 2000). Still, Roscoe & Chi (2007) caution, "although there is ample evidence that tutors can learn in a variety of settings, such outcomes are not guaranteed" (p. 539).

7.3.3 State of the Art/ Research on Peer-Assisted Language and Literacy Learning in ECEC

These theoretical explications are consistent with recent research demonstrating that the degree of emotional reciprocity between preschoolers emerged as an important influencing factor in the production of decontextualized language features. Pellegrini and colleagues (1997) observed 64 dyads of friends and children unfamiliar to each other (M_{age} = 5 years, 3 months) in a total of 12 pre-structured narrative, play, and writing settings across a kindergarten year. Analysis of audio-recordings revealed that children expressed more emotional state terms as well as literate language (a composite score of use of cognitive and linguistic terms) when solving conflicts with familiar peers (Pellegrini, Galda, Flor, Bartini, & Charak, 1997; also see Pellegrini, Galda, & Flor, 1997). Similarly, Pellegrini and colleagues (2002) found that children who were on average 5 years and 6 months old expressed more emotional state terms and literate language features when retelling a picture book story to a familiar peer than in interactions with unfamiliar children (Pellegrini, Melhuish, Jones, Trojanowska, & Gilden, 2002). It can therefore be concluded that close relationships between peers are not only meaningful emotionally and socially, but also promote decontextualized language use[58] (also see Jones, 2002).

Furthermore, Daiute and colleagues (1993) observed children from different cultural and linguistic backgrounds (African American, Asian American, Indian American, and European American) in a US classroom when composing narratives with their teacher or with a peer. Overall, teacher-led activities produced more elaborated classic narra-

[58] Note, though, that the interpersonal attraction did not emerge as an influencing factor for preschooler's convergence of sociolinguistic features in Nardy et al.'s (2014) study.

tive structures, but during peer interactions children were more socially engaged and still produced elaborated narrative texts. While the developmental significance of interactions between "experts" and "novices" is beyond question, judging the learning experience, the authors argued that the absolute "[…] expertise is not the most important quality in a collaborator." Instead, the "nature of the interaction" (Daiute, Campbell, Griffin, Reddy, & Tivnan, 1993, p. 61) may be just as—or even more—vital to effective learning interactions. Further evidence can be drawn from studies which included a more closely focus on PAL activities.

When carefully adapting the didactic framework, PAL activities such as PT can be successfully installed in the ECEC environment, as suggested by McGregor's preliminary study (2000, study 3) of a clinician-prompted, peer-assisted narrative intervention in the US-American preschool system. More specifically, two 3-year-old target children, who were among the lowest performers on a narrative task and were confirmed by their classroom teachers as being among the lowest language performers in the classroom, were each paired a with high-achieving age-matched peer (all participating children were African American). During the 10 intervention sessions over the time course of eight weeks, tutors modeled stories from four different picture-books, which the tutee then repeated; both children received support through minimal clinical scaffolding in the form of prompts and recasts. Larger pre- and post-intervention gains in terms of narrative microstructure (total number of words, number of different words, and mean length of utterance) and macrostructure (inclusion of story elements) were evident for children in the experimental group as opposed to children in the control group. Also, children were able to generalize their narrative skills to novel story telling experiences. Furthermore, one of the tutors maintained their performance, while the other also exhibited gains in narrative macrostructure.

Meanwhile, Nicolopoulou (2002) explored the effects of a story telling and story acting practice on the narrative skills of ten 3-to 5-year-olds (all English speaking) from low-SES backgrounds in US-American ECEC settings. The intervention included a daily practice of a child telling a story of choice (mainly fictional) to the practitioner, who recorded it. Later on in the day, the practitioner would read the story aloud to all

children and the story inventor as well as selected peers would act the story out. Target children made higher gains in selected areas of narrative micro- and macrostructure over the time course of an academic year than children from a non-intervention control group (also see Nicolopoulou, Brockmeyer Cates, de Sá, & Ilgaz, 2014).

Taken together, while small in scope, these studies suggest that children's exposure to peers with more advanced narrative skills and the joint construction of stories may be affecting their narrative growth. Furthermore, albeit not studied in depth, there is evidence that these positive peer effects appear to extend to preschoolers with language impairments, such as they can benefit from script knowledge shared by their typically developing peers during play activities. Robertson and Ellis Weismer (1997, study 1) paired eight preschoolers aged 4 to 5 with specific language impairment (SLI) with typically developing preschoolers. Children were supplied with props and were instructed to play "house" for 15 to 20 minutes at four different times within a three-week period. During play activities, children were instructed to tell all they knew about playing house and prompted with "What else do you do?" when appropriate. Otherwise, adults were not part of the ongoing play interaction. The children with SLI who participated in structured play interactions with the untrained peer models demonstrated significant gains in the length of their script reports (e.g., answering the question, "what do you do when you play house?"), the number of different words used, the number of play-theme-related acts within their scripts, and the number of linguistic markers used (also see Law, Garrett & Nye, 2003). In a subsequent study, Robertson and Ellis Weismer (1997, study 2) paired six 4-year-old children with SLI either with each other (two play dyads total) or with a typically developing peer model (two play dyads total) in a single-case, multiple baseline design. Each dyad participated in four play sessions, similar to those reported in study 1, over the time course of three weeks. Both children with SLI paired with typically developing peer partners made marked gains in all targeted areas, namely total number of words and number of different words produced, as well as the verbalization of play-themed acts, and the use of linguistic markers (i.e., temporal, conditional, and other conjunctions), as opposed to their peers with SLI in SLI play dyads, who made little or no gain. Drawing on both

studies, the researchers suggested that carefully planned scripted-play activities with typically developing peers may be one method to facilitate some aspects of language development in children with SLI. Again, though, the small sample size of these studies prohibits a generalization of findings.

However, these results also fall in line with findings by Schmitt (2013), who investigated active ingredients in school-based speech and language therapy for 233 children in kindergarten, first, and second-grade with language impairments, as provided by 73 speech-language pathologists (SLPs). While all children made considerable progress, one main finding was that children seen in therapy sessions together with typically-developing peers made greater gains than those who were not. In fact, this was the only therapy ingredient, next to the group size (i.e., children seen in smaller groups made more gains), which emerged as a significant moderator on child language outcomes. Taken together, these findings further support the use of peer-assisted learning approaches in targeted language support. The fact that children with limited linguistic proficiency—whether due to language impairment or dual language learning (e.g., DeLuzio & Girolametto, 2011; Guralnick et al., 1996; Menting et al., 2011; Tabors & Snow, 1994)—may have limited access to naturally occurring peer interactions with children with more advanced linguistic skills, further underlines the potential benefits of peer-assisted learning approaches.

7.4 Chapter Summary and Consequences for Future Research – Study II

Both theoretically and empirically, peer interactions have been found to offer potent contexts for language acquisition in ECEC settings. From an early age—and in different ways than adults—peers engage in dyadic and multi-party interactions, providing children with the opportunity to verbally co-construct and negotiate meaning, such as in joint play actions, conflict resolution, and story telling activities.

Through these frequent interactions throughout the typical ECEC-day, peers may influence each other in their development. For example, exposure to peers with strong language skills in ECEC can boost language learning in preschoolers (e.g., Justice et al., 2011). Naturally, therefore, “peers who have a larger vocabulary, ability to express

themselves, greater familiarity with print materials, and well-developed social skills could stimulate skill development among the other children within their preschool environment" (Henry & Rickman, 2007, p. 101).

Narrative intervention can be defined as an intervention procedure that uses oral narratives as a medium whereby the participant practices language-related features after a prompt and/or a model (Swanson, Fey, Mills, & Hood, 2005). In the realm of peer-assisted learning activities, a peer will offer the prompt and/or model. Theoretic explications and research evidence underline that PAL activities can be successfully implemented in the ECEC environment and that children engaging in peer learning activities can make considerable progress in selected learning outcomes. Research evidence does not only emphasize the role of peers in language development, but also suggests that peers can be successfully included as language intervention agents in ECEC, provided that careful planning and support of peer-assisted learning is implemented. In storytelling activities, there is emerging evidence that preschool-aged children draw on each other's model, which may have a lasting influence on narrative productions (McGregor, 2000).

While previous studies suggest the successful implementation of peer assisted language learning approaches in the ECEC environment, it should be noted that limitations prevent generalization to a wide population. As reported, most existing studies have significantly small sample sizes and are restricted to a limited cultural frame. As reported studies were sparse and many small in scope, further research is needed to examine the implementation of a peer tutoring approach in ECEC and the potential impact on DLLs' fictional narrative skills.

Support of Emerging Fictional Narrative Skills through Peer-Assisted Intervention: An Exploratory Study (Study II)

As has been established in the previous sections, narrative skills are well recognized as an important skillset underlying a variety of socio-emotional and academic competencies (e.g., McCabe & Bliss, 2003; Nelson, Aksu-Koç, & Johnson, 2001; Norbury et al., 2014). Narrative intervention can serve as a potent tool to support preschoolers in their narrative development, and it is becoming an established feature in the support and clinical treatment of emerging language skills in preschool-age children (Gutiérrez-Clellen, 2012; Paul, 2007). Because there is not a standard method for delivering narrative intervention, research is necessary to support professionals in their endeavor to provide effective and efficient intervention and to identify components that will improve children's abilities to successfully produce narratives. For the current study, an innovative approach was developed and applied involving peer tutors to extend the investigation of effective approaches to narrative intervention. Employing peers as partners in interventions, such as PT, as deducted previously (see section 7.3), can be a promising approach in facilitating selected intervention goals (McGregor, 2000; Topping, 2005). Based on the theoretical background and the empirical evidence reviewed in the previous chapters, the current study pursued the main research aim to *explore the effects of a peer-assisted intervention on the narrative generations of preschool-age DLLs.*

This aim translated to three distinct purposes. The first was to explore the effects of a peer-assisted narrative-based language intervention—more precisely, its effects on indices of the oral fictional narrative generations of preschool-age DLLs. The second was to also target long-term effects of the intervention, while the third was to explore intervention effects on tutors.

All participating children were Turkish-German DLLs aged 3 to 6; testing and intervention occurred in German in the ECEC environment. A pre-posttest design including an intervention group, an intervention control group, and a non-intervention control group was applied to enable careful experimental control of aspects of oral narration as well as an assessment of generalization and maintenance of narrative skills.

The following specific research questions were addressed:

1. *To what extent does engaging a peer tutor in a narrative-based language intervention improve the tutee's generation of fictional narratives?*
2. *To what extent do any improvements in preschoolers' narrative performance maintain following a period of 5 weeks with no intervention?*
3. *Which effect does the intervention have on children serving as the tutors?*

8 Methods Study II

This exploratory intervention study[59] was based on a pre-posttest design including an intervention group, an intervention control group, and a non-intervention control group.

8.1 Participants

Forty-eight of the Turkish-German DLLs who participated in Study I comprised the participants for this study. Information on recruitment, inclusion criteria, and informed consent can be found in section 4.1 of Study I, respectively.

Based on their Frog Story EINC measures, 30 of the children who had among the lowest narrative complexity scores were randomly assigned to one of the three conditions: Peer Tutoring (PT), Peer Play (PP), or Control Group (CG). Each child in the PT and PP groups was then matched with a child from the same ECEC institution with considerably higher narrative language skills based on their Frog Story EINC and ECEC practitioners' referral[60]. The children with relatively weaker narrative skills were deemed the tutees and children with relatively strong narrative skills were deemed the tutors. ECEC practitioners reported the tutees to be among the weakest narrators and the tutors to be among the strongest spontaneous narrators[61]. Original group assignment led to 20 children in the PT group (i.e., 10 tutee-tutor-dyads), 18 children in the PP group (i.e., 8 tutor-tutee-dyads, two additional tutees), and 10 children in the CG group.

[59] Data collection was funded by a research grant by Niedersächsisches Institut für Frühkindliche Bildung und Entwicklung (nifbe) awarded to Ulrike M. Lüdtke and Ulla Licandro, née Grube (nifbe Az. FP 01-12). The author served as the principal investigator and has no financial or nonfinancial relationships relevant to the content of the study.

[60] ECEC practitioners were involved in the selection process to prevent the pairing of children disliking each other.

[61] Thus, children's narrative skills were considered in relation to his or her peers' skills, that is, their reference-group status (Hanushek, Kain, Markman, & Rivkin, 2003).

U. Licandro, *Narrative Skills of Dual Language Learners*, Diversität in Kommunikation und Sprache / Diversity in Communication and Language,
DOI 10.1007/978-3-658-14673-3_8

Overall, eight children dropped out over the time course of the study. Two dyads in the PT group dropped out because of high rates of absence (i.e., more than 4 sessions) due to spontaneous extended family holidays (in one case the tutee and in the other case the tutor). Two children who were originally assigned to the PP group participated in the pretest and were identified as tutees, but could not be matched with an appropriate tutor. Two children in the CG group participated in the pretest, but did not participate in the posttest, one because of refusal, and the other one because of absence from ECEC on the days of testing. As a result, 40 children (i.e., 8 tutee-tutor dyads in PT, 8 tutee-tutor dyads in PP, and 8 children in CG) participated in the final study. Summary data describing the characteristics of the children by participant group are given in Tables 11 and 12 and statistical comparisons between the groups are provided in tables 13 and 14 (for all tables, see preliminary analyses, section 9.1).

8.2 Materials

The following sections present information about the standardized test instruments, the narrative assessment material, and the intervention material.

Standardized Test Instruments

As all children, tutees, tutors, and participants in the control condition also participated in study I, information on procedures for measures of home language environment, language assessment, and nonverbal intelligence is provided in section 4.2.

Narrative Assessment Material

The Frog Story (Mayer, 1969, as presented in section 4.3) was used for pre- and post-intervention probes to track narrative microstructure as well as macrostructure and evaluative and literate language use (as assessed by the combined instrument EINC, see section 4.4.2). Different self-developed stories (similar to the intervention material, see section below) were used at pretest, posttest, as well as after the no-intervention period as a maintenance probe, and also analyzed via EINC.

Intervention Material

The intervention in the PT group itself, as well as additional pre- and posttests and generalization probes[62] throughout the intervention period, involved a total of 20 picture stories. Following McGregor's (2000) example, these wordless stories were developed to reflect young children's experiences. While some of the books were modeled after McGregor's (2000, study 3) materials and others were self-developed, they were all digitally designed by an artist. This procedure eliminated the possibility that participants had prior exposure to any particular story and controlled for length and complexity effects on the obtained narratives. Each story was seven pages long and showed animated characters of diverse ethnicity and gender or animal protagonists solving a single problem or encountering events familiar to children (e.g., falling from a tree, searching for a shoe). Each page represented an opportunity for the inclusion of one or more story grammar elements (character, setting, initiating event, action/attempt, complication, consequence). The pictures were printed in color on 13x9 cm cardstock and laminated. Each story was put in an individual box that bore a picture of the main character(s) and the name of the story. Additionally, all stories were on 16x11 cm laminated cardstock so that children also had the opportunity spread their story out on the floor and to tell their story while standing up or while sitting on the floor. Finally, the stories were bound as little story books, displaying one picture per page. An example story is displayed in Appendix A.

8.3 Study Design and Intervention Procedure

As presented in Figure 15, the study was based on a pre-intervention to post-intervention comparison. It involved tracking selected measures of microstructural and narrative complexity (macrostructure and evaluative language features) used in the oral productions of the Frog Story (unfamiliar at pretest and told for the second time at posttest I).

[62] The analysis of the generalization probes collected throughout the intervention process was not analyzed as part of the current study.

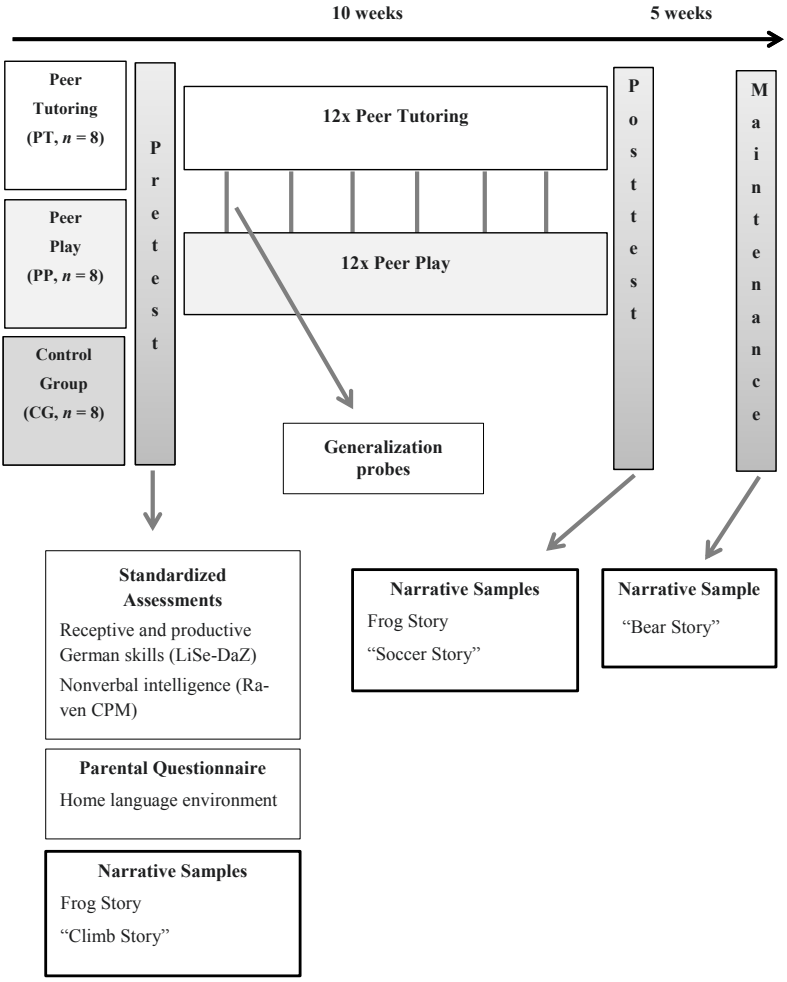

Figure 15. Overview of the Exploratory Intervention Study Design

To supplement the narrative productions, children in all three groups (both tutors and tutees, as well as children in the control group) also produced two narratives based on unfamiliar picture books at pretest, posttest, and after a non-intervention maintenance phase (each time a warm-up story and a story that was used for tracking changes in narrative production). Posttest measures were collected in the same manner as pretest

measures. Five weeks ($M = 32.86$ days, $SD = 6.75$ days) following the posttest, a maintenance probe was collected from all children. As several weeks had passed between the collection of stories at posttest and maintenance probe, the latter included the production of two stories. The first story was treated as a warm up, while the second was seen as the assessment story. The protocol for the collection of the narrative sample was similar to pretest and posttest. No further data was collected at this point. Furthermore, for children in the PT and PP groups, biweekly generalization probes were collected that included the unaided production of two unfamiliar story books (7 pages; see previous section and Appendix A for a sample story). The analysis of the generalization probes was not included in the current study. The intervention procedure as well as tutor-tutee dyads were held constant throughout the intervention, as young children in a peer-learning setting may not only benefit from the familiarity with a task, but also from the familiarity with their assigned peer partner (e.g., Ogden, 2000; Pellegrini et al., 2002).

The study featured one intervention group (Peer Tutoring, PT) and two control groups: the Peer Play (PP) group as well as a no-intervention control group (CG), where children only participated in pre- and posttests to control for naturally occurring growth over time. The procedures for the PT and PP groups took place in a quiet room in the children's ECEC institutions. Detailed descriptions for both procedures are given below.

Peer Tutoring Group (PT)

Before implementing the intervention for the study, it was piloted with a group of children in an ECEC setting, which led to the final intervention plan.

The relational didactic framework for the intervention, drawing on the theoretical background of the relational didactics (see section 7.3.2), was the notion of 'Geschichtendetektive' *[Story Detectives Buddies]*; the children's task was "to discover stories together." To do so, children were told to listen carefully, "just like detectives," when their peer told them a story and pay attention to detail when telling a story them-

selves. Prompted peer models[63] were achieved in the following manner: After selecting a story at random from a selection of three, the tutor told the depicted story to the tutee. The clinician used corrective feedback and elaboration techniques as well as a maximum of four prompts per story, following the tutor's utterances, to elicit narratives rich in structural form and content (for examples of all prompting and feedback methods, see Appendix D). Therefore, prompted peer models represented the narrative reflection of the clinician-supported tutor's performance (cf., McGregor, 2000). Following the tutor's model, the tutee told the same story back to the tutor. The clinician used similar feedback and prompting methods to support narrative elaboration, but never modeled a complete story to the children. Consecutively, this procedure was repeated with another story. For the third story, a different setting was created to facilitate joint narrative co-construction between tutor and tutee. The children were prompted to jointly tell the story as depicted in their book to the clinician. During the part, the clinician remained silent except to demonstrate interest using a selected array of prompts and backchannel responses such as nodding, "yes," "mhm," "anything else?" and "continue."

The 12 sessions each featured on average three stories (for a total of $M = 33.00$, $SD = 2.93$ stories throughout the intervention) and were each carried out for 35-40 minutes ($M = 37.58$, $SD = 3.18$ minutes), including a welcome song and little movement activities in between stories to ensure focused participation, especially in younger children. At the beginning of the intervention period, each child received a 'detective pass' where they received a stamp after the completion of each session. Upon the collection of four stamps (i.e., three times throughout the intervention process), children could collect a small toy or a sticker as a reward.

This setting was not only special in the sense that children were put in tutor-tutee dyads and participated in structured story telling activities, but also because a clinician from outside of the ECEC institution visited and spent time with them in an intimate setting, which is quite unusual in a regular ECEC day. Research found, as previously discussed, that preschool-age children can linguistically benefit from play interactions

[63] This part of the intervention was modelled after McGregor (2000, study 3).

with stronger language peers (e.g., Robertson & Ellis Weismer, 1997, also see section 7.1). For these reasons, the Peer Play group (PP) was created.

Peer Play Group (PP)

The tutee-tutor dyads of the PP group met in a similar fashion to that of the PT dyads. An examiner was present and guided the children through selected activities. In these groups, the notion of peer play was the focus. The overall theme was 'Weltenforscher' *[World Explorers]*. Participating children received a map and were told they would travel to a different land every time (e.g., 'The Land of Ice,' 'The Land of Robots,' etc.). For each world, a crafting activity and/or moving game was prepared to keep the children engaged for around 40 minutes. Again, similar to the PT group, each participating child received a pass, received a stamp for their participation, and had the opportunity to collect a little item upon the completion of three sessions. While there was no specific emphasis on storytelling, children were engaged in joint play and crafting activities.

Children in the PP groups participated in the pretest, posttest, and the maintenance probe. Furthermore, to control for effects due to repeated testing (e.g., familiarization with the process and the examiner, natural growth over time due to repeated unprompted storytelling, etc.), generalization probes were collected along the intervention process in exactly the same manner as in the PT group.

Control Group (CG)

To further control for naturally occurring growth over time, a control group ($n = 8$) only participated in the pre- and posttest as well as in the maintenance probe.

8.4 Treatment Fidelity

To ensure research quality, investigators must provide evidence that "treatment was implemented as intended" (Dollaghan, 2007, p. 72), a concept referred to as *treatment fidelity*. Treatment fidelity for the current study was implemented as follows: All in-

tervention deliverers had a professional background in Speech-Language Pathology[64] and were experienced in interacting with preschool-age children. They were carefully trained for the delivery of the PT intervention and the PP activities in targeted workshops led by the author and followed a detailed, prescriptive treatment protocol to ensure consistency across sessions. Regular team meetings bore the opportunity to monitor delivery of the intervention by discussing experiences, observations, and ideas. Furthermore, for the PT groups, approximately 50% of the sessions were recorded via video (Panasonic HC-V500EG-K camcorder) and the remaining sessions were recorded using a digital voice recorder (Olympus DM-650). An independent examiner trained on the treatment protocol randomly selected 10% of the video-recordings and observed if the examiner adhered to the protocol and followed specific activities as set out in the session plans. No obvious discrepancies were observed. Furthermore, after each session, both examiners of the intervention and control groups completed an intervention log including general procedures, compliance, and personal comments to control for implementation validity.

8.5 Analytic Strategy

The current study addressed the three main research questions relevant to preschool-age DLLs' emerging narrative skills: It explored the effects of a peer-assisted narrative-based language intervention on indices of the oral fictional narrative generations of preschool-age DLLs; it targeted long-term effects of the intervention; and, finally it targeted the intervention effects on tutors. Specific analyses are detailed below.

Because of the group sizes and high inter-individual differences between children, a normal distribution of examined variables could not be assumed. Accordingly, all analyses targeting were carried out using nonparametric testing procedures. As all three research questions included group comparisons, the same analytic approach was chosen to explore differences between study groups at posttest and at maintenance: To detect significant differences between more than two groups, Kruskal-Wallis H tests were applied. In keeping with standard practice, significant differences were followed

[64] I.e., professional training at least equivalent to a BA in Communication Sciences and Disorders

up with the Mann-Whitney U test to identify the origins of these differences with Bonferroni adjustments[65] applied for multiple between-group comparisons. Categorical variables were compared via chi-square-test for independence. Effect sizes were calculated to help to determine whether statistically significant differences were differences of practical concern. In accordance with Cohen (1988), effect sizes between .10 and .29 represented a small association, those between .30 and .49 represented a medium association, and effect sizes above .50 indicated large effects (Cohen, 1988, pp. 77-81).

Potential impacts of the chosen analytic approach on study findings and interpretations are discussed in the results and discussion section (see section 10.2.1 specifically for statistical considerations).

[65] This adjustment of the level of significance was applied to avoid type I errors when running multiple tests, i.e., concluding the presence of a significant difference when it is not.

9 Results Study II

In this section, following the preliminary analyses for differences between participant groups, all results will be displayed in regard to the specific research questions.

9.1 Preliminary Analyses

Summary data describing the characteristics of the children by randomized group assignment are given in Table 11 for tutors and Table 12 for tutees. Tables 13 and 14 provide a comparison of tutees' and tutors' narrative performance.

Tutee Groups

Table 11 provides an overview of group characteristics for the children in the intervention and control conditions. Participants in the PT group (3 boys, 5 girls) had a mean age of 4;7 and a mean exposure to German of 24 months; children in the PP group (5 boys, 3 girls) had a mean age of 4;5 and a mean of 24 months' exposure to German; finally, the children in the CG (3 boys, 5 girls) were on average 4;6 old with an average German exposure of 25 months (*SD*, ranges, and further characteristics appear in Table 11).[66] A Kruskal-Wallis H test yielded no differences between the three groups for age, exposure to German, expressive and receptive language, and nonverbal intelligence.

[66] Although gender was not equally distributed among the groups, the groups were still deemed comparable, as, similar to other studies (e.g., Hipfner-Boucher, 2011), gender analyses conducted in the previously presented study on narrative skills in Turkish-German DLLs did not reveal any significant differences between boys and girls on the measures used in this study (see section 5.1).

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DOI 10.1007/978-3-658-14673-3_9

Table 11. *Participant Characteristics for the CG, PP, and PT Groups (Tutees)*

Variable	Group	*M*	*SD*	Range	*p*
Age in months	CG	55.63	6.26	48-66	.888
	PP	54.50	7.84	44-66	
	PT	56.50	7.86	47-67	
Exposure to German in months[a]	CG	24.88	12.43	12-48	.997
	PP	23.75	9.39	14-43	
	PT	24.50	11.14	13-46	
Education mother in years	CG	7.75	3.73	0-10	.490
	PP	9.63	3.58	4-13	
	PT	10.00	3.51	4-17	
Education father in years	CG	7.75	3.73	0-10	.435
	PP	9.75	2.82	4-13	
	PT	12.13	4.05	9-17	
Expressive language[b]	CG	20.13	17.47	3-42	.580
	PP	19.88	7.95	8-34	
	PT	25.88	12.79	8-45	
Receptive language[b]	CG	21.13	9.54	8-33	.580
	PP	18.25	4.27	13-24	
	PT	19.50	4.57	10-25	
Nonverbal intelligence[c]	CG	15.13	2.95	12-20	.538
	PP	16.63	2.77	12-19	
	PT	15.50	5.98	8-27	
EINC Frog Story[d]	CG	7.88	4.12	3-13	.749
	PP	9.00	4.21	4-17	
	PT	7.63	4.44	3-17	
EINC Climb Story[d]	CG	6.75	3.41	2-13	.512
	PP	8.50	4.21	4-15	
	PT	8.25	4.86	3-16	

Note. CG = Control; PP = Peer play; PT = Peer Tutoring; each group had 8 participants. Reported *p*-values refer to Mann-Whitney U tests.
[a]Based on parent report.
[b]Raw score sums, LiSe-DaZ expressive and receptive subtests (Schulz & Tracy, 2011).
[c]Raw scores, Raven Coloured Progressive matrices (Raven, 1995).
[d]Measures of narrative complexity based on generations of "Frog, where are you?" (Mayer, 1969); 'Climb Story' was a self-designed picture story. Narrative complexity measured using an adapted and extended version of the INC scoring rubric (Petersen, Gillam, & Gillam, 2008). The maximum score for each story was 26.
None of the above measures were significantly different between the groups.

Narrative performance was assessed based on spontaneous narration of the Frog Story (for procedures, see section 4.3). Microstructural measures (narrative productivity, lexical diversity, and syntactic complexity) as well as narrative complexity (as assessed via EINC) were compared between the groups. Furthermore, narrative com-

plexity was also assessed via a second spontaneous narrative production based on an unfamiliar 7-page-long picture book ("Climb Story") (also see section 8.2).

For the Frog Story's narrative productivity measures, a Kruskal-Wallis H test revealed no significant differences between the three experimental groups, with a mean total number of words (TNW) of 75.00 (SD = 30.03) for PT, 110.50 (SD = 62.52) for PP, and 68.00 (SD = 52.48) for CG, $\chi^2(2) = 1.83$, $p = .400$; similar to the total number of produced C-units, TNCU: PT, M = 43.43, SD = 57.36; PP, M = 23.62, SD = 9.72; CG, M = 17.38, SD = 9.20, $\chi^2(2) = 2.01$, $p = .367$. The measures of lexical diversity, namely number of different words in lemmas (NDW) and the vocabulary diversity statistic (VOCD), respectively, did also not differ significantly between the three groups (NDW: PT M = 30.34 (SD = 13.71), PP M = 29.88 (SD = 13.37), CG M = 22.63, (SD = 14.27), $\chi^2(2) = 1.70$, $p = .427$; VOCD: PT M = 17.28 (SD = 7.13), PP M = 11.16, (SD = 5.32), CG M = 14.33 (SD = 5.70), $\chi^2(2) = 2.99$, $p = .224$). Finally, there was no significant difference for syntactic complexity, as assessed by mean length of C-unit (MLCU), between the PT tutees (PT; M = 3.69, SD = 1.27) children assigned to the PP condition (M = 4.46, SD = 1.27), and the CG (M = 3.49, SD = 1.50), respectively, $\chi^2(2) = 1.93$, $p = .380$.

At pretest, the three groups were also equivalent with respect to narrative complexity scores based on two separate picture book prompted story generations. The EINC score for Frog Story narratives did not differ significantly between children assigned to the PT condition (M = 7.63, SD = 4.44), the PP condition (M = 9.00, SD = 4.21), and the CG condition (M = 7.88, SD = 4.12), $\chi^2(2) = .58$, $p = .749$. Similarly, the EINC score for the self-designed Climb Story did not differ significantly between children assigned to the PT condition (M = 8.25, SD = 4.86), the PP condition (M = 8.50, SD = 4.21), and the CG condition (M = 6.75, SD = 3.41), $\chi^2(2) = 1.34$, $p = .512$.

Tutor Groups

The data for the two tutor groups are presented in Table 12. Mann-Whitney U tests were conducted to detect significant differences between the groups. Tutors in the PT condition (5 boys, 3 girls) had a mean age of 4;11 and tutors in the PP condition (3 boys, 5 girls) had a mean age of 5;2.

Table 12. *Participant Characteristics for the PP and PT Tutors*

Variable	Group	*M*	*SD*	Range	*p*
Age in months	TPP	61.88	6.01	54-69	.561
	TPT	59.38	6.80	50-72	
Exposure to German in months[a]	TPP	42.01	11.20	25-50	.035*
	TPT	45.13	11.29	31-59	
Education mother in years	TPP	10.29	1.72	9-13	> .999
	TPT	10.57	1.25	9-13	
Education father in years	TPP	12.00	3.70	9-17	.718
	TPT	10.25	1.17	9-12	
Expressive language[b]	TPP	37.13	9.94	20-50	.371
	TPT	33.25	7.72	18-43	
Receptive language[b]	TPP	25.75	3.62	18-30	.833
	TPT	24.88	4.70	19-31	
Nonverbal intelligence[c]	TPP	19.00	3.16	9-20	.072
	TPT	15.50	5.66	9-28	
EINC Frog Story[d]	TPP	17.25	3.24	12-22	.494
	TPT	16.25	5.23	10-26	
EINC Climb Story[d]	TPP	14.75	1.49	13-17	.789
	TPT	15.75	3.45	13-24	

Note. TPP = Tutors Peer Play; TPT = Tutors Peer Tutoring; each group had 8 participants. Reported *p*-values refer to Mann-Whitney U tests.
[a]Based on parent report.
[b]Raw score sums, LiSe-DaZ expressive and receptive subtests (Schulz & Tracy, 2011).
[c]Raw scores, Raven Coloured Progressive matrices (Raven, 1995).
[d]Measures of narrative complexity based on generations of "Frog, where are you?" (Mayer, 1969); 'Climb Story' was a self-designed picture story. Narrative complexity measured using an adapted and extended version of the INC scoring rubric (Petersen, Gillam, & Gillam, 2008). The maximum score for each story was 26.
*Statistically significant with $p < .05$.

On average, tutors in the PT condition had a higher previous exposure to German (*Mdn* = 50.50) than tutors in the PP condition (*Mdn* = 27.50), as measured in months, $U = 12.00$, $z = -2.11$, $p = .035$. However, this difference did not translate to significant differences in German expressive and receptive language performance. Also, no significant differences emerged for age in months and nonverbal intelligence.

For the narrative productivity measures, the total number of words (TNW) produced by the PT tutors (PTT; *Mdn* = 117.00) was not significantly different from the amount produced by the PP tutors (PPT; *Mdn* = 178.50), $U = 25.50$, $z = -0.68$, $p = .495$, similar

to the total number of produced C-units, TNCU: PTP *Mdn* = 21.50, PPT *Mdn* = 33.50, *U* = 15.00, *z* = -1.79, *p* = .073. The measures of lexical diversity, namely number of different words in lemmas (NDW) and the vocabulary diversity statistic (VOCD), respectively, did also not differ significantly between the two groups (NDW: PTP *Mdn* = 39.50, PPT *Mdn* = 52.50, *U* = 23.50, *z* = -0.89, *p* = .372; VOCD PTP *Mdn* = 20.82, PPT *Mdn* = 24.48, *U* = 24.00, *z* = -0.46, *p* = .643). Furthermore, there was no significant difference for syntactic complexity, as assessed by mean length of C-unit (MLCU) between the PTT (*Mdn* = 5.31) and the PPT (*Mdn* = 5.18), *U* = 26.00, *z* = -0.63, *p* = .528.

The tutor groups were also equivalent with respect to narrative complexity scores based on two separate picture book prompted story generations. The EINC score for Frog Story narratives did not differ significantly between tutors in the PT (*Mdn* = 15.00) and tutors in the PP condition (*Mdn* = 17.50), *U* = 25.50, *z* = -0.69, *p* = .494. Similarly, the EINC scores assigned for the production of the self-designed Climb Story did not differ between tutors in the PT (*Mdn* = 15.00) and tutors in the PP condition (*Mdn* = 14.50), *U* = 29.50, *z* = -0.27, *p* = .789.

Comparison of Frog Story Narrative Performance of Tutee and Tutor Groups

A tutee-tutor comparison (Mann-Whitney U test) of the Frog Story narratives revealed significant differences in all of the computed microstructural measures and the overall EINC score, such that tutors outperformed the tutees on the group level (see Table 13).

Comparison of Performance on the Self-Designed Story of Tutee and Tutor Groups

The comparison (Mann-Whitney U test) of the narration of the self-designed picture story at pretest revealed significant differences in all measures of narrative microstructure, except for a measure of productivity, namely total number of C-units. There was also a significant difference narrative complexity (EINC), such that tutors outperformed the tutees on the group level (see Table 14). VOCD was not compared, because it could not be computed for half (*n* = 4) of the tutee narratives due to limited story length.

Table 13. *Comparison of Pretest Frog Story Narrative Performance of Tutees and Tutors*

Variable	Group	*M*	*SD*	*Range*	*p*
TNW	Tutees	85.04	52.31	11-199	.004*
	Tutors	163.63	86.99	42-358	
TNCU	Tutees	27.48	32.83	7-172	.034*
	Tutors	31.94	13.94	16-65	
NDW	Tutees	27.52	13.65	4-50	.001*
	Tutors	53.13	24.01	19-104	
VOCD	Tutees[a]	13.86	6.22	1.96-25.46	.014*
	Tutors[b]	23.14	9.99	11.36-46.23	
MLCU	Tutees	3.89	1.37	1.00-6.63	.016*
	Tutors	5.03	1.36	2.21-7.75	
EINC	Tutees	8.17	4.11	3-17	< .001*
	Tutors	16.75	4.23	10-26	

Note. Tutees $n = 24$, tutors $n = 16$.
TNW = total number of words; TNCU = total number of utterances in C-units; NDW = total number of different words in lemmas; VOCD = vocabulary diversity; MLCU = mean length of C-units in words; EINC = Extended index of narrative complexity.
[a]$n = 16$.
[b]$n = 15$.
*Statistically significant with $p < .05$.

Table 14. *Comparison of Pretest Self-Designed Story Performance of Tutees and Tutors*

Variable	Group	*M*	*SD*	*Range*	*p*
TNW	Tutees	38.92	29.56	5-139	.040*
	Tutors	48.99	27.27	19-132	
TNCU	Tutees	8.46	4.01	4-21	.573
	Tutors	8.75	4.30	5-23	
NDW	Tutees	19.13	9.87	2-45	.034*
	Tutors	24.56	8.15	12-41	
MLCU	Tutees	4.22	1.30	1.25-6.63	.003*
	Tutors	5.38	0.92	3.17-7.00	
EINC	Tutees	7.83	4.09	2-16	< .001*
	Tutors	15.25	2.62	13-24	

Note. Tutees $n = 24$, tutors $n = 16$.
TNW = total number of words; TNCU = total number of utterances in C-units; NDW = total number of different words in lemmas; MLCU = mean length of C-units in words; EINC = Extended index of narrative complexity.
*Statistically significant with $p < .05$.

Summary of Preliminary Analysis

In sum, the three groups of tutees in the intervention/control conditions did not differ from each other in any of the computed measures, i.e., all groups were comparable in terms of German language skills, nonverbal intelligence, home environment measures, and narrative performance. The two groups of tutors did also not differ significantly from each other, except for months of German language exposure. Furthermore, as to be expected, marked differences in narrative competence surfaced between children assigned to the tutee and tutor groups.

9.2 Intervention Effects on Tutees – Pre-Posttest Comparisons

To follow up on the first research question, *To what extent does engaging a peer tutor in a narrative-based language intervention improve the tutee's generation of fictional narratives?*, three areas were explored. Firstly, the narrative productions of the familiar Frog Story at posttest were compared across PT tutors, PP tutors, and CG participants.

9.2.1 Narrative Measures

Frog Story productions were compared for differences in microstructure, narrative complexity (EINC), as well as for differences in the use of the individual components of the EINC.

Narrative Microstructure

In the area of narrative microstructure, a Kruskal-Wallis H test revealed no significant differences between the three groups for productivity, with a mean total number of words (TNW) of $M = 213.88$ ($SD = 87.62$) for PT, $M = 154.00$ ($SD = 79.83$) for PP, and $M = 103.75$ ($SD = 69.43$) for CG, $\chi^2(2) = 5.51$, $p = .064$; similar to the total number of produced C-units (TNCU: PT, $M = 36.75$, $SD = 9.22$; PP, $M = 30.14$, $SD = 12.59$; CG, $M = 28.00$, $SD = 15.93$), $\chi^2(2) = 2.68$, $p = .226$, and the measure of syntactic complexity, namely mean length of utterance (MLCU: PT, $M = 5.63$, $SD = 1.08$; PP, $M = 4.01$, $SD = 1.89$; CG, $M = 3.64$, $SD = 1.60$), $\chi^2(2) = 4.91$, $p = .086$.

Meanwhile, there was a statistical difference for a measure of lexical diversity. While group assignment did not significantly affect VOCD with a mean performance of $M = 18.75$ ($SD = 6.11$) for PT, $M = 17.65$ for PP, and $M = 16.25$ ($SD = 10.71$) for CG, $\chi^2(2) = 0.92$, p = .995, the number of different words in lemmas (NDW) differed significantly between groups with a mean rate of $M = 59.50$ ($SD = 20.17$) for PT, $M = 47.86$ ($SD = 18.77$) for PP, and $M = 31.75$ ($SD = 15.51$) for CG, respectively, $\chi^2(2) = 6.97$, $p = .031$.

A subsequent Mann-Whitney U test revealed a statistical difference between participants in the PT ($Mdn = 54.00$) and children in the Control condition ($Mdn = 27.00$) at a bonferroni-corrected significance level of .0167, $U = 8.00$, $z = -2.52$, $p = .012$, $r = -.63$. Neither did the number of different lemmas produced by children in the PP condition ($Mdn = 48.00$) differ from the performance of the PT group ($U = 21.00$, $z = -0.81$, $p = .416$, $r = -.20$), nor from the performance of participants in the Control condition ($U = 13.00$, $z = -1.74$, $p = .082$, $r = -.44$).

Narrative Complexity (EINC)

A Kruskal-Wallis H test computed a statistically significant difference in narrative complexity at posttest between the experimental groups, with a mean Frog Story EINC score of $M = 17.00$ ($SD = 5.13$) for PT, $M = 9.75$ ($SD = 4.03$) for PP, and $M = 8.50$ ($SD = 4.93$) for CG, $\chi^2(2) = 9.36$, $p = .009$. That is, Frog Story narrative complexity was significantly affected by group assignment.

Subsequently, Mann-Whitney U comparisons were conducted to post hoc follow up on the origin of the difference. Bonferroni adjustments were applied, such that all effects are reported at a .0167 level of significance. At posttest, narrative complexity of tutees in the Peer Tutoring group ($Mdn = 17.50$) was significantly higher than narrative complexity of tutees in the Peer Play group ($Mdn = 9.00$), $U = 8.00$, $z = -2.53$, $p = .011$, $r = -.63$, as well as children in the Control group ($Mdn = 8.00$), $U = 7.00$, $z = -2.64$, $p = .008$, $r = -.66$. However, it appeared that narrative complexity was not different between participants in the PP and in the CG, $U = 25.00$, $z = -0.74$, $p = .461$, $r = -.19$.

Figure 16 displays mean narrative complexity scores for all three experimental groups at pre- and posttest.

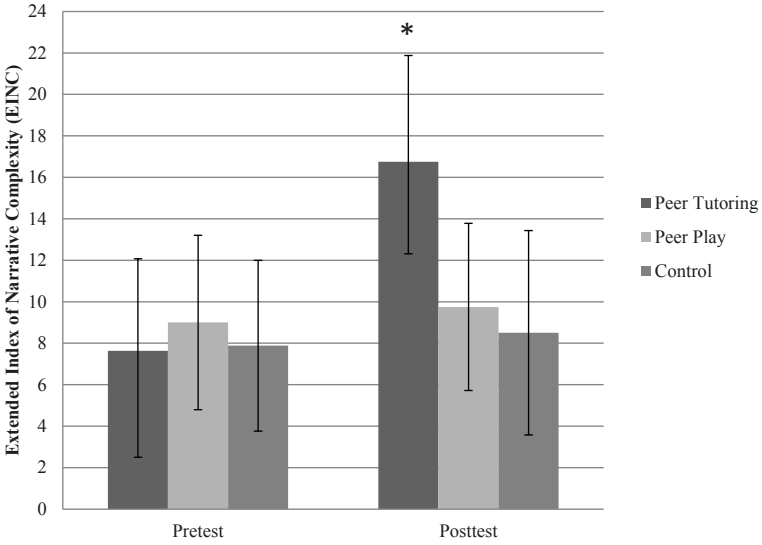


Figure 16. Tutees' Pre-Posttest Changes in Frog Story Narrative Complexity (Means and SD). *Note.* All groups were $n = 8$. Frog Story narrative complexity was based on generations of "Frog, where are you?" (Mayer, 1969). EINC represents composite scores; the maximum score was 26. Error bars represent standard deviation.

In-Depth Analysis of Tutee Differences in Frog Story Narrative Complexity Measures

To further explore the differences in tutees' narrative complexity, cohesive and evaluative language elements of the EINC, as derived from the Frog Story narratives, were analyzed individually to detect specific areas of growth. As the number of points to be reached for these individual EINC components only ranged between 0, 1, and 2, a chi-square-test of independence (with a Bonferroni adjustment applied) was performed to detect statistical differences between groups.

While at pretest, none of the individual EINC items were statistically different between the three experimental conditions (see Table E.1 in Appendix E), a chi-square test performed at posttest found a significant relationship between group assignments

and use of temporal markers, such that children in the PT group used more temporal markers than tutees in the PP group, $X^2(1, N = 16) = 8.77$, $p = .012$. At a bonferroni-corrected significance level of .0167, the difference between PT and the Control group, $X^2(1, N = 16) = 6.57$, $p = .037$, was not significant. Also, the use of metacognitive verbs was higher in the PT group than in the PP group, $X^2(1, N = 16) = 6.56$, $p = .010$, and in the CG, $X^2(1, N = 16) = 7.27$, $p = .007$. While the use of emotional state terms and physical state terms did not differ significantly between PT and PP groups, $X^2(1, N = 16) = 1.76$, $p = .185$, and $X^2(1, N = 16) = 0.71$, $p = .398$, respectively, the use of emotional state terms use was higher in the PT than in the CG condition, $X^2(1, N = 16) = 12.44$, $p < .001$ (physical state terms: $X^2(1, N = 16) = 5.33$, $p = .021$). As for the expression of intent, the performance of the PT group did not differ significantly from either PP, $X^2(1, N = 16) = 0.54$, $p = .464$, or CG condition, $X^2(1, N = 16) = 4.00$, $p = .046$.

9.2.2 Narrative Examples

The mean pre- to posttest scores show an increase in narrative skills (complexity) in tutees. In this section, excerpts from the Frog Story narratives of two tutees offer qualitative insight into individual growth patterns. These two children, Dilara and Fatima[67], were both successive DLLs who were first systematically exposed to German in ECEC and they were both tutees in the Peer Tutoring group. Dilara was 4 years and 5 months old and started the intervention with minimal German abilities after having had 13 months of previous exposure to German in the ECEC setting. Fatima was 5 years and 6 months old and, after an exposure time of 25 months, was relatively fluent and comfortable in speaking German.

At pretest, Dilara mostly names the characters on the pictures. While her minimal German skills certainly contribute to her not creating linguistically rich and detailed narratives, there is no evidence of a story plot or drawn connections between the depicted events. On Westby's (2005) Story Grammar Decision Tree, Dilara's narrative represents the lowest story structure level, a descriptive sequence:

[67] Names were changed to protect participants' identity.

Exerpt[68] 1: Dilara at pretest

> Frosch. Frosch eine Hund. Hund weg hier. Die Mama! Die Mama, die Baby! Die Baby. Der eine Hund. Ja! Die Mama, die Papa, die kriegen Babyfrosch! Oh, die die Baby große. Baby. Hoppa! Die Baby. Die Baby. Hund. Hund. Junge. Zwei Junge zwei Hunde. Was das? Eine Biene. Biene. Biene. Biene. Auch Biene. Biene. Nein! Zwei Junge. Eine Hund. Zwei Junge. Zwei eine Hund. Eine Biene. Eine Hund, eine Junge. Eine Hund, eine Junge. Eine Junge, eine Hund. Zwei Junge, zwei Hunde. Ein Hunde, eine Junge. Ein Frosch, viele Frosch. […]
>
> *Frog. Frog a dog. Dog away here. The mom! The mom, the baby! The baby. He one dog. Yes! The mom, the dad, they have baby frog! Oh, the the baby big. Baby. Oop! The baby. The baby. Dog. Dog. Boy. Two boy, two dogs. What that? A bee. Bee. Bee. Bee as well. Bee. No! Two boy. A dog. Two boys. Two a dog. A bee. A dog, a boy. A dog, a boy. Two boy, two dogs. A dog, a boy. A frog, many frog. [...]*

Meanwhile, at posttest, most children began to include more evaluative words in their stories and to include more crucial story elements. For example, Dilara's narrative is longer overall and clearly more detailed. The disappearance of the frog is identified a clear search pattern is evident. Also, she now frequently uses additive and temporal markers to connect her utterances and includes direct speech to paint a more vivid verbal picture of their narratives and to bring out the characters' perspectives. Overall, her narrative progressed from a descriptive sequence to an action sequence.

Excerpt 2: Dilara at posttest

> Die Hund, die Junge. Und die Hund hat die da ein Frosch hat. Und dann die und die äh die schlaft. Die Hund und die Junge, die noch schlaft. Und dann die Frosch hopp machen. Und dann die hüpft an die Seite. Und dann guckt, weg Frosch. Die äh die Hund guckt hier, auch nicht. Und die äh Junge hier, auch guckt nicht. Hier auch nicht. Hier auch nicht. Hier auch nicht. Und die Junge hat „Was macht du?" sagst. „Und dann mach ich so." sags. Und dann hier guckt und dann da hier da das. Und dann die Biene auch nicht. Die weiß nicht, wo da die Frosch. Guckt hoch. Hier auch nicht. Die weg die Frosch. Da guckt, auch nicht. Und dann hier guckt, auch nicht. […]
>
> *The dog, the boy. And the dog has a frog there has. And then they und they um they sleeps. The dog and the boy, they still sleeps. And then the frog oop make. And then it hops to the side. And then looks, away frog. The um the dog looks here, also not. And the um boy here, also looks not. Also not here. Also not here. Also not here. And the boy has „What are you doing?" says. „And then I do like this", says. And then here look and then there here this one. And then the bee also not. It does not know, where there the frog. Looks up. Also not here. It away the frog. There looks, also not. And then here looks, also not. [...]*

[68] To facilitate narrative cohesion, each example is presented in a narrative format, rather than in C-units, and has been edited for punctuation. Mazes, which were excluded from microstructural measures, are still included here.

Children with greater initial German abilities, such as Fatima, were already able to connect several sentences together to construct a narrative, and their narratives included more events to move the plot forward. However, Fatima loses herself in details when describing the setting, so that it is hard to make out the elements and events central to the story.

Excerpt 3: Fatima at pretest:

> Da sieht ein Mensch und eine Frosch und eine Hund. Eine Bett und eine Lampe. Und Fenster. Und von die Junge Schuhe. Und das ist das T-Shirt. Und das Kiste bei ihrem Bett. Das Junge schlaft. Und ihre Schuhe liegen. Und ihre diese Schuhe liegen. Das Frosch geht von den Glas. Das eine Socke. Ja. Das die Socke liegt da und ihre T-Shirt und ihre Bett. Es ist immer noch Mond. Und das Frosch hat nicht geschlaft. Und das Hund und das Junge geschlaft. Und das äh das Fenster ist da. Und das Lampe ist da. Und das Stuhl ist da. Als das Junge aufgewacht hat, hat die bei den Glas geguckt. Ist das weggegangen. Und ihre Hund. Und ihr das Junge. Und das war noch ihre Socke war da immer noch. Ihre Bett. Und das war noch da. Und das ist nicht abgerutscht. Und und ihre zwei Schuhe die liegen da. Und ihre T-Shirt und das Glas und das. Das Sonne ist irgendwo anders. Und als das Mond da war ist das verschwunden. Äh und dann das liegt noch das Glas. Und die beiden Schuhe immer noch. Und die Fenster und die Lampen und die Glas. Und das Stuhl. Das Hund hat das Glas. Das Hund hat das Glas. Und das Junge zieht sich was irgendwas an. Und da ist das T-Shirt mit das Hose und mit das beide Schuhe. Und mit das Stuhl und mit das Hund. Das Hund hat das Glas und das Lampe sieht noch. Und da sie xx Blatt. Und das Junge hat das Glas. Und das Junge ruft das Frosch. Und das Fenster sieht. […].
>
> *There see a person and a frog and a dog. A bed and a lamp. And window. And from the boy shoes. And this is the t-shirt. And this box by her bed. The boy sleeps. And her shoes lie. And her these shoes lie. The frog goes from the jar. This a sock. Yes. The the sock lies there and her t-shirt and her bed. It is still moon. And the frog has not slept. And the boy and the boy slept. And the um the window is there. And the lamp is there. And the chair is there. When the boy woke up, he looked by the jar. It went away. And her dog. And her the boy. And that was her sock was there still. Her bed. And that was still there. And that did not slide down. And and her two shoes they lie there. And her t-shirt and the jar and that. The sun is somewhere else. And when the moon was there it vanished. Um and then it still lies the jar. And both of the shoes still. And the window and the lamp and the jar. And the chair. The dog has the jar. The dog has the jar. And the boy put something on. And there is the t-shirt with the pants and with both of the shoes. And with the chair and with the dog. The dog has the jar and the lamp still sees. And there she xx leaf. And the boy has the jar. And the boy calls the frog. And the window sees. [...]*

At posttest, many of the advanced DLL children, such as Fatima, provided more events and advanced story structures and frequently used direct speech, painting a more vivid verbal picture of their narrative. According to Westby's (2005) binary de-

cision tree, some of the stories would be classified reactive sequences, or episodes of varying elaborateness, as some children already included causal connectors and a clear goal, attempt, and outcome. Also, Fatima's uses of evaluative words and the emotional state term böse *[upset/angry]* add depth to her characters. Distinct from her pretest narrative, now the characters, setting, and initiating event are clearly identifiable.

Excerpt 4: Fatima at posttest:

> Dann hatte der Hund und ein Junge ein Frosch gefangen. Das war nachts. Dann musste der in Bett. Dann war der in Bett und hat geschlafen. Und das Frosch war weg. Und als die aufgewacht haben, haben die geguckt. „Das Frosch ist weg" hat das Junge gesagt. Dann hatte die zum Schuhe geguckt, aber da war der nicht. Dann hat der geschlafen. Dann waren die im Fenster und haben geruft „Wo bist du, Frosch?". Dann ist der runtergefallen, Hundi. Dann waren die böse, dass der runtergefallen. Dann hat sie gesagt „Hundi, lass mich abzulecken!". Dann waren die da und hatten gesagt „Frosch, Frosch!". Dann hatten die nicht die gehört und nicht gefunden. Dann hatte der „Frosch, Frosch, komm' doch mal raus wo du versteckt hast!". […]
>
> *Then the dog and a boy had caught a frog. That was at night. Then he had to go to bed. Then he was in bed and was sleeping. And the frog was gone. And when they woke up, they looked. „The frog is gone", did the boy say. Then he looked to the shoes, but he was not there. Then this one slept. Then they were in the window and called, „Where are you, frog?". Then he fell down, doggy. Then they were angry, that he fallen down. Then she said, „Doggy, stop licking me!". Then they were there and had said, „Frog, frog, come on out where you are hiding!" [...]*

9.2.3 Generalization Probe

Additional to the Frog Story, children narrated the self-developed "Soccer Story" (see Appendix A) at posttest, which was analyzed for narrative complexity via EINC. Even though differences could be detected descriptively (see posttest, Fig. 17), there was no statistically significant difference between the EINC scores by different group assignment with a mean score of $M = 13.38$ for PT ($SD = 2.26$, $Mdn = 14.50$), $M = 10.38$ for PP ($SD = 4.78$, $Mdn = 10.00$), and $M = 7.50$ for CG ($SD = 4.41$, $Mdn = 6.00$), $\chi^2(2) = 5.74$, $p = .057$. For further interpretation of these results, it should be noted that a Wilcoxon Signed-Ranks Test indicated that narrative productivity (number of words produced) ranks for Frog Story narratives were significantly higher ($M = 157.35$, $SD = 89.02$) than median productivity ranks for the stories produced in response to the

seven-page long unfamiliar picture book in the generalization probe ($M = 44.63$, $SD = 22.97$), $Z = -4.20$, $p < .001$.

9.3 Long-Term Intervention Effects on Tutees

The second research question to be explored was: *To what extent do any improvements in preschoolers' narrative performance maintain following a period of 5 weeks with no intervention?* The maintenance probe assessed narrative complexity and was collected via an unfamiliar wordless picture book that was part of the self-developed materials and occurred after a 5 week no-intervention period following posttest (see Figure 17).

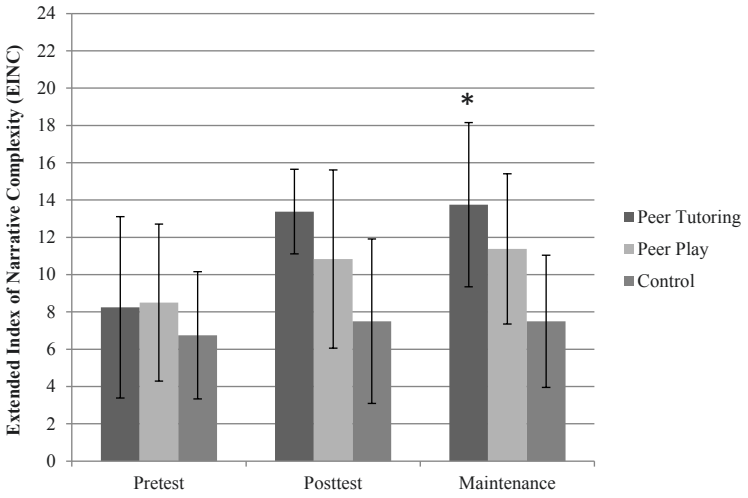


Figure 17. Self-Developed Picture Stories: Tutees' Narrative Complexity Performances at Pretest, Posttest, and Maintenance Probe (Means and SD).
Note. All groups were $n = 8$. Measures were based on generations on self-developed stories. EINC represents composite scores; the maximum score was 26. Error bars represent standard deviation.

For the EINC composite score, a Kruskal-Wallis H test yielded statistically significant group differences ($X^2(2) = 6.90$, $p = .032$), with a mean score of $M = 13.75$ for PT ($SD = 4.40$), $M = 11.38$ for PP ($SD = 4.03$), and $M = 7.50$ for CG ($SD = 3.55$), which

were followed up by group comparisons. It was revealed that narrative complexity measure of the PT group (*Mdn* = 12.50) was significantly higher than narrative complexity of children in the CG condition (*Mdn* = 6.00), *U* = 7.50, *z* = -2.59, *p* = .010, *r* = -.65, while comparisons between PT and PP children (*Mdn* = 12.50) yielded no differences, *U* = 27.00, *z* = -0.53, *p* = .596, *r* = .13. Similarly, results revealed that narrative complexity was not different between participants in the PP and in the CG, *U* = 15.00, *z* = -1.80, *p* = .073, *r* = -.45.

9.4 Intervention Effects on Tutors

The third research question (*Which effect does the intervention have on children serving as the tutors?*) concerned the performance of the tutors, that is, if narrative complexity measures of tutors of the Peer Tutoring (PTT) and Peer Play (PPT) groups would change through the intervention process. To assess this question, narrative performances of PT and PP tutors were compared at posttest and at maintenance probe.

Frog Story Microstructure

At posttest, all microstructural measures derived from the Frog Story narratives were compared between the two tutor groups. For the productivity measures, the total number of words (TNW) produced by the PT tutors (PTT; *Mdn* = 158.50) was not significantly different from the amount produced by the PP tutors (PPT; *Mdn* = 225.00), *U* = 21.00, *z* = -1.16, *p* = .248; similar to the total number of produced C-units (TNCU: PTP *Mdn* = 26.50, PPT *Mdn* = 37.00), *U* = 19.50, *z* = -1.32, *p* = .188. The measures of lexical diversity, namely, the number of different words in lemmas (NDW) and the vocabulary diversity statistic (VOCD), respectively, also did not differ significantly between the two groups (NDW: PTP *Mdn* = 53.50, PPT *Mdn* = 67.00, *U* = 25.00, *z* = -0.74, *p* = .462; VOCD PTP *Mdn* = 25.12, PPT *Mdn* = 21.07, *U* = 25.00, *z* = -0.74, *p* = .462). Finally, there was no significant difference for mean length of C-unit (MLCU) between the PTT (*Mdn* = 6.13) and the PPT (*Mdn* = 6.03), *U* = 32.00, *z* = 0.00, *p* > .99.

Frog Story Narrative Complexity (EINC)

Furthermore, group differences in narrative complexity for the Frog Story productions, as determined by EINC score, were explored. As displayed in Figure 18, the mean performance between pre-and posttest shows an upward trend in the PT tutors. However, a Mann-Whitney U test comparing Frog Story narrative complexity scores at posttest did not reveal a significant difference between the PT tutors (*Mdn* = 18.00) and the PP tutors (*Mdn* = 16.50), $U = 23.50$, $z = -0.90$, $p = .368$.

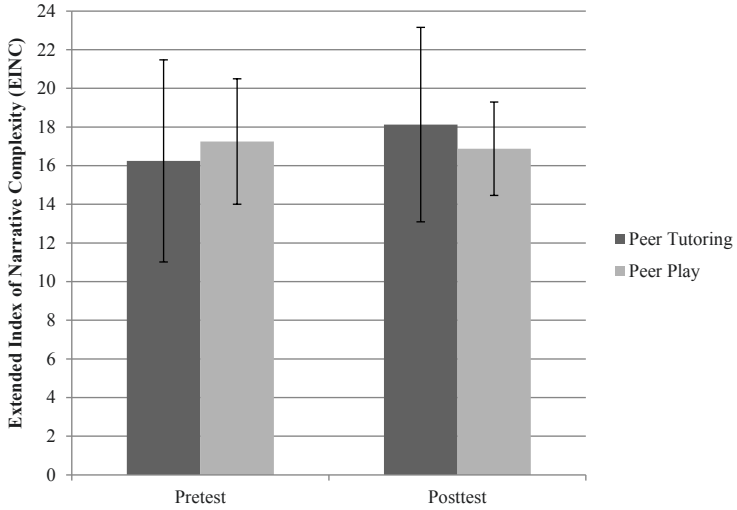


Figure 18. Tutors' Pre-Posttest Changes in Frog Story Narrative Complexity (Means and SD). *Note.* All groups were $n = 8$. Frog Story Narrative complexity was based on generations of "Frog, where are you?" (Mayer, 1969). EINC represents composite scores; the maximum score was 26. Error bars represent standard deviation.

Self-Developed Story Books – Microstructure at Posttest and Maintenance Probe

First, at posttest, all microstructural measures derived from the self-developed story book were compared between the two tutor groups. For the productivity measures, the total number of words (TNW) produced by the Peer Tutoring tutors (PTT *Mdn* = 50.50) was not significantly different from the amount produced by the PP tutors (PPT *Mdn* = 59.50), $U = 23.50$, $z = -0.89$, $p = .371$; similar to the total number of

produced C-units (TNCU: PTP *Mdn* = 9.00, PPT *Mdn* = 9.00), *U* = 30.50, *z* = -0.16, *p* = .871. The computed measure of lexical diversity, namely, the number of different words in lemmas (NDW), also did not differ significantly between the two groups (PTP *Mdn* = 26.00, PPT *Mdn* = 27.50, *U* = 26.50, *z* = -0.58, *p* = .562). Finally, there was no significant difference for mean length of C-unit (MLCU) between the PTT (*Mdn* = 6.11) and the PPT (*Mdn* = 6.14), *U* = 24.50, *z* = -0.79, *p* = .431.

As for the maintenance probe, tutors also maintained their performance. No significant differences emerged between tutors in the PT and tutors in the PP condition. For the productivity measures, the total number of words (TNW) produced by the Peer Tutoring tutors (PTT *Mdn* = 64.00) was not significantly different from the amount produced by the PP tutors (PPT *Mdn* = 57.00), *U* = 25.50, *z* = -0.68, *p* = .495; similar to the total number of produced C-units (TNCU: PTP *Mdn* = 9.50, PPT *Mdn* = 9.50), *U* = 22.50, *z* = -1.01, *p* = .311. The computed measure of lexical diversity, namely, the number of different words in lemmas (NDW), also did not differ significantly between the two groups (PTP *Mdn* = 31.50, PPT *Mdn* = 26.50, *U* = 17.00, *z* = -1.59, *p* = .112). Finally, there was no significant difference for mean length of C-unit (MLCU) between the PTT (*Mdn* = 6.76) and the PPT (*Mdn* = 6.35), *U* = 26.50, *z* = -0.58, *p* = .563.

Self-Developed Story Books – Narrative Complexity at Posttest and Maintenance Probe

Furthermore, group differences in narrative complexity for the narratives collected with the self-developed story books at posttest and maintenance probe, as determined by EINC score, were explored (see Figure 19). Mann-Whitney U tests comparing narrative complexity scores at posttest did not reveal a significant difference between the PT tutors (*Mdn* = 14.00) and the PP tutors (*Mdn* = 15.00), *U* = 25.00, *z* = -0.75, *p* = .450, similar to the results at maintenance probe, PT tutors (*Mdn* = 15.50), PP tutors (*Mdn* = 14.00), *U* = 18.00, *z* = -1.50, *p* = .133.

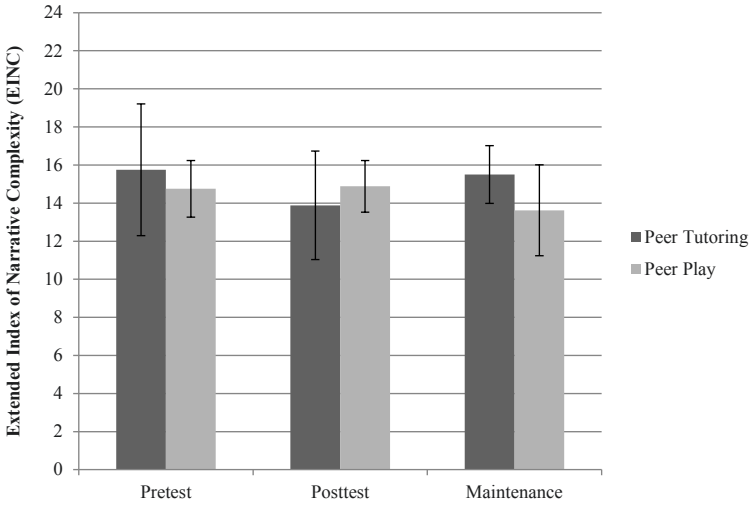


Figure 19. Self-Developed Story Books: Tutors' Narrative Complexity Performances at Pretest, Posttest, and Maintenance Probe (Means and SD).
Note. All groups were $n = 8$. Measures were based on generations on self-developed stories. EINC represents composite scores; the maximum score was 26. Error bars represent standard deviation.

In summation, study participation did not significantly affect tutors' narrative performance.

10 Discussion Study II

The main research aim of this study was to explore the effects of a clinician-prompted peer-assisted storybook intervention on the oral narrative generations of preschool-age DLLs, extending the research on peer-assisted learning to the ECEC setting and a DLL population. Three-to six-year old DLLs ($N = 24$) who were exposed to Turkish from birth on and who had varying degrees of German input and who were struggling narrators based on an oral picture book story generation in German, were randomly assigned to Peer Tutoring (PT), Peer Play (PP), or Control group condition (CG). Children in the PT ($n = 8$) and in the PP condition ($n = 8$) were then paired up with a tutor ($n = 16$), i.e., a child from the same ECEC institution with advanced oral fictional narrative skills. The effects of 12 sessions of clinician-prompted peer-assisted narrative intervention were investigated with respect to immediate and long-term changes in the tutees' narrative performances as well as in the tutors' narrative performances.

The first section in this chapter offers an in-depth analysis and discussion of the study results, organized by the three research questions (see 10.1). In the second section, the limitations of the current exploratory study will be carefully discussed while also pointing to considerations for future research (see 10.2). The third section presents a general discussion of the findings (see 10.3), while the fourth and final section derives theoretical, clinical, and pedagogical implications of both studies presented in this work.

10.1 The Efficacy of a Peer-Assisted Clinician-Prompted Narrative Intervention

The following paragraphs serve to summarize the main results of each research questions and discuss the findings based on the current research literature.

The first research question, *To what extent does engaging a peer tutor in a narrative-based language intervention improve the tutee's generation of fictional narratives?*, was explored via three different investigations. First, by assessing post-intervention measures of narrative microstructure and narrative complexity (narrative microstruc-

U. Licandro, *Narrative Skills of Dual Language Learners*, Diversität in Kommunikation und Sprache / Diversity in Communication and Language,
DOI 10.1007/978-3-658-14673-3_10

ture and evaluative language use) in narrations of the familiar[69] Frog Story across study groups; second, by a generalization probe presenting an additional narrative complexity measure at posttest including an unfamiliar story. Third, examples of pre- and posttest Frog Story narratives from two children were presented qualitatively. Results of the three investigations will be discussed in the following sections.

10.1.1 Quantitative Changes in Tutee Performance – Patterns of Narrative Growth

Children in the PT condition were repeatedly exposed to stories told by tutors, which were likely longer, contained more different lemmas, and had a higher complexity level (see Tables 13 and 14). In comparison to tutees in the PP and the CG conditions, they made marked gains on several of the targeted narrative measures.

While other measures of narrative performance on the microstructural level were not affected, group assignment significantly affected lexical diversity in Frog Story narratives, such that tutees in the PT condition produced more different lemmas than children in the control condition. These results fall in line with findings by McGregor (2000, study 3), who reported that children draw on each other's linguistic expressions when telling stories, and that children in a peer tutoring narrative intervention, similar to the current study—albeit smaller in sample size (2 tutees)—made gains in the number of different words. Also, Robertson and Ellis Weismer (1997) reported that preschool-age children with SLI, who participated in structured play interactions with untrained peer models, demonstrated significant gains in the length of their script reports (e.g., answering the questions), the number of different words used, the number of play-theme-related acts within their scripts, and the number of linguistic markers used.

The fact that the peer tutoring intervention did not appear to have significant effects on other measures of narrative microstructure (see section 9.2.1) may not be surprising, because narrative microstructure is mainly driven by expressive lexical knowledge and

[69] The Frog Story was familiar to children from one previous encounter (pretest). As the pretest occurred ten weeks earlier, it could not be expected that children would remember much information from the story. Still, to be precise and to account for the fact that children had been in contact with the story previously, it was deemed a familiar story in the interpretation of the results.

syntactic skills (e.g., Gagarina et al., 2012; also see study I), that is, complex areas of skill that are unlikely to be facilitated by a short-term intervention approach not specifically designed for targeting those aspects (e.g., Restrepo, Morgan, & Thompson, 2013). However, in McGregor's study (2000, study 3), tutees also made gains in the number of total words produced and the mean length of utterance. Other intervention studies targeting narrative skills in preschool-age children did not even include specific measures of narrative microstructure (Hayward & Schneider, 2000; Spencer & Slocum, 2010), possibly for the aforementioned reasons.

Participants in the peer-assisted intervention displayed significant improvements in narrative complexity at posttest (see Figure 16). A more detailed analysis of the individual elements of the EINC revealed that marked differences between groups emerged in multiple areas (see section). This finding could be interpreted as an indication that a peer-assisted narrative-language based intervention might be especially powerful in promoting use of selected cohesive markers (temporal markers) and evaluative language, specifically, internal state terms (metacognitive verbs and emotional state terms) in this population, all of which can be seen as key indices of later literacy skill (Curenton & Justice, 2004; Westby, 1991). While Zevenbergen and colleagues (2003) found that US American 4-year-old's references to internal states of story characters and use of dialogue in a story retelling task increased after a dialogic reading intervention involving parents, the current study is the first to provide evidence for an increase in evaluative language use through a narrative-based peer tutoring approach including DLLs. These changes do not only demonstrate quantitative differences in narrative skills, but also qualitative improvements towards cohesive and well-formed narratives (also see discussion point 10.1.2).

Furthermore, the generalization probe at posttest presented an additional narrative complexity measure and was collected via an unfamiliar, seven-page-long wordless picture book. Even though differences could be detected descriptively (see Figure 17), narrative complexity ratings did not differ between study groups. This may seem counterintuitive, as marked differences appeared in Frog Story narrative complexity assessed at posttest, as previously presented. When interpreting this finding, it should

first be noted that there was a significant effect for narrative productivity, such that Frog Story narratives were on average more than three times as long as narratives produced in response to the shorter unfamiliar picture book. Three possible explanations could account for this finding relating to narrative production, order of assessments, and familiarity with the type of material. For one, it may be that due to the shorter length and limited complexity of the wordless picture book used in the generalization probe that children could not display their full array of narrative skills (e.g., Botting, 2002). Another reason could lie in the order of assessment, as the Frog Story was collected before the generalization probe. While it was always ensured that children were alert through the whole data collection process, the Frog Story can be characterized as a rather long and complex picture book and children may have been less motivated to tell yet another story afterwards. Finally, albeit the story's unfamiliarity to all children, it resembled the intervention material in design and format, as it was developed with the other self-designed stories (see section 8.2). As the children in the PT group were familiarized with both the overall design and the procedure from the intervention sessions, it might have hampered their motivation.

10.1.2 Qualitative Changes in Tutee Performance – Individual Developmental Trajectories

Besides statistically exploring changes in performance, excerpts from Frog Story narratives exemplify pre- to post-intervention differences between the narrative skills of two peer tutoring tutees (one with minimal and one with advanced German skills) and illustrate individual developmental trajectories over the time course of the intervention (see section 9.2.2). The comparison narratives revealed clear advances in narrative structure and language use. Relative to their performances at pretest, both children produced longer narratives that were richer in evaluative language, included more and sophisticated markers to connect sentences and to add narrative structure and flow to the story. Furthermore, the increased inclusion of character discourse painted a more vivid verbal picture of their narratives and brought out the characters' perspectives. On

the macrostructural level, the children included more and clearly identifiable story elements at posttest, as also evidenced by a progression on the story structure level chart. These findings underline the quantitative advances on the group level and draw a clearer picture on the impact of the improvements in narrative complexity and how they unfold on the individual level. These narrative improvements, in turn, can be seen as advances in early literacy skills also related to school readiness (Curenton, 2010).

10.1.3 Long-Term Results of the Intervention Approach

The second research question, *To what extent do any improvements in preschoolers' narrative performance maintain following a period of 5 weeks with no intervention?*, was asked because, when assessing the efficacy or effectiveness[70] of an intervention, it is important not only to consider the direct results, but also the long-term outcomes. Ideally, an intervention is a short-time support that triggers development and continues to show effects even after withdrawal (e.g., Johnston, 2007; Paul, 2007). The current work explored the long-time effects of the intervention via a maintenance probe.

The maintenance probe, which was based on an unfamiliar wordless picture book, occurred after a five week no-intervention period following posttest and targeted narrative complexity, as measured by EINC (see Figure 17). Results revealed that PT tutees' narrative complexity was significantly higher than narrative complexity displayed by the Control group. Meanwhile, as tutees assigned to the PP condition also made progress, PT and PP comparisons yielded no differences. PP tutees might have been familiar with the type of task and material from their biweekly generalization probes.

A point worthy of discussion is the relatively long non-intervention period of 5 weeks, considering that the intervention was only conducted for 12 sessions in a 10-week time frame. Previous studies used shorter non-intervention periods to assess maintenance of narrative performance (e.g., Spencer & Slocum, 2010), while others reported none at

[70] Efficacy trials target intervention effects under ideal circumstances, while effectiveness trials target the effects of an intervention under "real world" conditions (Gartlehner, Hansen, Nissman, Lohr, & Carey, 2006).

all (e.g., Hayward & Schneider, 2000; McGregor, 2000; Petersen, Thompsen, Guiberson, & Spencer, 2016). However, the fact that in the current study the performance was maintained over the long period of no-intervention time may suggest that the intervention results were especially robust. This suggestion requires further study.

Overall, the analysis underlines the importance of including maintenance measures, as interventions may have a protracted effect. At posttest, no group differences appeared in the generalization probe, while there were clear differences five weeks post-intervention. However, also note that different (unknown) self-designed picture books were used at pretest, posttest, and maintenance probe, other than the Frog Story which was held consistent between pretest and posttest. Therefore, story effects cannot be excluded.

10.1.4 Intervention Effects on Tutors – Maintenance of Performance

The third and final research question, *Which effect does the intervention have on children serving as the tutors?*, was also of great importance, because it took the tutor's perspective into consideration. While it is widely accepted that tutees benefit from peer-assisted learning approaches (e.g., Ginsburg-Block et al., 2006), a common concern is that being exposed to the less-skilled models of the tutee may have a negative influence on the tutor's skills (Roscoe & Chi, 2007). Therefore, it should be ensured that peer-assisted learning activities do not occur to the detriment of the peers with more advanced skills.

The results of the current study showed that this was not the case. At posttest and at the maintenance probe, none of the computed measures of the Frog Story and self-designed stories targeting microstructural measures (i.e., narrative productivity, lexical diversity, and syntactic complexity) differed significantly between the intervention and control tutor groups. A similar pattern emerged for narrative complexity (as measured by EINC, see Figures 18 and 19). In summary, study participation did not negatively affect narrative performance in tutors.

These results are consistent with previous research. McGregor (2000, study 3) reported that in a preliminary study of a clinician-prompted peer-assisted narrative intervention,

one of the two tutors showed gains in use of story grammar elements while the other maintained their performance level. However, the generalizability of these results is limited by the fact that they were based on only two tutoring dyads. On a more general note, Mashburn et al. (2009) as well as Justice and colleagues (2011) found that child language development in ECEC was particularly affected by peer language skills in those children with lower language abilities. Meanwhile, children displaying high levels of language skills seemed fairly impervious to peer effects (e.g., Justice et al., 2011). Furthermore, previous researchers have pointed out many academic and social benefits of serving as a tutor, such as the enhancement of learning (Mastropieri, Spencer, Scruggs, & Talbott, 2000; McMaster et al., 2006; Topping, 2005) as well as improvements in social interactions (Ginsburg-Block et al., 2006; Parr & Townsend, 2002) and self-regulation (Hattie, 2009).

Taken together, these results suggest that a narrative-based peer-assisted intervention will not compromise the language skills of potential tutors. While the current study did not observe direct positive effects of study participation, there is evidence that children can benefit in a variety of ways from acting as a tutor in peer-assisted learning activities and that peer tutoring settings have the potential to support learning for both the tutees and the tutors (e.g., Cushing & Kennedy, 1997; Hunt et al., 1994; also see Ginsburg-Block et al., 2006; also see section 7.3).

10.2 Study Limitations and Considerations for Future Research

As always, findings should be interpreted within the proper context. As the current study was exploratory in nature, there are a number of limitations to be recognized. Based on these limitations, as well as further aspects derived from the current literature, the following sections also point to aspects that future studies may want to address.

Overall, it should be noted that the sample size in this study was small, so that findings have to be interpreted as purely exploratory rather than widely generalizable. Because of the sample size, the current study mainly applied non-parametric tests (Kruskal-Wallis H test and Mann-Whitney U test), which use ranked data in their formulae to assess significance. As a result, non-parametric approaches are largely unaffected by

non-normal distribution, unequal variances, and extreme scores (Pring, 2005), and are thus much less sensitive to outliers. However, in comparison to parametric approaches, these types of tests are also less powerful to assess between-subject differences, as the data ranking process may result in loss of statistical power, so that genuinely existing effects may not present themselves. Furthermore, the level of significance was adjusted according to the Bonferroni method when comparing multiple groups posthoc, such that the *p*-value to be exceeded to achieve statistical significance was lowered. While decreasing the probability of a type I error, the Bonferroni adjustment has been criticized for, in turn, lowering the power of a test and increasing the likelihood of type II errors, risking that real differences may not be detected (Rothman, 1990). Despite these limitations and considering the small sample size and the wide variability between individual children's performances, the statistical approaches were deemed appropriate for the current study because of the expected occurrence of unequal variances and extreme scores in the group under study. Nonetheless, statistical limitations should always be considered when carefully interpreting study results.

A further area worthy of discussion concerns the intervention design and areas for future studies. Accordingly, the following sections present the discussion relating to the materials, the selection of tutors, peer mediation vs. professional mediation in language intervention, and the tracking of peer talk and generalization of peer interactions.

Materials

Besides the use of the Frog Story, the stories used in the current study were specifically designed to meet the needs and interests of the participating children (see Appendix A for an example story). All stories either displayed children of different cultural backgrounds or animal protagonists encountering simple problems and offered opportunities for the inclusion of all story grammar elements as well as evaluative language features. Also, stories were available in different formats (such as in book format as well as smaller and bigger card sizes). Children enjoyed looking at the colorful pictures and usually told stories enthusiastically. It should be noted that the self-designed

picture book stories used as generalization probes in posttests I and II were similar in style and format to the materials used in the intervention and in the generalization probes throughout the intervention time frame. This familiarization could have influenced productivity rates and/or confused children due to lack of direct prompting in the collection of generalization probes, as opposed to the intervention. Also, because they were limited in length and therefore limited in opportunities for multiple tokens of story element types and evaluative language features, the stories may have yielded less complex narratives overall.

Selection of Tutors

In comparison to the tutees, tutors were all advanced in narrative skill, but also DLLs of Turkish and German to facilitate code switching in tutee-tutor interactions. However, instances of code switching occurred very rarely during the intervention process. While code-switching is seen as a linguistic strength of dual language learning children and can frequently occur in preschool-age children (e.g., de Groot, 2011; Meisel, 1994), its frequency varies as a function of multiple factors, including the child's language dominance, but also the type of language task and the language of elicitation and the language environment (Bedore et al., 2006; Lofranco et al., 2006; Peña et al., 2006). In the current study, code switching could have been inhibited by the fact that the examiners were all monolingual German speakers. Furthermore, all interventions took place in monolingual German ECEC institutions, that is, settings where young children may "feel socially obligated" (Jia & Aaronson 2003, p. 154) to converse in the instructional language, so that code switching might have not been facilitated.

Another aspect of the choice of tutors relates to the need of active participation of both—tutee and tutor—in the intervention. As ECEC attendance is not mandatory in Germany, several children (tutees and tutors) from the current cohort were taking extended family holidays, which ultimately led to their exclusion from the study (see section 4.1 for further information on study drop out). Other cases that could impact the session regularity are sickness (of either of the tutee or tutor) or ECEC absence for different reasons. Future studies may want to account for these aspects by creating more flexible peer tutoring teams which could, for the time of absence of either tutee

or tutor, be paired with other children. Still, maintaining a set peer partner for each child may be beneficial, especially for young children. As Pellegrini and colleagues (2002) argued, the familiarity resulting from repeated pairings of children may increase emotional investment and "foster cooperation, typically because interactants usually reciprocate good turns so as to maximize the benefits associated with their own efforts." (p. 384).

Finally, while tutors were advanced in narrative production in comparison to their assigned tutees, they were still in the process of acquiring German. A tutor more advanced in the target language might have offered a narrative model richer in lexical and syntactic complexity. Future studies may wish to also employ other tutors (for example, L1 speakers of the target language).

Peer Play Group

The Peer Play group did not make significant gains on any of the narrative measures collected via Frog Story. Meanwhile, PT and PP comparisons at posttest and maintenance probe yielded no differences. PP tutees might have benefitted from being familiar with the type of task from their biweekly generalization probes, which included narrative material similar in design and extent (see section 8.2). However, other than the PT tutees' performance at maintenance probe, PP tutee's performance still was not different from the CG condition. It is probable that to improve areas of narrative production over this relatively short amount of time, a more focused intervention is needed. Future studies may wish to either change the session format of the PP groups or to apply a longer intervention period, so that developments can evolve. Another possibility is that the chosen measures were not sensitive enough to track development. Video observations, including tracking the type of peer talk used in the sessions (for an example, see Rydland et al., 2014a, 2014b), may be an informative tool to do so.

Peer Mediation vs. Professional Mediation

Due to the study's didactic setting (peer-assisted, clinician prompted), it was impossible to completely tease apart adult from peer influence when interpreting the results. Working with children in the preschool age range, it was important to provide a certain

level of adult guidance to keep tutors and tutees on task and to elicit elaborated narrative models from the tutors. Therefore, interactions between the children were likely different than unscaffolded peer-to-peer interactions. It should be noted though, that at all times, adult mediation and prompting was strictly minimized to a set number of four prompts per story and that adults never modeled a complete narrative.

Other previous studies of narrative intervention chose a professional mediation approach. For example, Petersen and colleagues (2016) conducted two English language individualized narrative intervention sessions on two consecutive days targeting both causal subordination and selected story grammar elements with 5-to 9-year-old DLLs of Spanish and English, who were either typically developing or had a current diagnosis of SLI. The children in the SLI treatment group ($n = 9$) showed greater post-intervention use of causal subordination and story grammar elements in an English narrative retell task than did the children with SLI in the control group ($n = 8$), as did the typically developing children in the treatment group ($n = 33$), in comparison to the typically developing control group ($n = 23$). Thus, the intervention yielded a substantial effect in a relatively short time frame (i.e., 50 minutes of intervention per child). However, it must be noted that children in the Petersen et al. study were markedly older than children in the current study, that intervention targets were very limited, and that no follow-up data were collected to assess long-term results, such that the authors concluded "[…] we are uncertain how lasting and generalizable that effect was" (Petersen et al., 2016, p.16). Still, future studies may wish to further distinguish peer from adult influences and experimentally vary levels of professional mediation.

Tracking of Peer Talk and Generalization of Peer Interaction

The observational methods in the current study were chosen to measure outcomes in a peer-assisted learning processes and were not primarily

> "[…] geared toward capturing the dynamics of the interactive processes between peers in natural contexts and explicating learning processes and potentials by closely following children's discursive collaboration in situ in a wide range of social and play activities"
>
> (Cekaite et al., 2014, p. 4).

However, selected points will be discussed beyond sheer outcome measures to identify areas for future research.

Although not explicitly targeted in this project, spontaneous observations as well as reports from ECEC practitioners showed that tutee-tutor dyads, which mostly consisted of children who, prior to the intervention, usually did not have established relationships, often continued interacting together after the intervention and/or engaged in play activities during the ECEC day. Given the fact that children can enhance their language abilities through the continued exposure to peers with well-developed language skills (Justice et al., 2011; Mashburn et al., 2009; Palermo et al., 2014; Palermo & Mikulski, 2014) and play interactions (Robertson & Ellis Weismer, 1997) with strong-language peers (also see section 7.2), the generalization of fruitful peer interactions outside of the peer-assisted intervention is a potential positive side effect. This aspect also emerged in previous work on peer-assisted learning in the ECEC environment (McGregor, 2000) and should be further examined in future research.

Also, while the actual amount of peer talk and its direct influences on children's oral language performance was not tallied as part of the current study, future studies may choose to include those measures to more closely investigate peer influences on child language performance.

Finally, in the realm of the current research, it was not possible to conduct further qualitative and quantitative analyses of peer interaction during the intervention (for example, targeting the frequency, the length, and the emotional quality of the intersubjective exchange). However, building on the promising results of the current study, future research in these areas would add further important insight into the successful application of peer learning approaches in ECEC.

On a different note, the current study did not track children's narrative performance in their other language, Turkish. While, when possible, both languages of a child should be supported (e.g., Kohnert, 2010; Kupersmitt et al., 2014; Thordardottir, 2011), other studies provided evidence for cross-linguistic transfer of newly acquired macrostructural story components (e.g., Petersen et al., 2016), and future studies may also want to consider this aspect.

10.3 Conclusion Study II

Up until this point, dual language learning has rarely been considered as a factor in research on narrative-based language intervention (but see Petersen et al., 2016; Spencer, Kajan, Petersen, & Bilyk, 2014; Spencer, Petersen, Slocum, & McAllen, 2015; Spencer & Slocum, 2010), which is concerning, because the number of DLL preschoolers is growing internationally (e.g., Grosjean, 2015). For example, about a third of all children in Germany grow up in bilingual contexts and many of them have their first systematic and meaningful exposure to German when they enter ECEC at the age of three or four (Chilla, Rothweiler, & Babur, 2010). Thus, it is crucial to conduct research that informs clinicians and educational professionals working with young DLLs in ECEC environments how to best develop the necessary oral language and early literacy skills, including narrative skills, to promote literacy and academic success. Furthermore, it is important to examine linguistically and culturally diverse populations from backgrounds other than Spanish and English speaking children growing up in the United States, since the majority of early literacy and narrative research has concentrated on those populations (e.g., Fiestas & Peña, 2004; Hammer et al., 2014; Páez, Bock, & Pizzo, 2011). Meanwhile, it should be noted that, as Connor inferred with regard to an early literacy intervention, that "*one size does not fit all* (sic) – it is highly unlikely that researchers and practitioners will find *the* (sic) perfect […] intervention that works for all students" (Connor, 2011, p. 269). This principle can be applied to the current study. Target children of ECEC language intervention approaches usually comprise a heterogeneous group with various needs and a variety of previous language and early literacy experiences, and this is especially true for young DLLs (e.g., Hammer et al., 2011). Accordingly, children will likely benefit differently from the proposed intervention approach. Keeping this important point in mind, the following sections will take a closer look at two topics relevant to the current research, namely active ingredients in the intervention as well as the potential benefits of a peer-assisted approach when faced with a clinician-client mismatch.

Taken together, the presented research reveals that focused peer-assisted support of emerging narrative skills can improve children's narrative performance. Providing such support may be a more fruitful approach than solely focusing on practitioner-, clinician-, or teacher-directed activities. However, as previously discussed, given that the intervention used a complex setting for narrative intervention, it was not possible to discern which components of the intervention were most effective. However, the combined use of the tutor's model, clinician prompts, and elicitations (McGregor, 2000), and the joint narrative construction with the tutor (Licandro & Lüdtke, 2013, June)—which led to the child's multiple hearing and telling of narratives—seemed to have an impact on children's narrative learning. The peer-assisted intervention used these techniques throughout the sessions and controlled the application across units, activities, and tutoring dyads. This type of setting also could be well included in a multicomponent intervention targeting early literacy skills and complement other, professional-led approaches, such as shared story book reading activities, including techniques like print referencing (Justice & Piasta, 2011). Furthermore, a study that analyzed the effectiveness of intervention approaches for school-aged children with language impairments over an academic year reported that children who received SLP services with typically-developing peers showed greater gains than their peers receiving therapy in different settings (Schmitt, 2013).

On a more general level, it should be considered that peer-assisted intervention can be a way to deal with cultural and linguistic clinician-client mismatches or practitioner-child mismatches (e.g., McGregor, 2000; Pham et al., 2011). These mismatches are common due to the shortage of bilingual professionals such as Speech-Language-Pathologists (SLPs). For example, in the United States, only 5% of SLPs and audiologists reported that they qualified as a bilingual service provider (ASHA, 2014), while a German survey focusing on bilingual services and collaboration revealed that 69.5% of SLPs in Germany and 68.5% of SLPs in Austria did not know any bilingual colleagues (Schütte & Lüdtke, 2013, p. 52). For professionals who work with children from a variety of language and cultural backgrounds and those who face challenges of cultural and linguistic mismatches, it can be beneficial to implement peer-based intervention

approaches to facilitate minority language proficiency (Kohnert, 2007). Also, considering cultural influences on language and narrative production (e.g., Terry et al., 2013; Gorman et al., 2011), including peers from same linguistic and cultural backgrounds may be a viable way to successfully support children's cultural and linguistic diversity (McGregor, 2000).

Narratives provide an authentic, valid context for language intervention and can serve as a functional language target whereby complex language is introduced, modeled and practiced. That is, children can practice targeted language skills while constructing a meaningful form of communication that is naturalistic. Meanwhile, Hattie states on the school system that "The effects of peers can be considerable, although it is noted how infrequently peers are involved in the teaching and learning process" (Hattie, 2009, p. 104). This is equally true, if not more so, for the ECEC environment. While it is widely accepted that peer interactions positively influence young children's emotional, social, cognitive, and linguistic development, hardly any research has attempted to employ those peer effects for facilitating learning processes in the ECEC setting.

To successfully implement peer tutoring activities in ECEC environments, certainly more has to be done than "putting children together and hoping for the best" (Topping, 2005, p. 632). Pure exposure to advanced language models is not enough for increasing narrative skills; interactive support is a necessary component to provide young children not only with external models, but also with prompts and feedback, which allows them to gain experience at structuring their narratives (cf., Sénéchal et al., 2008). However, the inclusion of peers as intervention agents also likely enhances children's engagement in narrative tasks (e.g. section 7.3, also see Nicolopoulou, Cortina, Ilgaz, Cates, & de Sá, 2015; Nicololopoulou et al., 2014). Therefore, drawing on Nicolopoulou (1996), it is agreed that

> […] both narrative research and educational practice should treat children's group life as a developmental context of prime importance and great potential, and should seek to identify, understand, and facilitate those forms of peer-group activity that can most effectively engage children in ways that promote their narrative development.
>
> (p. 375)

The reported research has demonstrated that a clinician-prompted peer-assisted narrative intervention can provide an emotionally relevant, potent context for supporting

selected aspects of young DLLs' narrative development and thus adds to the current literature and further validates the inclusion of peer-assisted learning settings in ECEC environments: After the completion of a clinician-prompted peer tutoring intervention, DLL children with limited fictional narrative abilities in German demonstrated higher levels of lexical diversity as well as narrative complexity as measured by narrative macrostructure, cohesive elements, and selected evaluative language features than children in control groups. The effect size of $r = .06$ showed that the intervention had a large effect of substantive significance. There was also evidence that narrative gains were maintained over time and could generalize an unfamiliar picture book. Importantly, tutors were not negatively affected by their study participation.

Although more research is needed to explore the value of a peer-assisted intervention component with larger numbers of children, and to distinguish peer-related from clinician-related effects, the preliminary results of the current study suggest a way to support selected language components in narrative-based language skills. This project was an initial investigation of the feasibility of promoting the generation of fictional narratives in a fairly representative real-life setting (i.e., intervention offered during the ECEC day, intervention dyads paired with the input of ECEC practitioners, etc.). The data indicated that this treatment effectively promoted changes in the area of narrative complexity and evaluative language use in a relatively short intervention period (12 sessions over the time course of 10 weeks). To reach the goal of successful inclusion of all children in mainstream ECEC and school classrooms, peer-assisted learning should be further investigated.

11 Overall Discussion – Towards a Multi-Faceted Understanding and Enhancement of DLL's Emerging Narrative Skills

The two presented studies make several contributions. First, they document and analyze emerging narrative language skills in preschool-age DLL children on the basis of a broad range of narrative components, namely, narrative microstructure, macrostructure, evaluative language use, as well as the speech production process. Second, they give insight into interdependencies between indices of narrative language, standardized assessments, and the home language environment. Third, they suggest that a short-term clinician-prompted, peer-assisted approach is not only feasible for application in an ECEC setting, but can also successfully support emerging narrative skills while not being detrimental to tutors' narrative skills. The success of this exploratory project highlights key components that can be applied to future peer-assisted intervention studies in the ECEC environment. While future studies addressing study limitations are needed to confirm findings and replication is needed to generalize these initial findings to other participant groups, important implications can still be drawn to inform researchers and practitioners on the theoretical, clinical, and educational level, as discussed in the final upcoming sections.

Theoretical Implications

Moving beyond isolated utterances, preschool narrative analysis provides insight into complex, socio-emotionally and academically valid aspects of language development (e.g., Justice et al., 2010; Norbury et al., 2014, also see chapter 2). The current study included participants from an understudied population and thus provides an important addition to the current literature, because there is an obvious need to diversify research on young DLLs, specifically the languages and cultures under study (e.g., Paradis & Kirova, 2014). To date, the vast majority of research in the area of DLLs' early language and literacy development includes children who are 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 preschool-aged DLLs of Spanish and English growing up in the United States (e.g., Be-

U. Licandro, *Narrative Skills of Dual Language Learners*, Diversität in Kommunikation und Sprache / Diversity in Communication and Language,
DOI 10.1007/978-3-658-14673-3_11

dore et al., 2006, 2008, 2010; Lucero, 2015; Montanari, 2004; Petersen et al., 2016; Resendiz et al., 2014; Rojas & Iglesias, 2006; Squires et al., 2014; Uccelli & Páez, 2007), there is a paucity of studies investigating narrative skills in children from diverse first-language and cultural backgrounds (see sections 3.4 and 3.5). Including these populations is crucial in identifying aspects of DLLs' development that are not only common across languages and populations, but also in discerning aspects that are different (Hammer et al., 2011).

Ultimately, the current studies generated data regarding the underlying principles of the construction of new representations to support new complexities in narrative discourse to refine current models of language and early literacy learning in DLLs. Conducting these studies 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 and also promotes the identification of risk and resiliency factors in early dual language and literacy development. Also, the current work provides valuable information regarding the patterns of various elements in fictional narratives of DLLs and thus has broader application to theories about the ways in which narrative ability develops.

Another specific contribution of this work is the refinement of a theoretical relational conceptualization of the processes underlying peer-assisted language-based learning approaches in ECEC (see section 7.3.2), which are posited to have facilitative socio-emotional potential for children's language and early literacy learning. In particular, these explications provide indirect support for experiential accounts that acknowledge the role of emotionally relevant, dyadic exchanges in the context of peer interactions (e.g., Licandro & Lüdtke, 2012).

Clinical Implications

The over- and underdiagnosis of language impairments in DLL children continues to be a widespread problem (e.g., Kohnert, 2010). It is not only crucial to identify markers of language impairment for different languages (e.g., Leonard, 2014), but also to explore developmental pathways associated with successful dual language and literacy

achievement to complement the knowledge base that serves to develop methods in helping clinicians distinguish typical DLL variations from differences due to impairment (Gillam et al., 2013; Paradis et al., 2013). Internationally, it is agreed that narrative analysis should be an essential part of SLPs' assessment, monitoring, and intervention processes, especially when working with DLLs (e.g., Bedore et al., 2010; Fiestas & Peña, 2004; Gagarina et al., 2015; Gutiérrez-Clellen, 2002; Johnston, 2008; Laing & Kamhi, 2003; Peña, et al., 2014; Rhodes et al., 2005; Terry et al., 2013; Westerveld & Gillon, 2010). However, developmental language data of DLLs, needed to determine valid criteria for the mastery of specific linguistic forms and narrative structure, are still sparse, especially for DLLs from linguistic and cultural backgrounds other than Spanish and English.

In this capacity, the descriptive-developmental indicators on narrative skills in DLLs produced in the current work as well as the exploration of relations between DLLs' language and cognitive skills, the home language environment, and oral narrative performances, can contribute to define expectations of young DLLs' narrative performance. These expectations can translate to documenting and assessing narrative development, identifying possible language delays, selecting appropriate intervention goals, and designing and delivering prevention and intervention models. For example, data from Study I underlined the unique relations between children's expressive language and narrative skills. Therefore, supporting children's (L2) expressive language skills (e.g., vocabulary skills) may also promote the expression of narrative complexity. Correspondingly, interventions addressing narrative macrostructure may lead to concurrent vocabulary growth (also see Heilmann, Miller, Nockerts, & Dunaway, 2010).

Furthermore, Study II complements the knowledge base on including peer models in language intervention by providing further evidence that skills that underpin narrative expression are trainable in DLL children aged 3 to 6 years and that including advanced language peers in the intervention process is not only feasible, but likely beneficial. While this approach has previously been identified as a promising feature in language intervention for school-aged children (e.g., McMaster et al., 2006; Schmitt, 2013), data

on peer-assisted language intervention in the ECEC context are still sparse, such that the extension to preschool-age children is a unique feature of the current work.

Educational Implications

In the early years of a child's schooling, being a successful oral narrator not only entails sustaining conversations in informal social contexts, but also having the ability to linguistically adapt to formal instructive contexts, which can be seen as an educational prerequisite. Although typical developmental patterns have been found across children, there is huge variability in the emerging narrative skills of preschoolers. While some children entering primary school may be prepared for everyday conversation with peers and adults, they may not be equipped with pre-existing competence at understanding and producing the type of narrative structure that is appreciated and required in academic settings. This mainly concerns children from families with social risks (e.g., Gathercole et al., 2015; Peterson, 1994), where engagement in relevant communicative experiences occurs less frequently. This, in turn, may manifest itself in future difficulties in adapting to various linguistic requirements and thus could lead to disadvantages for socio-emotional and academic achievement. Young DLLs, who often rely on the ECEC environment to provide them with these skills, are also often at a disadvantage. The enhancement of children's opportunities for the active appropriation of (L2) language skills should therefore be a main concern of ECEC institutions, while the continued support of L1 language and literacy skills should also be encouraged in educational and home environments (e.g., Kohnert, 2010; Kupersmitt et al., 2014; Thordardottir, 2011). From a broader perspective, documenting and supporting the communicative development of DLLs is a crucial part of the professional activities in ECEC institutions. Especially in the present circumstances, it is crucial for all educators to be knowledgeable about the process of dual language acquisition and the effect of dual language learning on early literacy skills, such as in the area of narrative (e.g., Hammer et al., 2014; Paéz et al., 2011; Tabors & Snow, 2002).

As narratives provide an authentic context for high-quality language and literacy instruction in the ECEC environment, another area explored in the current work was the

successful support of emerging narrative skills in DLLs. It has been well established that socio-emotionally relevant peer interactions contribute to children's language development (e.g, Cekaite & Björk-Willén, 2013; Henry & Rickman, 2007; Justice et al., 2011; Mashburn et al., 2009; Palermo et al., 2014; Palermo & Mikulski, 2014), which strengthens educational policies on the importance of facilitating children's interactions and peer-to-peer conversations in ECEC. While adults may not always be available to listen to children's everyday stories in pedagogical and educational contexts, peers are readily available and also scaffold their equal-status partners' linguistic constructions (Cekaite & Björk-Willén, 2013; Long, et al., 2004). The results of Study II contribute to our knowledge that carefully planned and implemented peer-assisted intervention approaches in ECEC can offer a valid contribution to children's learning.

Conclusion

The rising number of children, adolescents, and adults growing up with and operating in different languages in their daily life makes the consideration of DLLs' language acquisition, use, and the successful support thereof an obligatory field of 21st century educational and clinical practice, as well as research. One of the most pressing issues in educational and clinical settings is how to adequately address the language needs of DLLs in order to equip them with the skills needed to excel in school. Gaining better insight into DLLs' narrative skills in conjunction with other child skills and language socialization patterns, as well as the successful support of narrative skills, can ultimately positively influence clinical services and language education. The two presented studies uniquely add to the literature by focusing on the fictional narrative skills of young DLL children as well as exploring the effects of promoting these early narrative skills via a peer-assisted narrative-based language intervention. As a result, the presented data may help to inform linguistic expectations, developmentally appropriate language goals, and support strategies to promote narrative language features in DLL preschoolers. Furthermore, the current work hopefully provides inspiration to the development of expanded programmatic options including peer-assisted learning activities in the ECEC environment to create engaging and successful language learning opportunities for all children.

References

Abbott, H. P. (2002). *The Cambridge introduction to narrative*. Cambridge, UK: Cambridge University Press.

Aksu-Koç, A. A. (1994). Development of linguistic forms: Turkish. In R. Berman & D. Slobin (Eds.), *Relating events in narrative: A crosslinguistic developmental study* (pp. 329-385). Hillsdale, NJ: Lawrence Erlbaum.

Alamillo, A. R.; Colletta, J.-M., & Guidetti, M. (2013). Gesture and language in narratives and explanations: the effects of age and communicative activity on late multimodal discourse development. *Journal of Child Language, 40*, 511-538. doi: 0.1017/S0305000912000062

Allen, M. S., Kertoy, M. K., Sherblom, J. C., & Pettit, J. M. (1994). Children's narrative productions: A comparison of personal event and fictional stories. *Applied Psycholinguistics, 15*, 149-176. doi: 10.1017/S0142716400005300

American Speech-Language-Hearing Association (2014). *Demographic profile of ASHA members providing bilingual services*. Retrieved from www.asha.org/uploadedFiles/ Demographic-Profile-Bilingual-Spanish-Service-Members.pdf

American Speech-Language-Hearing Association. (2004). *Knowledge and skills needed by speech-language pathologists and audiologists to provide culturally and linguistically appropriate services*. Retrieved from www.asha.org/policy

Andresen, H. (2005). Role play and language development in the preschool years. *Culture & Psychology, 11*, 387–414. doi: 10.1177/1354067X05058577

Andresen, H. (2013). Zur Problematik von Stufenmodellen in der Erzählentwicklung in Spracherwerbsforschung und Sprachdidaktik [On the problematic of stage models of narrative development in languge acquisition research and language didactics]. In T. Becker & P. Wieler (Eds.), *Erzählforschung und Erzähldidaktik heute. Entwicklungslinien, Konzepte, Perspektiven* (pp. 19-38). Tübingen: Stauffenberg.

Anstatt, T. (2008). Aspect and tense in storytelling by Russian, German and bilingual children. *Russian Linguistics, 32*, 1-26. doi: 10.1007/s11185-007-9021-0

Applebee, A. N. (1978). *The child's concept of story*. Chicago, IL: University of Chicago Press.

Armon-Lotem, S., de Jong, J. & Meir, N. (Eds.). (2015). *Assessing Multilingual Children: Disentangling bilingualism from language impairment*. Bristol: Multilingual Matters.

Asbrock, D., Ferguson, C., & Hoheiser-Thiel, N. (2011). *Sprachdiagnostik bei mehrsprachigen Vorschulkindern–ein Praxisleitfaden* [Language Assessment in multilingual preschoolers – a practical guide]. Köln: ProLog.

Auer, P., & Wei, L. (Eds.). (2009). *Handbook of multilingualism and multilingual communication*. Berlin: Walter de Gruyter.

August, D., Carlo, M., Dressler, C., & Snow, C. (2005). The critical role of vocabulary development for English language learners. *Learning Disabilities Research & Practice, 20,* 50–57. doi: 10.1111/j.1540-5826.2005.00120.x

Aukrust, V. G., & Rydland, V. (2011). Preschool Classroom Conversations as Long-Term Resources for Second Language and Literacy Acquisition. *Journal of Applied Developmental Psychology, 32*, 198-207. doi: 10.1016/j.appdev.2011.01.002

Autorengruppe Bildungsberichterstattung im Auftrag der Ständigen Konferenz der Kultusminister der Länder in der Bundesrepublik Deutschland und des Bundesministeriums für Bildung und Forschung (Ed.). (2010). *Bildung in Deutschland 2010. Ein indikatorengestützter Bericht mit einer Analyse zu Perspektiven des Bildungswesens im demografischen Wandel* [Education in Germany 2010. An indicator-aided report including an analysis on perspectives of the educational system in times of demographic change]. Bielefeld: Bertelsmann.

Axe, J. B. (2011). Peer Tutoring. In S. Goldstein & J. A. Naglieri (Eds.), *Encyclopedia of child behavior and development* (pp. 1076-1077). New York: Springer.

Bamberg, M. (1987). *The acquisition of narratives: Learning to use language*. Berlin, New York, Amsterdam: Mouton de Gruyter.

U. Licandro, *Narrative Skills of Dual Language Learners*, Diversität in Kommunikation und Sprache / Diversity in Communication and Language,
DOI 10.1007/978-3-658-14673-3

Bamberg, M. (1994). Development of linguistic forms: German. In R. Berman & D. Slobin (Eds.), *Relating events in narrative: A crosslinguistic developmental study* (pp. 189-238). Hillsdale, NJ: Lawrence Erlbaum.

Bamberg, M. (Ed.). (1997). *Narrative development. Six approaches*. New York & London: Routledge.

Bamberg, M., & Damrad-Frye, R. (1991). On the ability to provide evaluative comments - further explanations of children's narrative competencies. *Journal of Child Language, 18*, 689-710. doi: 10.1017/S0305000900011314

Bansner, M., & Lüdtke, U. M. (2014). Der Einfluss einer benachteiligten Lebenslage auf die frühkindliche Kommunikationsentwicklung: Die Bedeutung der emotionalen Qualität zwischen Mutter und Kind. [The influence of disadvantaged situations on the early development of communication: The importance of the emotional quality between mother and child]. *MitSprache, 46*, 25-38.

Barbu, S. (2009). Similarity of behavioral profiles among friends in early childhood. *Child Health and Education, 1*, 27-40.

Bat-Chava, Y., Martin, D., & Imperatore, L. (2014). Long-term improvements in oral communication skills and quality of peer relations in children with cochlear implants: parental testimony. *Child: Care, Health and Development, 40*, 870-881. doi:10.1111/cch.12102

Battle, D. (2002). Language development and disorders in culturally and linguistically diverse children. In D. Bernstein & E. Tiegerman-Farber (Eds.), *Language and communication disorders in children* (pp. 354–386). Boston: Allyn & Bacon.

Becker, T. (2011). *Kinder lernen erzählen. Zur Entwicklung narrativer Fähigkeiten von Kindern unter Berücksichtigung der Erzählform* [Children learn to narrate. On the development of narrative skills of children in consideration of the narrative format] (Vol. 3). Baltmannsweiler: Schneider Verlag Hohengehren.

Bedore, L. M., Fiestas, C. E., Peña, E., & Nagy, V. (2006). Cross-language comparisons of maze use in Spanish and English in functionally monolingual and bilingual children. *Bilingualism: Cognition and Language, 9*, 233-247.doi: 10.1017/S1366728906002604

Bedore, L. M., & Peña, E. D. (2008). Assessment of bilingual children for identification of language impairment: Current findings and implications for practice. *International Journal of Bilingual Education and Bilingualism, 11*, 1–29. doi: 10.2167/beb392.0

Bedore, L. M., Peña, E. D., Gillam, R. B., & Ho, T.-H. (2010). Language sample measures and language ability in Spanish-English bilingual kindergarteners. *Journal of Communication Disorders, 43*, 498-510. doi: 10.1016/j.jcomdis.2010.05.002

Berman, R. (2001). Narrative development in multilingual contexts: A cross-linguistic perspective. In L. Verhoeven & S. Strömqvist (Eds.), *Narrative development in a multilingual context* (pp. 419 – 428). Amsterdam: J. Benjamins.

Berman, R. (2005). Introduction: Developing discourse stance in different text types and languages. *Journal of Pragmatics, 37*, 105-124. doi:10.1016/j.pragma.2004.08.003

Berman, R. (2009). Language development in narrative contexts. In E. L. Bavin (Ed.), *The Cambridge handbook of child language* (pp. 355-375). Cambridge, UK: Cambridge University Press.

Berman, R., & Slobin, D. (1994). *Relating events in narrative: A crosslinguistic developmental study*. Hillsdale, NJ: Lawrence Erlbaum.

Berndt, T. J. & Ladd, G. W. (Eds.) (1989). *Peer relationships in child development*. New York: Wiley.

Bialystok, E. (2001). *Bilingualism in development. Language, literacy, and cognition*. Cambridge, UK: Cambridge University Press.

Bishop, D. V. M., & Edmundson, A. (1987). Language impaired four year olds: Distinguishing transient from persistent impairment. *Journal of Speech and Hearing Disorders, 52*, 156-173. doi: 10.1044/jshd.5202.156

Björk-Willén, P., & Cromdal, J. (2009). When education seeps into 'free play': How preschool children accomplish multilingual education. *Journal of Pragmatics, 41*, 1493-1518. doi:10.1016/j.pragma.2007.06.006

Blom, E., & Boerma, T. (2015, July). *Narrative ability in bilingual and monolingual children with and without Language Impairment: Results from the Dutch LITMUS MAIN*. Paper presented at the conference Bilingualism and Specific Language Impairment - 2015, François Rabelais University, Tours, France. Abstract retrieved from http://bisli.sciencesconf.org/55058

Blum-Kulka, S., & Gorbatt, N. (2014). "Say princess": the challenges and affordances of young Hebrew L2 novices' interaction with their peers. In A. Cekaite, S. Blum-Kulka, V. Grøver, & E. Teubal (Eds.), *Children's peer talk: Learning from each other* (pp. 169-193). Cambridge, UK: Cambridge University Press.

Blum-Kulka, S., & Snow, C. E. (2004). Introduction: The potential of peer talk. *Discourse Studies, 6*, 291–306. doi: 10.1177/1461445604044290

Botting, N. (2002). Narrative as a tool for the assessment of linguistic and pragmatic impairments. *Child Language Teaching & Therapy, 18*, 1–22. doi: 10.1191/0265659002ct224oa

Branco, A. U. (2005). Peer interactions, language development and metacommunication. *Culture Psychology, 11*, 415-429. doi: 10.1177/1354067X05058580

Brendgen, M., Vitaro, F., Bukowski, W. M., Dionne, G., Tremblay, R. E., & Boivin, M. (2013). Can friends protect genetically vulnerable children from depression? D*evelopment and Psychopathology, 25*, 277-289. doi: 10.1017/S0954579412001058

Bretherton, I. (1989). Pretense: the form and function of make-believe play. *Developmental Review, 9*, 383-401. doi: 10.1016/0273-2297(89)90036-1

Bruner, J. S. (1975). From communication to language: A psychological perspective. *Cognition, 3*, 255–287.

Bruner, J. S. (1983). *Child's talk: Learning to use language*. New York: Norton.

Bruner, J. S. (1986). *Actual minds, possible worlds.* Cambridge, MA: Harvard University Press

Bruner, J. S. (1990). *Acts of meaning*. Cambridge, MA: Harvard University Press.

Bruner, J. S. (1991). The narrative construction of reality. *Critical Inquiry, 18*, 1-21.

Bryant, J. B. (2009). Pragmatic development. In E. Bavin (Ed.), *The Cambridge handbook of child language* (pp. 339-354). Cambridge, UK: Cambridge University Press.

Bundesministerium für Familie, Senioren, Frauen und Jugend (Ed.). (2014). *Familien mit Migrationshintergrund: Analysen zur Lebenssituation, Erwerbsbeteiligung und Vereinbarkeit von Familie und Beruf* [Families with a migrant background. Analyses on the life situation, labour market participation, and the compatibility of family and work]. Berlin: Geschäftsstelle des Zukunftsrats Familie des Bundesministeriums für Familie, Senioren, Frauen und Jugend. Retrieved from http://www.bmfsfj.de/RedaktionBMFSFJ/Broschuerenstelle

Burger, K. (2014). Effective early childhood care and education: Successful approaches and didactic strategies for fostering child development. *European Early Childhood Education Research Journal.* doi: 10.1080/1350293X.2014.882076.

Butler, Y. G., & Hakuta, K. (2004). Bilingualism and second language acquisition. In T. K. Bhatia & W. C. Ritchie (Eds.), *The Handbook of Bilingualism* (pp. 114-144). Malden, MA & Oxford: Wiley-Blackwell.

Cain, K. (2003). Text comprehension and its relation to coherence and cohesion in children's fictional narratives. *British Journal of Developmental Psychology, 21*, 335-351. doi: 10.1348/026151003322277739

Cárdenas-Hagan, E., Carlson, C., & Pollard-Durodola, S. (2007). The cross-linguistic transfer of early literacy skills: The role of initial L1 and L2 skills and language of instruction. *Language, Speech, and Hearing Services in Schools*, *38*, 249–259. doi: 10.1044/0161-1461(2007/026)

Carmiol, A. & Sparks, A. (2014). Narrative development across cultural contexts: Finding the pragmatic in parent-child reminiscing. In D. Mathews (Ed.), *Pragmatic development: Trends in language acquisition research* (pp. 279-294). Amsterdam: J. Benjamins.

Carrow-Woolfolk, E. (1995). *Oral and written language scales*. Circle Pines, MN: American Guidance Service.

Carter, E. W., Cushing, L. S., Clark, N. M., & Kennedy, C. H. (2005). Effects of peer support interventions on students' access to the general curriculum and social interactions. *Research & Practice for Persons with Severe Disabilities, 30*, 15-25.

Cekaite, A., & Björk-Willén, P. (2013). Peer group interactions in multilingual educational settings: Co-constructing social order and norms for language use. *International Journal of Bilingualism, 17,* 174-188. doi: 10.1177/1367006912441417

Cekaite, A., Blum-Kulka, S., Grøver, V., & Teubal, E. (Eds.). (2014). *Children's peer talk: Learning from each other*. Cambridge, UK: Cambridge University Press.

Chapman, R. S. (2000). Children's language learning: An interactionist perspective. *Journal of Child Psychology and Psychiatry, 41*, 33-54. doi: 10.1111/1469-7610.00548

Chen, D. W., Fein, G. G., Killen, M., & Tam, H. (2001). Peer conflicts of preschool children: Issues, resolution, incidence, and age related patterns. *Early Education and Development, 12,* 523–544. doi: 10.1207/s15566935eed1204_3

Chilla, S., Rothweiler, M., & Babur, E. (2010). *Kindliche Mehrsprachigkeit. Grundlagen – Störungen – Diagnostik* [Child bilingualism. Foundations – impairments – assessment]. München: Reinhardt.

Christie, J. F., & Stone, S. J. (1999). Collaborative literacy activity in print-enriched play centers: Exploring the "zone" in same-age and multi-age groupings. *Journal of Literacy Research, 31*, 109-131. doi: 10.1080/10862969909548042

Cleave, P. L., Girolametto, L. E., Chen, X., & Johnson, C. J. (2010). Narrative abilities in monolingual and dual language learning children with specific language impairment. *Journal of Communication Disorders, 43*, 511–522. doi: 10.1016/j.jcomdis.2010.05.005

Cobley, P. (2001). *Narrative.* New York & London: Routledge.

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.) Hillsdale, NJ: Lawrence Erlbaum.

Colle, L., Baron-Cohen. S., Wheelwright, S. & van der Lely, H. K. J. (2008). Narrative discourse in adults with high-functioning autism or asperger syndrome. *Journal of Autism and Developmental Disorders, 38*, 28-40. doi: 10.1007/s10803-007-0357-5

Collins, M. F. (2010). ELL preschoolers' English vocabulary acquisition from storybook reading. *Early Childhood Research Quaterly, 25*, 84-97. doi: doi:10.1016/j.ecresq.2009.07.009

Connor, C. M. (2011). Child characteristics – Instruction interactions: Implications for students' literacy skills development in the early grades. In S. B. Neuman & D. K. Dickinson (Eds.), *Handbook of early literacy research* (Vol. 3, pp. 256-275). New York: Guilford.

Conti-Ramsden, G., & Botting, N. (2004). Social difficulties and victimization in children with SLI at 11 years of age. *Journal of Speech, Language, and Hearing Research, 47*, 145-161. doi: 10.1044/1092-4388(2004/013)

Core, C., Hoff, E., Rumiche, R., & Señor, M. (2013). Total and conceptual vocabulary in Spanish–English bilinguals from 22 to 30 months: Implications for assessment. *Journal of Speech, Language, and Hearing Research, 56*, 1637-1649. doi:10.1044/1092-4388(2013/11-0044)

Corsaro, W. A. (1985). *Friendship and peer culture in the early years*. Norwood, NJ: Ablex.

Corsaro, W. A. (2011). *The sociology of childhood* (Vol. 3). Thousand Oaks, CA: Sage Publications.

Corsaro, W. A., & Eder, D. J. (1990). Children's peer cultures. *Annual Review of Sociology, 16*, 197-220.

Cromdal, J. (2009). Childhood and social interaction in everyday life: Introduction to the special issue. *Journal of Pragmatics, 41*, 1473–1476. doi:10.1016/j.pragma.2007.03.008

Curenton, S. M. (2004). The association between narratives and theory of mind for low-income preschoolers. *Early Education and Development, 15*, 121-145. doi: 10.1207/s15566935eed1502_1

Curenton, S. M. (2010). Narratives as learning tools to promote school readiness. *Early Education & Development, 21*, 287-292. doi: 10.1080/10409289.2010.485532

Curenton, S. M. (2011). Understanding the landscapes of stories: the association between preschoolers' narrative comprehension and production skills and cognitive abilities. *Child Development and Care, 181*, 717-732. doi: 10.1080/03004430.2010.490946

Curenton, S. M., & Justice, L. M. (2004). African American and Caucasian preschoolers' use of decontextualized language: Literate language features in oral narratives. *Language, Speech, and Hearing Services in Schools, 35*, 240-253. doi: 10.1044/0161-1461(2004/023)

Curenton, S. M., & Lucas, T. M. (2007). Assessing young children's oral narrative skills: The story pyramid framework. In K. Pence (Ed.), *Assessment in emergent and early literacy* (pp. 377-427). San Diego, CA: Plural.

Curenton, S. M., Craig, M. J., & Flanigan, N. (2008). Use of decontextualized talk across story contexts: How oral storytelling and emergent reading can scaffold children's development. *Early Education and Development, 19*, 161-187.

Cushing, L. S., & Kennedy, C. H. (1997). Academic effects of providing peer support in general education classrooms on students without disabilities. *Journal of Applied Behavior Analysis, 30*, 139-152. doi: 10.1901/jaba.1997.30-139

Daiute, C., Campbell, C. H., Griffin, T. M., Reddy, M., & Tivnan, T. (1993). Young authors' interactions with peers and a teacher: Toward a developmentally sensitive sociaocultural literacy theory. *New Directions for Child and Adolescent Development, 61*, 41-63. doi: 10.1002/cd.23219936105

Damon, W., & Phelps, E. (1989). Strategic uses of peer learning in children's education. In T. J. Berndt & G. W. Ladd (Eds.), *Peer relationships in child development* (pp. 135-157). New York: Wiley.

De Fina, A., & Georgakopoulou, A. (2011). *Analyzing narrative. Discourse and sociolinguistic perspectives*. Cambridge, UK: Cambridge University Press.

de Groot, A. M. B. (2011). *Language and cognition in bilinguals and multilinguals: An introduction*. New York: Psychology Press.

De Houwer, A. (2009). *Bilingual first language acquisition*. Bristol, UK: Multilingual Matters.

Degotardi, S., & Pearson, E. (2014). *The relationship worlds of infants and toddlers. Multiple perspectives from early years theory and practice*. New York: Open University Press.

DeLuzio, J., & Girolametto, L. (2011). Peer interactions of preschool children with and without hearing loss. *Journal of Speech, Language, and Hearing Research, 54*, 1197–1210. doi: 10.1044/1092-4388(2010/10-0099)

Dickinson, D. K., & McCabe, A. (1991). The acquisition and development of language: A social interactionist account of language and literacy development. In J. F. Kavanaugh (Ed.), *The language continuum: From infancy to literacy* (pp. 1–40). Parkton, MD: York Press.

Dickinson, D. K., & Porche, M. V. (2011). Relation between language experiences in preschool classrooms and children's kindergarten and fourth-grade language and reading abilities. *Child Development, 82*, 870-886. doi: 10.1111/j.1467-8624.2011.01576.x

Dickinson, D. K., & Snow, C. E. (1987). Interrelationships among prereading and oral language skills in kindergartners from two social classes. *Early Childhood Research Quarterly, 1*, 25. doi: 10.1016/0885-2006(87)90010-X

Dickinson, D. K., & Tabors, P. O. (1991). Early literacy: Linkages between home, school, and literacy achievement at age five. *Journal of Research in Childhood Education, 6*, 30-46.

Dockett, S., & Perry, B. (2011). Researching with young children. Seeking assent. *Child Indicators Research, 4*, 231-247. doi: 10.1007/s12187-010-9084-0

Dollaghan, C. A. (2007). *The handbook for evidence-based practice in communication disorders*. Baltimore: Paul H. Brookes.

Duchesne, S., McMaugh, A., Bochner, S., & Krause, L. K. (2013). *Educational psychology for learning and teaching*. Melbourne: Cengage Learning.

Dunn, J. (1993). *Young children's close relationships: Beyond attachment.* London: Sage.

Eaton, J., Collis, G., & Lewis, V. A. (1999). Evaluative explanations in children's narratives of a video sequence without dialogue. *Journal of Child Language, 26*, 699–720.

Ebert, K. D., Kohnert, K., Pham, G., Disher, J. R., & Payesteh, B. (2014). Three treatments for bilingual children with primary language impairment: Examining cross-linguistic and cross-domain effects. *Journal of Speech, Language, and Hearing Research, 57*, 172-186. doi: 10.1044/1092-4388(2013/12-0388)

Eckerman, C., & Peterman, K. (2001). Peers and infant social/communicative development. In G. Bremner & A. Fogel (Eds.), *Blackwell handbook of infant development* (pp. 326–350). Oxford: Blackwell.

Eckert, P. (2003). Language and adolescent peer groups. *Journal of Language and Social Psychology, 22*, 112-118. doi: 10.1177/0261927X02250063

Eisenberg, S. L., Ukrainetz, T. A., Hsu, J. R., Kaderavek, J. N., Justice, L. M., & Gillam, R. B. (2008). Noun phrase elaboration in children's spoken stories. *Language, Speech, and Hearing Services in Schools, 39*, 145-157. doi: 10.1044/0161-1461(2008/014)

Ellis, P. D. (2010). *The essential guide to effect sizes. Statistical power, meta-analysis, and the interpretation of research results*. Cambridge, UK: Cambridge University Press.

Ely, R., & Gleason, J. (1995). Socialization across contexts. In P. Fletcher & B. MacWhinney (Eds.), *The handbook of child language* (pp. 251-276). Cambridge, MA: Blackwell.

Engel, S. (1995). *The stories children tell. Making sense of the narratives of childhood*. New York, NY: W.H. Freeman.

Engel, S. (2005). The narative worlds of what is and what if. *Cognitive Development, 20*, 514-525. doi: 10.1016/j.cogdev.2005.08.005

European Commission (2014). *Proposal for key principles of a quality framework for Early Childhood Education and Care*. Retrieved from http://ec.europa.eu/education/policy/strategicframework/archive/documents/ecec-quality-framework_en.pdf

Ezell, H. K., & Justice, L. M. (2005). *Shared storybook reading: Building young children's language and emergent literacy skills*. Baltimore: Paul H. Brookes.

Fantuzzo, J., & Ginsburg-Block, M. (1998). Reciprocal Peer Tutoring: Developing and testing effective peer collaborations for elementary school students. In K. Topping & S. Ehly (Eds.), *Peer-assisted learning*. Mahwah, NJ: Lawrence Erlbaum.

Fassler, R. (1998). Room for Talk: Peer Support for Getting into English in an ESL Kindergarten. *Early Childhood Research Quarterly, 13*, 379-409. doi:10.1016/S0885-2006(99)80047-7

Fey, M. E., Catts, H. W., Proctor-Williams, K., Tomblin, J. B., & Zhang, X. (2004). Oral and written story composition skills of children with language impairment. *Journal of Speech, Language, and Hearing Research, 47*, 1301-1318. doi: 10.1044/1092-4388(2004/098)

Fiestas, C. E., & Peña, E. D. (2004). Narrative discourse in bilingual children: Language and task effects. *Language, Speech, and Hearing Services in Schools, 35*, 155-168. doi: 10.1044/0161-1461(2004/016)

Fiestas, C. E., Bedore, L. M., Peña, E. D., & Nagy, V. J. (2005). Use of mazes in the narrative language samples of bilingual and monolingual 4- to 7-year old children. In J. Cohen, K. T. McAlister, K. Rolstad, & J. MacSwan (Eds.), *ISB4: Proceedings of the 4th International Symposium on Bilingualism* (pp. 730–740). Somerville, MA: Cascadilla Press.

Fivush, R., & Vasudeva, A. (2002). Remembering to relate: socioemotional correlates of mother-child reminiscing. *Journal of Cognition and Development, 3*, 73-90. doi: 10.1207/S15327647JCD0301_5

Fivush, R., Haden, C. A., & Reese, E. (2006). Elaborating on elaborations: Role of maternal reminiscing style in cognitive and socioemotional development. *Child Development, 77*, 1568-1588. doi: 10.1111/j.1467-8624.2006.00960.x

Flavell, J. H., & Miller, P. H. (1998). Social cognition. In W. Damon (Series Ed.), D. Kuhn & R. S. Siegler (Eds.), *Handbook of child psychology: Vol. 2. Cognition, perception, and language* (5th ed., pp. 851–898). New York: Wiley

Gagarina, N., Klop, D., Kunnari, S., Tantele, K., Välimaa, T., Balčiūnienė, I., Bohnacker, U., & Walters, J. (2012). MAIN: Multilingual assessment instrument for narratives. *ZAS Papers in Linguistics, 56*, 1-140.

Gagarina, N., Klop, D., Kunnari, S., Tantele, K., Välimaa, T., Balčiūnienė, I., Bohnacker, U., & Walters, J. (2015). Assessment of Narrative Abilities in Bilingual Children. In S. Armon-Lotem, J. de Jong, & N. Meir (Eds.), *Assessing Multilingual Children: Disentangling bilingualism from language impairment*, (pp. 243-269). Bristol: Multilingual Matters.

Gagnon, S. G., Nagle, R. J., & Nickerson, A. B. (2007). Parent and teacher ratings of peer interactive play and social-emotional development of preschool children at risk. *Journal of Early Intervention, 29,* 228-242. doi: 10.1177/105381510702900303

Gámez, P. B., Lesaux, N. K., & Rizzo, A. A. (2015). Narrative production skills of language minority learners and their English-only classmates in early adolescence. *Applied Psycholinguistics,* Available on CJO 2015. doi: 10.1017/S0142716415000314

Gardner-Neblett, N., & Iruka, I. U. (2015). Oral narrative skills: Explaining the language-emergent literacy link by race/ethnicity and SES. *Developmental Psychology, 51*, 889-904. doi: 10.1037/a0039274

Gartlehner, G., Hansen, R. A., Nissman, D., Lohr, K.N., & Carey, T. S. (2006). Criteria for distinguishing effectiveness from efficacy trials in systematic reviews. *Technical Review 12 (Prepared by the RTI-International-University of North Carolina Evidence-based Practice Center under Contract No. 290-02-0016.) AHRQ Publication No. 06-0046*. Rockville, MD: Agency for Healthcare Research and Quality.

Gathercole, V. C. M., Kennedy, I., & Thomas, E. M. (2015). Socioeconomic levels and bilinguals' performance on language and cognitive measures. *Bilingualism: Language and Cognition,* Available on CJO 2015. doi: 10.1017/S1366728915000504

Gertner, B. L., Rice, M. L., & Hadley, P. A. (1994). Influence of communicative competence on peer preferences in a preschool classroom. *Journal of Speech and Hearing Research, 37*, 913-923. doi: 10.1044/jshr.3704.913

Gillam, R. B., & Pearson, N. A. (2004). *Test of narrative language*. Austin, TX: Pro-Ed.

Gillam, R. B., Peña, E. D., Bedore, L. M., Bohman, T. M., & Mendez-Perez, A. (2013). Identification of specific language impairment in bilingual children: I. Assessment in English. *Journal of Speech, Language, and Hearing Research, 56*, 1813-1823. doi: 10.1044/1092-4388(2013/12-0056)

Ginsburg-Block, M. D., Rohrbeck, C. A., & Fantuzzo, J. W. (2006). A meta-analytic review of social, self-concept, and behavioral outcomes of peer-assisted learning. *Journal of Educational Psychology, 98*, 737-749. doi: 10.1037/0022-0663.98.4.732

Glasgow, C., & Cowley, J. (1994). *Renfrew Bus Story test (North American edition)*. Centreville, DE: Centreville School.

Gogolin, I., & Lange, I. (2011). Bildungssprache und durchgängige Sprachbildung [Language of education and continuous language support]. In S. Fürstenau & M. Gomolla (Eds.), *Migration und schulischer Wandel: Mehrsprachigkeit* (pp. 107-128). Wiesbaden: Springer.

Goldstein, B. (2000). *Cultural and linguistic diversity resource guide for speech-language pathologists*. San Diego, CA: Singular Publishing Group.

Goldstein, H., English, K., Shafer, K., & Kaczmarek, L. (1997). Interaction among preschoolers with and without disabilities. *Journal of Speech, Language, and Hearing Research, 40*, 33-48. doi: 10.1044/jslhr.4001.33

Gorman, B. K., Fiestas, C. E., Peña, E. D., & Clark, M. R. (2011). Creative and stylistic devices employed by children during a storybook narrative task: A cross-cultural study. *Language, Speech, and Hearing Services in Schools, 42*, 167-181. doi: 10.1044/0161-1461(2010/10-0052)

Gort, M. (2008). "You give me idea!": Collaborative strides toward bilingualism, biliteracy, and cross-cultural understanding in a two-way partial immersion program. *Multicultural Perspectives, 10*, 192-200. doi: 10.1080/15210960802526086

Greenhalgh, K. S., & Strong, C. J. (2001). Literate language features in spoken narratives of children with typical language and children with language impairment. *Language, Speech, and Hearing Services in Schools, 32*, 114-125. doi: 10.1044/0161-1461(2001/010)

Griffin, T. M., Hemphill, L., Camp, L., & Wolf, D. P. (2004). Oral discourse in the preschool years and later literacy skills. *First Language*, *24*, 123–147. doi: 10.1177/0142723704042369

Grissom, R. J., & Kim, J. J. (2005). *Effect sizes for research: A broad practical approach.* Mahwah, NJ: Lawrence Erlbaum.

Grosjean, F. (2015). Bicultural bilinguals. *International Journal of Bilingualism, 19,* 572-586. doi: 10.1177/1367006914526297

Grosjean, F., & Li, P. (2013). *The Psycholinguistics of Bilingualism*. Malden, MA & Oxford: Wiley-Blackwell.

Guajardo, N. R., & Watson, A. C. (2002). Narrative discourse and theory of mind development. *The Journal of Genetic Psychology, 163*, 305–325. doi: 10.1080/00221320209598686

Guralnick, M. J., Connor, R. T., Hammond, M. A., Gottman, J. M., Kinnish, K. (1996). The peer relations of preschool children with communication disorders. *Child Development, 67,* 471-489.

Gutiérrez-Clellen, V. F. (2002). Narratives in two languages: assessing performance of bilingual children. *Linguistics and Education, 13,* 175–197. doi: 10.1016/S0898-5898(01)00061-4

Gutiérrez-Clellen, V. F. (2012). Narrative development and disorders in bilingual children. In B. Goldstein (Ed.), *Bilingual language development and disorders in Spanish-English speakers* (2nd ed., pp. 233–250). Baltimore, MD: Brookes.

Gutiérrez-Clellen, V. F., & Kreiter, J. (2003). Understanding child bilingual acquisition using parent and teacher reports. *Applied Linguistics, 24*, 267–288. doi: 10.1017/S0142716403000158

Gutiérrez-Clellen, V. F., Simon-Cereijido, G., & Wagner, C. (2008). Bilingual children with language impairment: A comparison with monolinguals and second language learners. *Applied Psycholinguistics, 29*, 3-20. doi: 10.1017/S0142716408080016

Hadley, P. A. (1998). Language sampling protocols for eliciting text-level discourse. *Language, Speech, and Hearing Services in Schools, 29*, 132-147. doi: 10.1044/0161-1461.2903.132

Hadley, P. A., & Rice, M. L. (1991). Conversational responsiveness of speech- and language-impaired preschoolers. *Journal of Speech and Hearing Research, 34*, 1308-1317. doi: 10.1044/jshr.3406.1308

Hair, E., Hallo, T., Terry-Humen, E., Lavelle, B., & Calkins, J. (2006). Children's school readiness in the ECLS-K: Predictions to academic, health, and social outcomes in first grade. *Early Childhood Research Quarterly, 21*, 431-454. doi:10.1016/j.ecresq.2006.09.005

Halle, T., Hair, E., Wandner, L., McNamara, M., & Chien, N. (2012). Predictors and outcomes of early versus later English language proficiency among English language learners. *Early Childhood Research Quarterly, 27*, 1–20. doi: 10.1016/j.ecresq.2011.07.004

Hamit, S. (2011). Peer group. In S. Goldstein & J. A. Naglieri (Eds.), *Encyclopedia of child behavior and development* (pp. 1073-1074). New York: Springer.

Hammer, C. S., Hoff, E., Uchikoshi, Y., Gillanders, C., Castro, D., & Sandilos, L. E. (2014). The language and literacy development of young dual language learners: A critical review. *Early Childhood Research Quarterly, 29*, 715-733. doi: 10.1016/j.ecresq.2014.05.008

Hammer, C. S., Jia, G., & Uchikoshi, Y. (2011). Language and literacy development of dual language learners growing up in the United States: A call for research. *Child Development Perspectives, 5*, 4–9. doi: 10.1111/j.1750-8606.2010.00140.x

Hammer, C. S., Miccio, A. W., & Wagstaff, D. A. (2003). Home literacy experiences and their relationship to bilingual preschoolers' developing English literacy abilities: An initial investigation. *Language, Speech, and Hearning Services in Schools, 34*, 20-30. doi: 10.1044/0161-1461(2007/023)

Hännikäinen, M. (1999). Togetherness. A manifestation of early day care life. *Early Child Development and Care, 151*, 19-28. doi: 10.1080/0300443991510103

Hanushek, E., Kain, J., Markman, J., & Rivkin, S. (2003). Does peer ability affect student achievement? *Journal of Applied Econometrics, 18*, 527-544. doi: 10.3386/w8502

Harkins, D., Koch, P., & Michel, G. F. (1994). Listening to maternal story telling affects narrative skill of 5-year-old children. *Journal of Genetic Psychology, 155*, 247–257. doi: 10.1080/00221325.1994.9914775

Harper, G. F., Mallette, B., & Moore, J. (1991). Peer mediated instruction: Teaching spelling to primary aged children with mild handicaps. *Reading, Writing, and Learning Disabilities International, 7*, 139-154.

Hartup, W. W. (1983). Peer relations. In P. H. Mussen & E. M. Hetherington (Eds.), *Handbook of child psychology: Vol. 4. Socialization, personality, and social development* (pp. 103-196). New York: Wiley.

Hartup, W. W. (1999). Constraints on peer socialization: Let me count the ways. *Merrill-Palmer Quarterly Journal of Developmental Psychology, 45*, 172–183.

Hattie, J. (2009). *Visible learning. A synthesis of over 800 meta-analyses relating to achievement*. New York & London: Routledge.

Haun, D. B. M., & Tomasello, M. (2011). Conformity to peer pressure in preschool children. *Child Development, 82*, 1759–1767. doi: 10.1111/j.1467-8624.2011.01666.x

Hay, D. F., Payne, A., & Chadwick, A. (2004). Peer relationships in childhood. *Journal of Child Psychology and Psychiatry, 45*, 84-108.

Hayward, D. V., & Schneider, P. (2000). Effectiveness of teaching story grammar knowledge to pre-school children with language impairment: An exploratory study. *Child Language Teaching and Therapy, 16*, 255–284. doi: 10.1177/026565900001600303

Heath, S. B. (1986). Taking a cross-cultural look at narratives. *Topics in Language Disorders, 7*, 84-94. doi: 10.1097/00011363-198612000-00010

Hedberg, N. L., & Westby, C. E. (1993). *Analyzing storytelling skills: Theory to practice*. Tuscon, AZ: Communication Skill Builder.

Heilmann, J., Miller, J. F., & Nockerts, A. (2010). Sensitivity of narrative organization measures using narrative retells produced by young school-age children. *Language Testing, 27*, 603–626. doi: 10.1177/0265532209355669

Heilmann, J., Miller, J., Nockerts, A., & Dunaway, C. (2010). Properties of the Narrative Scoring Scheme using narrative retells in young school-age children. *American Journal of Speech-Language Pathology, 19,* 154–166. doi: 10.1044/1058-0360(2009/08-0024)

Henry, G. T., & Rickman, D. K. (2007). Do peers influences children's skill development in preschool? *Economics of Education Review, 26*, 100-112. doi: 10.1016/j.econedurev.2005.09.006

Hickmann, M. (2003). *Children's discourse: Person, space and time across languages*. Cambridge, UK: Cambridge University Press.

Hipfner-Boucher, K. (2011). *A comparative study of ELL and EL1 narrative competence during the kindergarten years*. Doctoral dissertation, submitted at the Department of Human Development and Applied Psychology, University of Toronto.

Hipfner-Boucher, K., Milburn, T., Weitzman, E., Greenberg, J., Pelletier, J., & Girolametto, L. (2015). Narrative abilities in subgroups of English language learners and monolingual peers. *International Journal of Bilingualism, 19,* 677-692. doi: 10.1177/1367006914534330

Hoff, E. (2006). How social contexts support and shape language development. *Developmental Review, 26*, 55-88. doi: 10.1016/j.dr.2005.11.002

Hoff, E., & Core, C. (2015). Input and language development in bilingually developing children. *Seminars in Speech and Language, 36*, 89-99. doi: 10.1055/s-0035-1549104

Howes, C. (2009). *Culture and child development in early childhood programs: Practices for quality education and care*. New York: Teachers College Press.

Howes, C., & Phillipsen, L. C. (1998). Continuity in children's relations with peers. *Social Development, 7*, 340-349. doi: 10.1111/1467-9507.00071

Howes, C. & Ritchie, S. (2002). *A matter of trust. Connecting teachers and learners in the early childhood classroom*. New York: Teachers College Press.

Hughes, D., McGillvray, L., & Schmidek, M. (1997). *Guide to narrative language: Procedures for assessments*. Eau Claire, WI: Thinking Publications.

Hunt, P., Staub, D., Alwell, M., & Goetz, L. (1994). Achievement by all students within the context of cooperative learning groups. *Journal of the Association for Persons with Severe Handicaps, 19*, 290-301. doi: 10.1177/154079699401900405

Iluz-Cohen, P., & Walters, J. (2012). Telling stories in two languages: Narratives of bilingual preschool children with typical and impaired language. *Bilingualism: Language and Cognition, 15*, 58-74. doi: 10.1017/S1366728911000538

Institute of Education Sciences (2010). *Peer-assisted learning strategies*. Retrieved from http://ies.ed.gov/ncee/wwc/pdf/intervention_reports/wwc_.pdf

Jia, G., & Aaronson, D. (2003). A longitudinal study of Chinese children and adolescents learning English in the United States. *Applied Psycholinguistics, 24*, 131-161. doi: 10.1017.S0142716403000079

Johansen, M. (2010). Participation through imitative repetitions. *Discourse Studies, 12*, 763-783. doi: 10.1177/1461445610381861

Johnston, J. R. (2007). *Thinking about child language: Research to practice.* Greenville, SC: Thinking Publications University.

Johnston, J. R. (2008). Narratives: Twenty-five years later. *Topics in Language Disorders, 28*, 93-98. doi: 10.1097/01.TLD.0000318931.08807.01

Jones, I. (2002). Social relationships, peer collaboration and children's oral language. *Educational Psychology, 22*, 63-73. doi: 10.1080/01443410120101242a

Justice, L. M., Bowles, R. P., Kaderavek, J. N., Ukrainetz, T. A., Eisenberg, S. L., & Gillam, R. B. (2006). The index of narrative microstructure: A clinical tool for analyzing school-age children's narrative performances. *American Journal of Speech-Language Pathology*, *15*, 177–191. doi: 10.1044/1058-0360(2006/017)

Justice, L. M., Bowles, R. P., Pence, K., & Gosse, C. (2010). A scalable tool for assessing children's language abilities within a narrative context: The NAP (Narrative Assessment Protocol). *Early Childhood Research Quarterly*, *25*, 218–234. doi: 10.1016/j.ecresq.2009.11.002

Justice, L. M., Chow, S.-M., Capellini, C., Flanigan, K., & Colton, S. (2003). Emergent literacy intervention for vulnerable preschoolers: Relative effects of two approaches. *American Journal of Speech-Language Pathology, 12*, 320-332.

Justice, L. M., Kaderavek, J. N., Fan, X., Sofka, A., & Hunt, A. (2009). Accelerating preschoolers' early literacy development through classroom-based teacher-child storybook reading and explicit print referencing. *Language, Speech, and Hearing Services in Schools*, *40*, 67-85. doi: 10.1044/0161-1461(2008/07-0098)

Justice, L. M., Petscher, Y., Schatschneider, C., & Mashburn, A. (2011). Peer effects in preschool classrooms: Is children's language growth associated with their classmates' skills? *Child Development, 82*, 1768–1777. doi: 10.1111/j.1467-8624.2011.01665.x

Justice, L. M., & Piasta, S. B. (2011). Developing children's print knowledge through adult-child storybook reading interactions: Print referencing as an instructional practice. In S. B. Neuman & D. K. Dickinson (Eds.), *Handbook of early literacy research* (Vol. 3, pp. 200-213). New York: Guilford.

Justice, L. M., Sofka, A. E., & McGinty, A. (2007). Targets, techniques, and treatment contexts in emergent literacy intervention. *Seminars in Speech and Language, 28*, 14-24. doi: 10.1055/s-2007-967926

Kaderavek, J. N., & Sulzby, E. (2000). Narrative production by children with and without specific language impairment: Oral narratives and emergent readings. *Journal of Speech, Language, and Hearing Research, 43*, 34-49. doi: 10.1044/jslhr.4301.34

Kalia, V., & Reese, E. (2009). Relations between Indian children's home literacy environment and their English oral language and literacy skills. *Scientific Studies of Reading, 13*, 122–145. doi: 10.1080/10888430902769517

Keenan, E. O. (1974). Conversational competence in children. *Journal of Child Language, 1*, 163–184.

Kelly, K. R., & Bailey, A. L. (2012). Becoming independent storytellers: Modeling children's development of narrative macrostructure. *First Language, 33*, 68–88. doi:10.1177/0142723711433582

Kernan, M., Singer, E., & Swinnen, R. (2011). Introduction. In M. Kernan & E. Singer (Eds.). (2011). *Peer relationships in early childhood. Education and care* (pp. 1-14). New York & London: Routledge.

Klette, K. (2007). Trends in research on teaching and learning in schools: Didactics meets classroom studies. *European Educational Research Journal, 6*, 147-160. doi: 10.2304/eerj.2007.6.2.147

Klieme, E., Jude, N., Baumert, J., & Prenzel, M. (2010). PISA 2000–2009: Bilanz der Veränderungen im Schulsystem [PISA 200-2009: Taking stock of the changes in the school system]. In E. Klieme, C. Artelt, J. Hartig, N. Jude, O. Köller, M. Prenzel, W. Schneider, & P. Stanat (Eds.), *PISA 2009: Bilanz nach einem Jahrzehnt* (pp. 277–300). Münster: Waxmann.

Kline, P. (1999). *The handbook of psychological testing* (2nd ed.). New York & London: Routledge.

Kohler, F. W., & Greenwood, C. R. (1990). Effects of collateral peer supportive behaviors within the classwide peer tutoring program. *Journal of Applied Behavior Analysis, 23,* 307-322. doi: 10.1901/jaba.1990.23-307

Kohnert, K. (2007). *Language disorders in bilingual children and adults*. San Diego, CA: Plural Publishing.

Kohnert, K. (2010). Bilingual children with primary language impairment: Issues, evidence and implications for clinical actions. *Journal of Communication Disorders, 43*, 456-473.

Koizumi, R., & In'nami, Y. (2012). Effects of text length on lexical diversity measures: Using short texts with less than 200 tokens. *System, 40*, 554-564. doi: 10.1016/j.system.2012.10.012

Krappmann, L., & Oswald, H. (1995). *Alltag der Schulkinder. Beobachtungen und Analysen von Interaktionen und Sozialbeziehungen* [Everyday life of schoolchildren. Observation and analysis of interactions and social relations]. Weinheim: Juventa.

Kristen, C., & Dollmann, J. (2010). Sekundäre Effekte der ethnischen Herkunft: Kinder aus türkischen Familien am ersten Bildungsübergang [Secondary effects from ethnic background: Children from Turkish families in educational transition]. In B. Becker & D. Reimer (Eds.), *Vom Kindergarten bis zur Hochschule. Die Generierung von ethnischen und sozialen Disparitäten in der Bildungsbiografie* (pp. 117-144). Wiesbaden: VS Verlag für Sozialwissenschaften.

Kritikos, E. P. (2003). Speech-language pathologists' beliefs about language assessment of bilingual/bicultural individuals. *American Journal of Speech-Language Pathology, 12*, 73–91. doi: 10.1044/1058-0360(2003/054)

Küntay, A. C., & Şenay, I. (2003). Narratives beget narratives: Rounds of stories in Turkish preschool conversation. *Journal of Pragmatics, 35*, 559–587. doi: 10.1016/S0378-2166(02)00129-7

Kupersmidt, J. B., & Dodge, K. A. (Eds.). (2004). *Children's peer relations: From development to intervention*. Washington, DC: American Psychological Association.

Kupersmitt, J., & Berman, R. A. (2001). Linguistic features of Spanish-Hebrew children's narratives. In L. T. Verhoeven & S. Strömqvist (Eds.), *Narrative development in a multilingual context* (pp. 277-318). Amsterdam: J. Benjamins.

Kupersmitt, J. R., Yifat, R., & Blum-Kulka, S. (2014). The development of coherence and cohesion in monolingual and sequential bilingual children's narratives: Same or different? *Narrative Inquiry, 24*, 40-76. doi: 10.1075/ni.24.1.03kup

Kyratzis, A. (2004). Talk and interaction among children and the co-construction of peer groups and peer culture. *Annual Review of Anthropology, 33*, 625-649.

Labov, W. (1972a). *Language in the inner city*. Philadelphia, PA: University of Pennsylvania Press.

Labov, W. (1972b). *Sociolinguistic patterns*. Philadelphia, PA: University of Pennsylvania Press.

Labov, W., & Waletsky, J. (1967). Narrative Analysis. In J. Helm (Ed.), *Essays on the verbal and visual arts* (pp. 12-44). Seattle, WA: University of Washington Press.

Ladd, G. W. (2005). *Children's peer relations and social competence. A century of progress*. New Haven & London: Yale University Press.

Ladd, G. W., Herald, S. L., & Andrews, R. K. (2013). Young children's peer relations and social competence. In B. Spodek & O. N. Saracho (Eds.), *Handbook of research on the education of young children* (2nd ed., pp. 23-54). New York & London: Routledge.

Laing, S., & Kamhi, A. (2003). Alternative assessment of language and literacy in culturally and linguistically diverse populations. *Language, Speech, and Hearing Services in Schools*, *34*, 44–55. doi: 10.1044/0161-1461(2003/005)

Laurent, A., Nicoladis, E., & Marentette, P. (2015). The development of storytelling in two languages with words and gestures. *International Journal of Bilingualism, 19,* 56-74. doi: 10.1177/1367006913495618

Laursen, B., Finkelstein, B. D., & Betts, N. T. (2001). A developmental meta-analysis of peer conflict resolution. *Developmental Review, 21*, 423–449. doi: 10.1006/drev.2000.0531

Law, J., Garrett, Z., & Nye, C. (2003). Speech and language therapy interventions for children with primary speech and language delay or disorder (Cochrane Review). *Reviews 2009*, Issue 3. Art. No.: CD004110. doi: 10.1002/14651858.CD004110

Leadholm, B. J., & Miller, J. F. (1992*). Language sample analysis: The Wisconsin guide*. Madison, WI: Wisconsin Department of Public Instruction.

Leflot, G., van Lier, P. A. C., Verschueren, K., Onghena, P., & Colpin, H. (2011). Transactional associations among teacher support, peer social preference, and child externalizing behavior: A four-wave longitudinal study. *Journal of Clinical Child & Adolescent Psychology, 40*, 87 - 99. doi: 10.1080/15374416.2011.533409

Leonard, L. (2014). *Children with specific language impairment* (2nd ed.). Cambridge, MA: MIT Press.

Levelt, W. (1989). *Speaking: From intention to articulation.* Cambridge, MA: Bradford Books.

Lever, R., & Sénéchal, M. (2011). Discussing stories: On how a dialogic reading intervention improves kindergartners' oral narrative construction. *Journal of Experimental Child Psychology, 108*, 1-24. doi:10.1016/j.jecp.2010.07.002

Licandro, U. (2014). Peerbeziehungen im Vorschulalter - Chancen für Sprachförderung und Sprachtherapie [Peer relations in the preschool-age – Opportunities for language support and speech-language therapy]. In S. Sallat, M. Spreer, & C. W. Glück (Eds.), *Sprache professionell fördern: kompetent-vernetzt-innovativ* (pp. 335-340). Idstein: Schulz-Kirchner.

Licandro, U., & Lüdtke, U. M. (2012). „With a little help from my friends…" - Peers in Sprachförderung und Sprachtherapie mit mehrsprachigen Kindern [„With a little help from my friends…" - Peers in language support and speech-language therapy with multilingual children]. *L.O.G.O.S. Interdisziplinär, 4*, 288-295. doi: 10.7345/prolog-1204288

Licandro, U., & Lüdtke, U. M. (2013). *Peer-Interaktionen – Sprachbildung in und durch die Gruppe* [Peer interactions – Language education in and through a group context]. nifbe Themenheft Nr. 15. Osnabrück: nifbe-Eigenverlag.

Licandro, U., & Lüdtke, U. M. (2013, June). *Co-creating stories as a means of second language learning in preschoolers – an exploratory intervention study.* Poster presented at the Symposium on Research in Child Language Disorders (SRCLD), University of Wisconsin-Madison.

Liles, B. Z. (1993). Narrative Discourse in children with language disorders and children with normal language: A critical review of the literature. *Journal of Speech and Hearing Research, 36*, 868-882. doi: 10.1044/jshr.3605.868

Liles, B. Z., Duffy, R. J., Merritt, D. D., & Purcell, S. L. (1995). Measurement of narrative discourse ability in children with language disorders. *Journal of Speech & Hearing Research, 38*, 415-425. doi:10.1044/jshr.3802.415

Lindfors, J. (1999). *Children's inquiry: Using language to make sense of the world.* New York: Teachers College Press.

Loban, W. (1976). *Language development: Kindergarten through grade twelve*. Urbana, IL: National Council of Teachers of English.

Lofranco, L. L., Peña, E. D., & Bedore, L. M. (2006). English language narratives of Filipino children. *Language, Speech and Hearing Services in Schools, 37*, 28–38. doi: 10.1044/0161-1461(2006/004)

Long, S., Bell, D., & Brown, J. (2004). Making a place for peer interaction: Mexikan American kindergarteners learning language and literacy. In E. Gregory, S. Long, & D. Volk (Eds.), *Many pathways to literacy. Young children learning with siblings, grandparents, peers and communities* (pp. 93-104). New York & London: Routledge.

Lucero, A. (2015). Cross-linguistic lexical, grammatical, and discourse performance on oral narrative retells among young Spanish speakers. *Child Development, 86,* 1419-1433. doi: 10.1111/cdev.12387

Lüdtke, U. M. (2005). *Sprache und Emotion: Vom Logos zum Dialog. Zur Konstruktion einer Relationalen Theorie der Sprachbehindertenpädagogik: Erkenntnistheorie – Sprachtheorie – Didaktiktheorie* [Language and emotion: From logos to dialogue. On the construction of a relational theory of speech-language pedagogy: Epistemology – language theory – didactic theory]. Unpublished professorial dissertation, University of Bremen.

Lüdtke, U. M. (2006). Emotion und Sprache: Neurowissenschaftliche und linguistische Relationen [Emotion and language: Neuroscientific and linguistic relations]. *Die Sprachheilarbeit, 51*, 160-175.

Lüdtke, U. M. (2010a). Relationale Didaktik in Sprach-Pädagogik und Sprach-Therapie: Historische Einbettung und aktuelle Forschung [Relational didactics in speech-language pedagogy and speech-language therapy: Historical embeddedness and current research]. *Mitsprache, 42*, 21–46.

Lüdtke, U. M. (2010b). Sprachdidaktiktheorie – Vom Sprachtherapeutischen Unterricht zur Relationalen Didaktik. Wie weiter in Zeiten der Inklusion? [Theory of language didactics – From speech-language therapeutic instruction to relational didactics. Where to in times of inclusion?] *Zeitschrift für Heilpädagogik, 3*, 84–96.

Lüdtke, U. M. (2012a). Relational emotions in semiotic and linguistic development: Towards an intersubjective theory of language learning and language therapy. In A. Foolen, U. M. Lüdtke, T. P. Racine, & J. Zlatev (Eds.), *Moving ourselves, moving others: Motion and emotion in intersubjectivity, consciousness and language* (pp. 305-346). Amsterdam: J. Benjamins.

Lüdtke, U. M. (2012b). Sprachdidaktiktheorie [Theory of language didactics]. In Braun, O. & Lüdtke, U. M. (Ed.), *Enzyklopädisches Handbuch der Behindertenpädagogik, Band 8, Sprache und Kommunikation* (S. 449–492). Stuttgart: Kohlhammer.

Lüdtke, U. M. (Ed.). (2015). *Emotion in language. Theory – research – application*. Amsterdam: J. Benjamins.

MacWhinney, B. (2000). *The CHILDES Project. Tools for analyzing talk* (3rd ed.). Mahwah, NJ: Lawrence Erlbaum.

Malvern, D., Richards, B., Chipere, N., & Durán, P. (2004). *Lexical diversity and language development: Quantification and assessment.* New York: Palgrave MacMillan.

Mancilla-Martinez, J., & Lesaux, N. K. (2011). Early home language use and later vocabulary development. *Journal of Educational Psychology, 103*, 535–546. doi: 10.1037/a0023655

Mashburn, A. J., Justice, L. M., Downer, J. T., & Pianta, R. C. (2009). Peer effects on children's language achievement during pre-kindergarten. *Child Development, 80*, 686–702. doi: 10.1111/j.1467-8624.2009.01291.x

Mastropieri, M., Spencer, V., Scruggs, T., & Talbott, E. (2000). Students with disabilities as tutors: An updated research synthesis. In T. E. Scruggs & M. A. Mastropieri (Eds.), *Educational interventions: Advances in learning and behavioral disabilities* (Vol. 14, pp. 247–279). Stamford, CT: JAI Press.

Mayer, M. (1969). *Frog, where are you?* NY: Dial Press.

McCabe, A. (1997). Developmental and cross-cultural aspects of children's narration. In M. Bamberg (Ed.), *Narrative development* (pp. 137-174). London: Lawrence Erlbaum.

McCabe, A., & Bliss, L. S. (2003). *Patterns of narrative discourse: A multicultural, life span approach*. Boston: Allyn & Bacon.

McCabe, A., Bliss, L., Barra, G., & Bennett, M. (2008). Comparison of personal versus fictional narratives of children with language impairment. *American Journal of Speech-Language Pathology, 17*, 194-206. doi: 10.1044/1058-0360(2008/019)

McCabe, A., & Rollins, P. (1994). Assessment of preschool narrative skills. *American Journal of Speech-Language Pathology*, *3*, 45–56. doi: 10.1044/1058-0360.0301.45

McGregor, K. K. (2000). The development and enhancement of narrative skills in a preschool classroom. Towards a solution to clinician-client mismatch. *American Journal of Speech-Language Pathology, 9*, 55-71. doi: 10.1044/1058-0360.0901.55

McMaster, K. L., Fuchs, D., & Fuchs, L. S. (2006). Research on peer-assisted learning strategies: The promise and limitations of peer-mediated instruction. *Reading and Writing Quarterly, 22*, 5-25. doi: 10.1080/10573560500203491

Mehta, P. D., Foorman, B. R., Branum-Martin, L., & Taylor, W. P. (2005). Literacy as a unidimensional multilevel construct: Validation, sources of influence, and implications in a longitudinal study in grades 1-4. *Scientific Studies of Reading, 9*, 85-116. doi: 10.1207/s1532799xssr0902_1

Meisel, J. M. (1994). Code-switching in young bilingual children. The acquisition of grammatical constraints. *Studies in Second Language Acquisition, 16*, 413-439. doi: 10.1017/S0272263100013449

Melzer, D. K., & Palermo, C. A. (2015). 'Mommy, you are the princess and I am the queen': How preschool children's initiation and language use during pretend play related to complexity. *Infant and Child Development, 25,*221-230. doi: 10.1002/ icd.1927

Melzi, G., & Caspe, M. (2008). Research approaches to narrative, literacy, and education. In K. A. King & N. H. Hornberger (Eds.), *Encyclopedia of language and education* (2nd ed., Vol. 10: Research methods in language and education, pp. 151–163). New York: Springer.

Melzi, G., Schick, A., & Bostwick, E. (2013). Latino children's narrative competencies over the preschool years. *Actualidades en Psicología, 27*, 1-14. doi: 10.15517/ap.v27i115.9276

Menting, B., van Lier, P. A. C., & Koot, H. M. (2011). Language skills, peer rejection, and the development of externalizing behavior from kindergarten to fourth grade. *Journal of Child Psychology and Psychiatry, 52*, 72-79. doi: 10.1111/j.1469-7610.2010.02279.x

Mercer, S. H., & DeRosier, M. E. (2008). Teacher preference, peer rejection, and student aggression: A prospective study of transactional influence and independent contributions to emotional adjustment and grades. *Journal of School Psychology, 46*, 661-685. doi: 10.1016/j.jsp.2008.06.006

Miller, J. F., Heilmann, J., Nockerts, A., Iglesias, A., Fabiano, L., & Francis, D. (2006). Oral language and reading in bilingual children. *Learning Disabilities Research & Practice, 21*, 30–43. doi: 10.1111/j.1540-5826.2006.00205.x

Miller, P. J., & Sperry, L. L. (1988). Early talk about the past: Origins of conversational stories of personal experience. *Journal of Child Language, 15*, 293-315. doi: 10.1017/S0305000900012381

Mills, M. T. (2015). Narrative performance of gifted African American school-aged children from low-income backgrounds. *American Journal of Speech-Language Pathology, 24*, 36-46. doi: 10.1044/2014_AJSLP-13-0150

Minami, M. (2005). Bilingual narrative development in English and Japanese: A form/function approach. In J. Cohen, K. T. McAlister, K. Rolstad, & J. MacSwan (Eds.), *ISB4: Proceedings of the 4th International Symposium on Bilingualism* (pp. 1618-1629). Somerville, MA: Cascadilla Press.

Montanari, S. (2004). The development of narrative competence in the L1 and L2 of Spanish-English bilingual children. *International Journal of Bilingualism, 8*, 449-497. doi: 10.1177/13670069040080040301

Muñoz, M. L., Gillam, R. B., Peña, E. D., & Gulley-Faehnle, A. (2003). Measures of language development in fictional narratives of Latino children. *Language, Speech, and Hearing Services in Schools, 34*, 332-342. doi: 10.1044/0161-1461(2003/027)

Nardy, A., Chevrot, J.-P., & Barbu, S. (2014). Sociolinguistic convergence and social interactions within a group of preschoolers: A longitudinal study. *Language Variation and Change, 26*, 273-301. doi: 10.1017/S0954394514000131

Naylor, J. M. (2011). Peer relationships. In S. Goldstein & J. A. Naglieri (Eds.), *Encyclopedia of child behavior and development* (pp. 1075-1076). New York: Springer.

Nelson, K. (2007). *Young minds in social worlds: Experience, meaning, and memory.* Cambridge, MA: Harvard University Press.

Nelson, K. E., Aksu-Koç, A., & Johnson, C. E. (Eds.). (2001). *Children's language. Vol. 10. Developing narrative and discourse competence*. New York, London: Psychology Press.

Nettelbladt, U., & Hansson, K. (1999). Mazes in Swedish pre-school children with specific language impairment. *Clinical Linguistics & Phonetics, 13*, 483-497. doi: 10.1080/026992099298997

Neumann, S. B., & Dickinson, D. K. (Eds.). (2011). *Handbook of early literacy research* (Vol. 3). New York: Guilford.

Neuman, S. B., & Roskos, K. (1991). Peers as literacy informants: A description of young children's literacy conversations in play. *Early Childhood Research Quarterly, 6*, 233-248.

Newcomb, A. F., & Bagwell, C. L., (1995). Children's friendship relations: A meta-analytic review. *Psychological Bulletin, 117*, 306–347. doi: 10.1037//0033-2909.117.2.306

Nicolopoulou, A. (1993). Play, cognitive development, and the social world: Piaget, Vygotsky, and beyond. *Human Development, 36*, 1-23. doi: 10.1159/000277285

Nicolopoulou, A. (1996). Narrative development in social context. In D. Slobin, J. Gerhardt, J. Guo, & A. Kyratzis (Eds.), *Social interaction, social context, and language: Essays in honor of Susan Ervin-Tripp* (pp. 369-390). Mahwah, NJ: Lawrence Erlbaum.

Nicolopoulou, A. (2002). Peer-group culture and narrative development. In S. Blum-Kulka & C. E. Snow (Eds.), *Talking to adults* (pp. 117-152). Mahwah, NJ: Lawrence Erlbaum.

Nicolopoulou, A., Brockmeyer Cates, C., de Sá, A., & Ilgaz, H. (2014). Narrative performance, peer group culture, and narrative development in a preschool classroom. In A. Cekaite, S. Blum-Kulka, V. Grøver, & E. Teubal (Eds.), *Children's peer talk: Learning from each other* (pp. 42-62). Cambridge, UK: Cambridge University Press.

Nicolopoulou, A., Cortina, K. S., Ilgaz, H., Cates, C. B., de Sá, A. B. (2015). Using a narrative- and play-based activity to promote low-income preschoolers' oral language, emergent literacy, and social competence. *Early Childhood Research Quarterly, 31,* 147-162. doi: 10.1016/j.ecresq.2015.01.006

Ninio, A. (1988). The roots of narrative: Discussing recent events with very young children. *Language Sciences, 10*, 32-52. doi: 10.1016/0388-0001(88)90004-6

Norbury, C. F., & Bishop, D. V. M. (2003). Narrative skills in children with communication impairments. *International Journal of Language and Communication Impairments*, *38*, 287-313. doi: 10.1080/136820310000108133

Norbury, C. F., Gemmell, T., & Paul, R. (2014). Pragmatics abilities in narrative production: A cross-disorder comparison. *Journal of Child Language, 41*, 485-510. doi: 10.1017/S030500091300007X

O'Donnell, A., & Hmelo-Silver, C. E. (2013). Introduction: What is collaborative learning? An Overview. In C. E. Hmelo-Silver, C. A. Chinn, C. K. K. Chan, & A. O'Donnell (Eds), *The international handbook of collaborative learning*. New York & London: Routledge.

O'Neill, D. K., Main, R. M., & Ziemski, R. A. (2009). 'I like Barney': Preschoolers' spontaneous conversational initiations with peers. *First Language, 29*, 401-425. doi: 10.1177/0142723709105315

Ogden, L. (2000). Collaborative tasks, collaborative children: An analysis of reciprocity during peer interaction at key stage 1. *British Educational Research Journal, 26*, 211-216.

Oller, D. K., & Eilers, R. E. (Eds.). (2002). *Language and literacy in bilingual children*. Clevedon: Multilingual Matters.

Oller, D. K., Pearson, B., & Cobo-Lewis, A. (2007). Profile effects in early bilingual language and literacy. *Applied Psycholinguistics, 28*, 191–230. doi: 10.1017.S0142716407070117

O'Neill, D. K., Pearce, M. J., & Pick, J. L. (2004). Preschool children's narratives and performance on the Peabody Individualized Achievement Test—Revised: Evidence of a relation between early narrative and later mathematical ability. *First Language, 24*, 149–183. doi: 10.1177/0142723704043529

Organization for Economic Co-operation and Development (OECD) (2015). *Early Childhood Education and Care.* Retrieved from www.oecd.org/edu/earlychildhood

Paetsch, J., Wolf, K. M., Stanat, P., & Darsow, A. (2014). Sprachförderung von Kindern und Jugendlichen aus Zuwandererfamilien [Language support for children and adolescents from immigrant families]. *Zeitschrift für Erziehungswissenschaft, 17*, 315-347. doi: 10.1007/s11618-013-0474-1

Páez, M. M., Bock, K. P., & Pizzo, L. (2011). Supporting the language and early literacy skills of English language learners: effective practices and future directions. In S. B. Neuman & D. K. Dickinson (Eds.), *Handbook of Early Literacy Research* (Vol. 3, pp. 136-152). New York: Guilford.

Palermo, F., Mikulski, A. M. (2014). The role of positive peer interactions and English exposure in Spanish-speaking preschoolers' English vocabulary and letter-word skills. *Early Childhood Research Quarterly, 29*, 625-635. doi: 10.1016/j.ecresq.2014.07.006

Palermo, F., Mikulski, A. M., Fabes, R. A., Hanish, L. D., Martin, C. L., & Stargel, L. E. (2014). English exposure in the home and classroom: Predictions to Spanish-speaking preschoolers' English vocabulary skills. *Applied Psycholinguistics, 35*, 1163–1187.

Papoušek, M. (1994). *Vom ersten Schrei zum ersten Wort: Anfänge der Sprachentwicklung in der vorsprachlichen Kommunikation* [From the first cry to the first word: Beginnings of language acquisition in preverbal communication]. Bern: Huber.

Paradis, J., Emmerzael, K., & Duncan, T. S. (2010). Assessment of English language learners: Using parent report on first language development. *Journal of Communication Disorders, 43*, 474–497. doi: 10.1016/j.jcomdis.2010.01.002

Paradis, J., Genesee, F., & Crago, M. (2011). *Dual language development and disorders: A handbook on bilingualism and second language learning* (2nd ed.). Baltimore, MD: Brookes.

Paradis, J., & Kirova, A. (2014). English second language learners in preschool: Profile effects in their English abilities and the role of home language environment. *International Journal of Behavior Development, 38*, 342–349. doi: 10.1177/0165025414530630

Paradis, J., Schneider, P., & Duncan, T. S. (2013). Discriminating children with language impairment among English-language learners from diverse first-language backgrounds. *Journal of Speech, Language, and Hearing Research, 56*, 971-981. doi: 10.1044/1092-4388(2012/12-0050)

Parr, J. M., & Townsend, M. A. R. (2002). Environments, processes, and mechanisms in peer learning. *International Journal of Educational Research, 37*, 403-423.

Paul, R. (2007). *Language disorders from infancy through adolescence: Assessment and intervention* (3rd ed.). St Louis, MO: Elsevier Mosby.

Paul, R., & Smith, R. L. (1993). Narrative skills in 4-year-olds with normal, impaired, and late-developing language. *Journal of Speech, Language, and Hearing Research, 36*, 592-598. doi: 10.1044/jshr.3603.592

Pavlenko, A. (2008). Narrative analysis in the study of bi- and multilingualism. In Moyer, M. & Li Wei (Eds.), *The Blackwell guide to research methods in bilingualism* (pp. 311-325). Oxford: Blackwell.

Pearson, B. Z. (2001). Logic and mind in Spanish-English children's narratives. In L. Verhoeven & S. Strömqvist (Eds.), *Narrative development in a multilingual context* (pp. 373-398). Amsterdam: J. Benjamins.

Pearson, B. Z. (2002). Narrative competence among monolingual and bilingual school children in Miami. In D. K. Oller & R. E. Eilers (Eds.), *Language and literacy in bilingual children* (pp. 135-174). Clevedon, UK: Multilingual Matters.

Pearson, B. Z., & de Villiers, P. A. (2005). Child language acquisition: Discourse, narrative, and pragmatics. In K. Brown & E. Lieven (Eds.), *Encyclopedia of language and linguistics* (2nd ed). Oxford, UK: Elsevier.

Peets, K. F., & Bialystok, E. (2015). Academic discourse: Dissociating standardized and conversational measures of language proficiency in bilingual kindergarteners. *Applied Psycholinguistics, 36*, 437-461. doi:10.1017/S0142716413000301

Pellegrini, A. D., Galda, L., & Flor, D. (1997). Relationships, individual differences, and children's use of literate language. *British Journal of Educational Psychology, 67*, 139-152. doi: 10.1111/j.2044-8279.1997.tb01233.x

Pellegrini, A. D., Galda, L., Flor, D., Bartini, M., & Charak, D. (1997). Close relationships, individual differences, and early literacy learning. *Journal of Experimental Child Psychology, 67*, 409-422. doi:10.1006/jecp.1997.2415

Pellegrini, A. D., Melhuish, E., Jones, I., Trojanowska, L., & Gilden, R. (2002). Social contexts of learning literate language: The role of varied, familiar, and close peer relationships. *Learning and Individual Differences, 12*, 375-389. doi: 10.1016/S1041-6080(02)00044-4

Peña, E. D., & Halle, T. G. (2011). Assessing preschool dual language learners: Traveling a multiforked road. *Child Development Perspectives, 5*, 28-32.

Peña, E. D., Gillam, R. B., & Bedore, L. M. (2014). Dynamic Assessment of Narrative Ability in English Accurately Identifies Language Impairment in English Language Learners. *Journal of Speech, Language, and Hearing Research, 57*, 2208-20. doi: 10.1044/2014_JSLHR-L-13-0151

Peña, E. D., Gillam, R. B., Malek, M., Ruiz-Felter, R., Resendiz, M., Fiestas, C. E., & Sabel, T. (2006). Dynamic assessment of school-age children's narrative ability: An experimental investigation of classification accuracy. *Journal of Speech, Language, and Hearing Research, 49*, 1037–1057. doi: 10.1044/1092-4388(2006/074)

Petersen, D. B. (2011). A systematic review of narrative language intervention with children who have language impairment. *Communication Disorders Quarterly, 32,* 207-220. doi: 10.1177/1525740109353937

Petersen, D. B., Gillam, S. L., & Gillam, R. B. (2008). Emerging procedures in narrative assessment: The Index of Narrative Complexity. *Topics in Language Disorders, 28*, 115–130. doi: 10.1097/01.TLD.0000318933.46925.86

Petersen, D. B., Thompsen, B., Guiberson, M. M., & Spencer, T. D. (2016). Cross-linguistic interactions from second language to first language as the result of individualized narrative language intervention with children with and without language impairment. *Applied Psycholinguistics, 37,* 703-724. doi: 10.1017/S0142716415000211

Peterson, C. (1994). Narrative skills and social class. *Canadian Journal of Education, 19*, 251–269. doi: 10.2307/1495131

Peterson, C., & McCabe, A. (1983). *Developmental psycholinguistics: Three ways of looking at a child's narrative*. New York: Plenum.

Peterson, C., & McCabe, A. (1991). Linking children's connective use and narrative macrostructure. In A. McCabe & C. Peterson (Eds.), *Developing narrative structure* (pp. 29–53). Hillsdale, NJ: Lawrence Erlbaum.

Pfaff, C. W. (2001). The development of co-constructed narratives by Turkish children in Germany. In L. Verhoeven & S. Strömqvist (Eds.), *Narrative development in a multilingual context* (pp. 153-188). Amsterdam: J. Benjamins.

Pham, G., Kohnert, K., & Mann, D. (2011). Addressing clinician-client mismatch: Language intervention with a bilingual Vietnamese-English preschooler. *Language, Speech, and Hearing Services in Schools, 42*, 408-422. doi: 10.1044/0161-1461(2011/10-0073)

Phillips, B. M., Clancy-Menchetti, J., & Lonigan, C. J. (2008). Successful phonological awareness instruction with preschool children: Lessons from the classroom. *Topics in Early Childhood Special Education, 28*, 3-17.

Philp, J., Adams, R., & Iwashita, N. (2014). *Peer interaction and second language learning*. New York & London: Routledge.

Piaget, J. (1926). *The language and thought of the child*. New York: Harcout Brace.

Piaget, J. (1932). *The moral judgment of the child*. Glencoe, IL: Free Press.

Piaget, J. (1978). *The development of thought. Equilibration of cognitive structures*. Oxford, UK: Basil Blackwell.

Pianta, R. C., La Paro, K. M., & Hamre, B. K. (2008). *Classroom assessment scoring system manual Pre-K*. Baltimore: Brookes.

Pica, T., Lincoln-Porter, F., Paninos, D., & Linnell, J. (1996). Language learners' interaction: How does it address the input, output, and feedback needs of L2 learners? *TESOL Quarterly, 30*, 59–84. doi: 10.2307/3587607

Powell, D. R., & Diamond, K. E. (2012). Promoting early literacy and language development. In R. C. Pianta, W. S. Barnett, L. M. Justice, & S. M. Sheridan (Eds.), *Handbook of early childhood education* (pp. 194-216). New York: Guilford.

Pramling Samuelsson, I., & Asplund Carlsson, M. (2008). The playing learning child. Towards a pedagogy of early childhood. *Scandinavian Journal of Educational Research, 52*, 623 – 641. doi: 10.1080/00313830802497265

Prevoo, M. J. L., Malda, M., Mesman, J., & Van IJzendoorn, M. H. (2016). Within- and cross-language relations between oral language proficiency and school outcomes in bilingual children with an immigrant background: A meta-analytical study. *Review of Educational Research, 86,* 237-276. doi: 10.3102/0034654315584685

Pring, T. (2005). *Research methods in communication disorders*. London: Whurr.

Pungello, E. P., Iruka, I. U., Dotterer, A. M., Mills-Koonce, & Reznick, J. S. (2009). The effects of socioeconomic status, race, and parenting on language development in early childhood. *Developmental Psychology, 45*, 544-557. doi: 10.1037/a0013917

Purcell-Gates, V. (2001). Emergent literacy is emerging knowledge of written, not oral, language. In P. R. Britto & J. Brooks-Gunn (Eds.), *The role of family literacy environments in promoting young children's emerging literacy skills* (pp. 7-22). San Francisco, CA: Jossey-Bass.

Raven, J. C. (1995). *Coloured Progressive Matrices. Sets A, Ab, B*. Oxford: Information Press Ltd.

Raven, J. C., Raven, J., & Court, J. H. (2010). *Coloured Progressive Matrices mit der Parallelform des Tests und der Puzzle-Form.* Frankfurt: Pearson.

Raviv, T., Kessenich, M., & Morrison, F. J. (2004). A mediational model of the association between socioeconomic status and three-year-old language abilities: The role of parenting factors. *Early Childhood Research Quarterly, 19*, 528-547. doi:10.1016/j.ecresq.2004.10.007

Reese, E., & Fivush, R. (1993). Parental styles of talking about the past. *Developmental Psychology, 29*, 596-606. doi: 10.1037/0012-1649.29.3.596

Reese, E., Haden, C. A., Baker-Ward, L., Bauer, P., Fivush, R., & Ornstein, P. A. (2011). Coherence of personal narratives across the lifespan: A multidimensional model and coding method. *Journal of Cognition and Development, 12*, 424-462. doi: 10.1080/15248372.2011.587854

Reese, E., Sparks, A., & Suggate, S. (2012). Assessing children's narratives. In E. Hoff (Ed.), *Research methods in child language: A practical guide* (pp. 133-148). Malden, MA & Oxford: Wiley-Blackwell.

Reese, E., Suggate, S., Long, J., & Schaughency, E. (2010). Children's oral narrative and reading skills in the first 3 years of reading instruction. *Reading and Writing, 23*, 627-644. doi: 10.1007/s11145-009-9175-9

Reilly, J., Losh, M., Bellugi, U., & Wulfeck, B. (2004). „Frog, where are you?" - Narratives in children with specific language impairment, early focal brain injury, and Williams syndrome. *Brain and Language, 88,* 229-247. doi: 10.1016/S0093-934X(03)00101-9

Resendiz, M., Henrich, R., Domsch, C., & Belasco, E. (2014). Grammaticality of preschoolers in narratives: Considering the influences of bilingualism and daycare participation. A retrospective and exploratory study. *SIG 14 Perspectives on Communication Disorders and Sciences in Culturally and Linguistically Diverse (CLD) Populations, 21,* 22-32. doi: 10.1044/cds21.1.22

Restrepo, M. A., Morgan, G. P., & Thompson, M. S. (2013). The efficacy of a vocabulary intervention for dual-language learners with language impairment. *Journal of Speech, Language, and Hearing Research, 56*, 748-765. doi: 10.1044/1092-4388(2012/11-0173)

Retherford, K. (2000). *Guide to analysis of language transcripts* (3rd ed.). Eau Claire, WI: Thinking Publications.

Rhodes, R. L., Ochoa, S. H., & Ortiz, S. O. (2005). *Assessing culturally and linguistically diverse students: A practical guide.* New York: Guilford.

Robertson, S. B., & Ellis Weismer, S. (1997). The influence of peer models on the play scripts of children with specific language impairment. *Journal of Speech, Language, and Hearing Research, 40*, 49–61. doi: 10.1044/jslhr.4001.49

Rogoff, B. (1990). *Apprenticeship in thinking: Cognitive development in social context*. New York: Oxford University Press.

Rohrbeck, C. A., Ginsburg-Block, M. D., Fantuzzo, J. W., & Miller, T. R. (2003). Peer-assisted learning interventions with elementary school students: A meta-analytic review. *Journal of Educational Psychology, 95*, 240–257. doi: 10.1037/0022-0663.95.2.240

Rojas, R., & Iglesias, A. (2009). Making a case for language sampling: Assessment and intervention with (Spanish–English) second-language learners. *The ASHA Leader, 14*. doi: 10.1044/leader.FTR1.14032009.10

Roscoe, R. D., & Chi, T. H. (2007). Understanding tutor learning: Knowledge building and knowledge-telling in peer tutors' explanations and questions. *Review of Educational Research, 77*, 534-574. doi: 10.3102/0034654307309920

Rosenthal, J. A. (1996). Qualitative descriptors of strength of association and effect size. *Journal of Social Service Research, 21*, 37-59. doi: 10.1300/J079v21n04_02

Rothman, K. J. (1990). No adjustments are needed for multiple comparisons. *Epidemiology, 1*, 43–46.

Rubin, K. H., Bowker, J. C., McDonald, K. L., & Menzer, M. (2013). Peer relationships in childhood. In P. Zelazo (Ed.), *Oxford handbook of developmental psychology* (Vol 2, pp. 242-275). Oxford, UK: Elsevier.

Rubin, K. H., Bukowski, W. M., & Laursen, B. (2009). *Handbook of peer interactions, relationships, and groups*. New York: Guilford.

Rubin, K. H., Bukowski, W. M., & Parker, J. G. (1998). Peer interactions, relationships, and groups. In W. Damon (Series Ed.) & N. Eisenberg (Vol. Ed.), *Handbook of child psychology: Vol. 3. Social, emotional, and personality development* (5th ed., pp. 571-645). New York: Wiley.

Rydland, V., Grøver, V., & Lawrence, J. (2014a). The second-language vocabulary trajectories of Turkish immigrant children in Norway from ages five to ten: The role of preschool talk exposure, maternal education, and co-ethnic concentration in the neighborhood. *Journal of Child Language, 41*, 352-381. doi: 10.1017/S0305000912000712

Rydland, V., Grøver, V., & Lawrence, J. (2014b). The potentials and challenges of learning words from peers in preschool: A longitudinal study of second language learners in Norway. In A. Cekaite, S. Blum-Kulka, V. Grøver, & E. Teubal (Eds.), *Children's peer talk: Learning from each other* (pp. 214-234). Cambridge, UK: Cambridge University Press.

Scarborough, H. S., Rescorla, L., Tager-Flusberg, H, Fowler, A. E., & Sudhalter, V. (1991). The relation of utterance length to grammatical complexity in normal and language-disordered groups. *Applied Psycholinguistics, 12*, 23-45. doi: 10.1017/S014271640000936X

Schechter, C., & Bye, B. (2007). Preliminary evidence for the impact of mixed-income preschools on low-income children's language growth. *Early Childhood Research Quarterly, 22*, 137–146. doi:10.1016/j.ecresq.2006.11.005

Scheele, A. F., Leseman, P. P. M., & Mayo, A. Y. (2010). The home language environment of monolingual and bilingual children and their proficiency. *Applied Psycholinguistics, 31,* 117-140. doi: 10.1017/S0142716409990191

Schmitt, M. B. (2013). *Active ingredients of speech-language therapy in the public schools for children with language impairment* (Doctoral dissertation). Retrieved from https://etd.ohiolink.edu/etd/

Schneider, P., Hayward, D., & Dubé, R. V. (2006). Storytelling from pictures using the Edmonton Narrative Norms Instrument. *Journal of Speech-Language Pathology and Audiology, 30*, 224–238.

Schneider, P., & Watkins, R. V. (1996). Applying Vygotskian developmental theory to language intervention. *Language, Speech, and Hearing Services in Schools, 27*, 157-170. doi: 10.1044/0161-1461.2702.157

Schuele, C. M., Rice, M. L., & Wilcox, K. A. (1995). Redirects: A strategy to increase peer initiations. *Journal of Speech and Hearing Research, 38*, 1319-1333. doi:10.1044/jshr.3806.1319

Schulz, P., & Tracy, R. (2011). *LiSe-DaZ: Linguistische Sprachstandserhebung – Deutsch als Zweitsprache* [Linguistic language assessment for children with German as a second language]. Göttingen: Hogrefe.

Schütte, U., & Lüdtke, U. M. (2013). Sprachtherapeutische Praxis im Kontext kindlicher Mehrsprachigkeit – Eine international vergleichende Bestandsaufnahme in Deutschland, Österreich und der Schweiz [Speech-language pathology in the context of child multilingualism – An international comparison of Germany, Austria, and Switzerland]. *Forschung Sprache, 2*, 45-60.

Sénéchal, M., Pagan, S., Lever, R., & Ouelette, G. P. (2008). Relations among the frequency shared reading and 4-year-old children's vocabulary, morphological and syntax comprehension, and narrative skills. *Early Education and Development, 19*, 27-44. doi: 10.1080/10409280701838710

Shapiro, L. R., & Hudson, J. A. (1991). Tell me a make-believe story: Coherence and cohesion in young children's picture-elicited narratives. *Developmental Psychology, 27*, 960-974. doi: 10.1037/0012-1649.27.6.960

Shiro, M. (2003). Genre and evaluation in narrative development. *Journal of Child Language, 30*, 165-195. doi: 10.1017/S0305000902005500

Simón-Cereijido, G, & Gutiérrez-Clellen, V. F. (2009). A cross-linguistic and bilingual evaluation of the interdependence between lexical and grammatical domains. *Applied Psycholinguistics, 30*, 315–337. doi: 10.1017/ S0142716409090134

Simpson, J., & Weiner, E. (Eds.). (1989). *The Oxford English Dictionary* (2nd ed.). New York: Oxford University Press.

Singer, E., & de Haan, D. (2007). Social life of young children. Co-construction of shared meanings and togetherness, humor, and conflicts in child care centers. In B. Spodek & O. N. Saracho (Eds.), *Contemporary perspectives on research in early childhood social learning* (pp. 309-332). Charlotte, NC: Information Age Publishers.

Snow, C. E. (1991). The theoretical basis for relationships between language and literacy in development. *Journal of Research in Childhood Education, 6,* 5-10. doi: 10.1080/02568549109594817

Snow, C. E. (2010). Academic language and the challenge of reading for learning about science. *Science, 328*, 450–452. doi: 10.1126/science.1182597

Snow, C. E., Burns, M. S., & Griffin, P. (Eds.). (1998). *Preventing reading difficulties in young children*. Washington, DC: National Academy Press.

Snow, C. E., Tabors, P. O., Nicholson, P. A., & Kurland, B. F. (1995). SHELL: Oral language and early literacy skills in kindergarten and first-grade children. *Journal of Research in Childhood Education, 10*, 37–48. doi: 10.1080/02568549509594686

Snow, C. E., & Uccelli, P. (2009). The challenge of academic language. In D. R. Olson & N. Torrance (Eds.), *The Cambridge handbook of literacy* (pp. 112–133). Cambridge, UK: Cambridge University Press.

Speece, D. L., Roth, F. P., Cooper, D. H., & De La Paz, S. (1999). The relevance of oral language skills to early literacy: A multivariate analysis. *Applied Psycholinguistics, 20*, 167–190.

Spencer, T. D., Kajan, M., Petersen, D. B., & Bilyk, N. (2014). Effects of an individualized narrative intervention on children's storytelling and intervention skills. *Journal of Early Intervention.* Advance online publication. doi: 10.1177/1053815114540002

Spencer, T. D., Petersen, D. B., Slocum, T. A., & McAllen, M. (2015). Large group narrative intervention in Head Start preschools: Implications for response to intervention. *Journal of Early Childhood Research, 13,* 196-217. doi: 10.1177/1476718X13515419

Spencer, T. D., & Slocum, T. A. (2010). The effect of a narrative intervention on story retelling and personal story generation skills of preschoolers with risk factors and narrative language delays. *Journal of Early Intervention, 32*, 178-199. doi: 10.1177/1053815110379124

Sperry, L. L., & Sperry, D. E. (1996). Early development of narrative skills. *Cognitive Development, 11*, 443-465. doi: 10.1016/S0885-2014(96)90013-1

Spilt, J. L., Koomen, H. M. Y., & Harrison, L. J. (2015). Language development in the early school years: The importance of close relationships with teachers. *Developmental Psychology, 51*, 185-196. doi: 10.1037/a0038540

Squires, K. E., Lugo-Neris, M. J, Peña, E. D., Bedore, L. M., Bohman, T. M, & Gillam, R. B. (2014). Story retelling by bilingual children with language impairments and typically-developing controls. *International Journal of Language and Communication Disorders, 49*, 60-74. doi: 10.1111/1460-6984.12044

Stadler, M. A., & Ward, G. C. (2005). Supporting the narrative development of young children. *Early Childhood Educational Journal, 33*, 73-80. doi: 10.1007/s10643-005-0024-4

Stanat, P., & Edele, A. (2011). Migration und soziale Ungerechtigkeit [Migration and social injustice]. In H. Reinders, H. Ditton, C. Gräsel, & B. Gniewosz (Eds.), *Empirische Bildungsforschung. Gegenstandsbereiche*. Wiesbaden: Springer.

Stanat, P., Rauch, D., & Segeritz, M. (2010). Schülerinnen und Schüler mit Migrationshintergrund [Students with a migration background]. In E. Klieme, C. Artelt, J. Hartig, N. Jude, O. Köller, M. Prenzel, W. Schneider, & P. Stanat (Eds.), *PISA 2009. Bilanz nach einem Jahrzehnt* (pp. 200-230). Münster: Waxmann.

Stanovich, K. E. (1986). Matthew effects in reading: Some consequences of individual differences in the acquisition of literacy. *Reading Research Quarterly, 21*, 360–407.

Statistisches Bundesamt (Ed.). (2013). *2013 microcensus: 16.5 million people with a migrant background.* Retrieved from https://www.destatis.de/EN/FactsFigures/SocietyState/ Population/MigrationIntegration/PersonsMigrationBackground/Current.html

Statistisches Bundesamt (Ed.). (2014). Schulen auf einen Blick. Ausgabe 2014. [Schools at a glance. Issue 2014]. Wiesbaden: Author. Retrieved from https://www.destatis.de /DE/Publikationen/Thematisch/ BildungForschungKultur/Schulen/BroschuereSchulenBlick0110018149004.pdf?__blob=publicationFile.

Stein, N. L., & Glenn, C. G. (1979). An analysis of story comprehension in elementary school children. In R. O. Freedle (Ed.), *Discourse processing: Multidisciplinary perspectives* (pp. 53-120). Norwood, NJ: Ablex.

Stein, N. L., & Glenn, C. G. (1982). Children's concept of time: The development of a story schema. In W. J. Friedman (Ed.), *The developmental psychology of time* (pp. 255-282). New York: Academic Press.

Stone, S. J., & Christie, J. F. (1996). Collaborative literacy learning during sociodramatic play in a multiage (K-2) primary classroom. *Journal of Research in Childhood Education, 10*, 123-133. doi: 10.1080/02568549609594895

Storch, S. A., & Whitehurst, G. J. (2002). Oral language and code-related precursors to reading: Evidence from a longitudinal structural model. *Developmental Psychology, 38*, 934–947. doi: 10.1037/0012-1649.38.6.934

Strömqvist, S. & Verhoeven, L. (2004). *Relating events in narrative: Typological and contextual perspectives.* Mahwah, NJ: Lawrence Erlbaum.

Sullivan, H. S. (1953). *The interpersonal theory of psychiatry*. New York: Norton.

Swanson, L. A., Fey, M. E., Mills, C. E., & Hood, L. S. (2005). Use of narrative-based language intervention with children who have specific language impairment. *American Journal of Speech-Language Pathology*, *14*, 131–143. doi: 10.1044/1058-0360(2005/014)

Tabors, P., & Snow, C. E. (1994). English as a second language in preschools. In F. Genesee (Ed.), *Educating second language children: the whole child, the whole curriculum, the whole community* (pp. 103-125). New York: Cambridge University Press.

Tabors, P., & Snow, C. E. (2002). Young bilingual children and early literacy development. In S. B. Neuman & D. K. Dickinson (Eds.), *Handbook of early literacy research* (Vol 2, pp. 159-178). New York: Guilford.

Tabors, P., Snow, C. E., & Dickinson, D. K. (2001). Homes and schools together: Supporting language and literacy development. In D. K. Dickinson & P. O.Tabors (Eds.), *Beginning literacy with language: Young children learning at home and school* (pp. 313–334). Baltimore, MD: Brookes.

Tager-Flusberg, H., & Sullivan, K. (1995). Attributing mental states to story characters: A comparison of narratives produced by autistic and mentally retarded individuals. *Applied Psycholinguistics, 16*, 241-256. doi: 10.1017/S0142716400007281

Terry, N. P., Mills, M. T., Bingham, G. E., Mansour, S., & Marencin, N. (2013). Oral narrative performance of prekindergarteners who speak nonmainstream American English. *Language, Speech, and Hearing Services in Schools, 44*, 291–305. doi: 10.1044/0161-1461(2013/12-0037)

Thordardottir, E. (2011). The relationship between bilingual exposure and vocabulary development. *International Journal of Bilingualism, 14*, 426-445. doi: 10.1177/1367006911403202

Tomasello, M. (1992). The social bases of language acquisition. *Social Development, 1*, 67-87. doi: 10.1111/j.1467-9507.1992.tb00135.x

Tomasello, M. (2003). *Constructing a language. A usage-based theory of language acquisition*. Cambridge, MA: Harvard University Press.

Tomasello, M. (2008). *Origins of human communication*. Cambridge, MA/ London: MIT Press.

Tomasello, M., & Farrar, M. J. (1986). Joint attention and early *language. Child Development, 57*, 1454-1463. doi: 10.2307/1130423

Topping, K. (2005). Trends in peer learning. *Educational Psychology, 25*, 631–645. doi: 10.1080/01443410500345172

Topping, K. J., & Ehly, S. (Eds.). (1998). *Peer-assisted learning*. Mahwah, NJ: Lawrence Erlbaum.

Topping, K. J., & Ehly, S. (2001). Peer assisted learning: A framework for consultation. *Journal of Education and Psychological Consultation, 12*, 113-132. doi: 10.1207/S1532768XJEPC1202_03

Trabasso, T., & Rodkin, P. (1994). Knowledge of goal/plans: A conceptual basis for narrating Frog, where are you? In R. Berman & D. I. Slobin (Eds.), *Relating events in Narrative: A crosslinguistic study* (pp. 85-106). Hillsdale, NJ: Lawrence Erlbaum.

Trevarthen, C. (2012). Intersubjektivität und Kommunikation [Intersubjectivity and communication]. In O. Braun & U. M. Lüdtke (Eds.), *Sprache und Kommunikation. – Behinderung, Bildung und Partizipation. Enzyklopädisches Handbuch der Behindertenpädagogik* (Vol.8, pp. 82-157). Stuttgart: Kohlhammer.

Tudge, J., & Rogoff, B. (2014). Peer influences on cognitive development: Piagetian and Vygotskian perspectives. In M. H. Bornsteiln & J. S. Bruner (Eds.), *Interaction in human development* (2nd ed., pp. 17-40). New York: Psychology Press.

Tulviste, T., Tõugu, P., Keller, H., Schröder, L., & de Geer, B. (2016). Children's and mothers' contribution to joint reminiscing in different sociocultural contexts: Who speaks and what is said. *Infant and Child Development, 25,* 43-63. doi: 10.1002/icd.1921

Uccelli, P., & Páez, M. M. (2007). Narrative and vocabulary development of bilingual children from kindergarten to first grade: developmental changes and associations among English and Spanish skills. *Language, Speech, and Hearing Services in Schools, 38*, 225-236. doi: 10.1044/0161-1461(2007/024)

Ukrainetz, T. A. (2006). Teaching narrative structure: Coherence, cohesion, and captivation. In T. A. Ukrainetz (Ed.), *Contextualized language intervention: Scaffolding PreK–12 literacy achievement* (pp. 195–246). Austin, TX: Pro-Ed.

Ukrainetz, T. A., & Gillam, R. B. (2009). The expressive elaboration of imaginative narratives by children with specific language impairment. *Journal of Speech, Language, and Hearing Research*, *52*, 883-898. doi: 10.1044/1092-4388(2009/07-0133)

Ukrainetz, T. A., Justice, L. M., Kaderavek, J. N., Eisenbuerg, S. L., Gillam, R. B., & Harm, H. H. (2005). The development of expressive elaboration in fictional narratives. *Journal of Speech, Language, and Hearing Research*, *48*, 1363-1377. doi: 10.1044/1092-4388(2005/095)

Ulich, M., & Mayr, T. (2003). *Sismik. Sprachverhalten und Interesse an Sprache bei Migrantenkindern in Kindertageseinrichtungen* [Sismik. Language behavior and interest in language in children with a migration background in early childhood education]. Freiburg: Herder.

van Kleeck, A. (2004). Fostering preliteracy development via storybook-sharing interaction. The context of mainstream family practices. In C. A. Stone, E. R. Silliman, B. J. Ehren, & K. Apel (Eds.), *Handbook of language and literacy. Development and disorders*. New York: Guilford.

van Kleeck, A., Stahl, S. A., & Bauer, E. B. (Eds.). (2008). *On reading books to children: Parents and teachers*. Center for Improvement of Early Reading Achievement, CIERA. Mahwah, NJ: Lawrence Erlbaum.

Vandell, D. L., Belsky, J., Burchinal, M., Steinberg, L., Vandergrift, N., & NICHD Early Child Care Research Network (2010). Do effects of early child care extend to age 15 years? Results from the NICHD study of early child care and youth development. *Child Development, 81*, 737–56. doi: 10.1111/j.1467-8624.2010.01431.x

Verhoeven, L., & Strömqvist, S. (Eds.). (2001). *Narrative development in a multilingual context.* Amsterdam: J. Benjamins.

Viberg, Å. (2001). Age-related and L2-related features in bilingual narrative development. In: L. Verhoeven & S. Strömqvist (Eds.), *Narrative development in a multilingual context* (pp. 87-128). Amsterdam: J. Benjamins.

von Salisch, M. (2000). Zum Einfluss von Gleichaltrigen (Peers) und Freunden auf die Persönlichkeitsentwicklung [On the influence of peers and friends on the personality development]. In M. Amelang (Ed.), *Determinanten individueller Unterschiede* (Vol. 4, pp. 345-405). Göttingen: Hogrefe.

Vukelich, C., & Christie, J. F. (2009). *Building a foundation for preschool literacy. Effective instruction for children's reading and writing development* (2nd ed.). Newark, DE: International Reading Association.

Vygotsky, L. S. (1967). Play and its role in the mental development of the child [Translation of a stenographic record of a lecture given in Russian in 1933]. *Soviet Psychology, 12*, 6-18.

Vygotsky, L. S. (1978). *Mind in society: The development of higher psychocological processes*. Cambridge, MA: Harvard University Press.

Vygotsky, L. S. (1986). *Thought and language* (A. Kozulin, Trans.). Cambridge, MA: MIT Press. (Original work published 1934)

Wasik, B. A., & Bond, M. A. (2001). Beyond the pages of a book: Interactive book reading and language development in preschool classrooms. *Journal of Educational Psychology, 93*, 243-250. doi: 10.1037/0022-0663.93.2.243

Wertsch, J. V. (1985). *Vygotsky and the formation of the mind*. Cambridge, MA: Harvard University Press.

Westby, C. E. (1991). Learning to talk, talking to learn: Oral literate language differences. In C. S. Simon (Ed.), *Communication skills and classroom success* (pp. 334–357). Eau Claire, WI: Thinking Publications.

Westby, C. E. (2005). Assessing and facilitating text comprehension problems. In H. Catts & A. Kahmi (Eds.), *Language and reading disabilities* (2nd ed., pp. 157-232). Boston, MA: Allyn & Bacon.

Westerveld, M. F., & Gillon, G. T. (2010). Profiling oral narrative ability in young school-aged children. *International Journal of Speech-Language Pathology, 12,* 178–189. doi: 10.3109/17549500903194125

Whitehurst, G. J., & Lonigan, C. J. (1998). Child development and emergent literacy. *Child Development, 69*, 848 – 872. doi: 10.3109/17549500903194125

Willard, J. A., Agache, A., Jäkel, J., Glück, C. W., & Leyendecker, B. (2015). Family factors predicting vocabulary in Turkish as a heritage language. *Applied Psycholinguistics, 36*, 875-898. doi: 10.1017/S0142716413000544

Wyatt, T. A. (1991). *Linguistic constraints on copula production in Black English child speech*. Unpublished doctoral dissertation, University of Massachusetts, Amherst, Amherst MA.

Youniss, J. (1980). *Parents and peers in social development*. Chicago: University of Chicago Press.

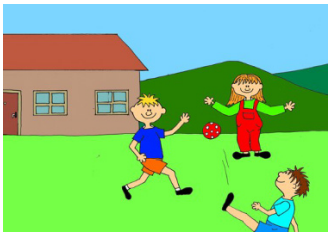
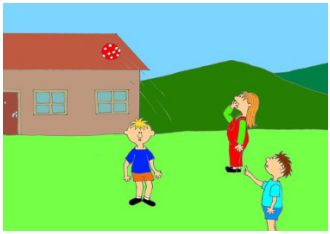
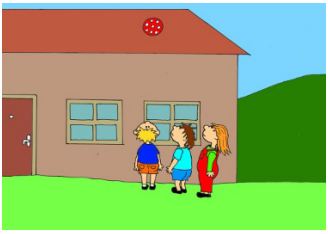
Youniss, J., & Damon, W. (1994). Social construction in Piaget's theory. In B. Puka (Ed.), *Moral development: New research in moral development* (pp. 407-286). Taylor & Frances.

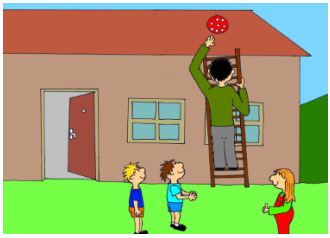
Youniss, J., McLellan, J. A., & Strouse, D. (1994). “We’re popular, but we’re not snobs”: Adolescents describe their crowds. In R. Montemayor & G.R. Adams (Eds.), *Personal relationships during adolescence* (pp. 101-122). Thousand Oaks, CA: Sage Publications.

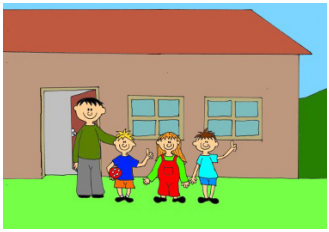
Zevenbergen, A., Whitehurst, G., & Zevenbergen, J. (2003). Effects of a shared-reading intervention on the inclusion of evaluative devices in narratives of children from low-income families. *Applied Developmental Psychology, 24*, 1-15. doi: 10.1016/S0193-3973(03)00021-2

Appendix

A Example of Self-Designed Picture Book (Soccer Story)





Pictures drawn by Anja Pfeiffer

U. Licandro, *Narrative Skills of Dual Language Learners*, Diversität in Kommunikation und Sprache / Diversity in Communication and Language,
DOI 10.1007/978-3-658-14673-3

B Extended and Adapted Index of Narrative Complexity (EINC) – Scoring Rubric Including Examples

MACROSTRUCTURE	0 points	1 point	2 points
Character - any reference to the subject of a clause in a narrative (here: the boy or the dog)	*No* main character is included, or only ambiguous pronouns are used. Examples *a. War da drinne.* *Was in there.* *b. Er schlief.* *He slept.*	Includes at least *one* main character with nonspecific labels only. Example *Da war so ein Frosch mit ein Hund und mit ein Junge. Die haben gespielt.* *There was a frog with a dog and with a boy. They were playing.*	
Setting - any reference to a place or time in a narrative	*No* reference to a specific general place. Example *Der Junge läuft. Und der Hund läuft.* *The boy runs. And the dog runs.*	Includes reference to a general place *or* time. Examples *a. Und der Frosch war hier drinne(n).* *And the frog was in here.* *b. Ein Junge schläft mit den Hund.* *A boy sleeps with the dog.*	
Initiating event - any reference to an event or problem that elicits a response from the character(s) in a narrative	An event or problem likely to elicit a response from the character *is not stated.* Example *Der Junge guckt die Hund an. Die gehen in die Wald.* *The boy looks at the dog. They walk into the woods.*	Includes at least *one* stated event or problem that is likely to elicit a response from the character, *but there is no response directly related to that event.* Example *Der Frosch geht weg. Der Hund geht aus dem Fenster.* *The frog goes away. The dog goes out of the window.*	Includes at least *one* stated event or problem *that elicits a response from the character(s).* Example *a. Da ist der Frosch einfach abgehauen […] Die suchen Frosch.* *There the frog simply ran off. They are looking for frog.*
Action/ attempt - Actions are taken by the main characters but not directly related to the IE. Attempts are taken by the main character(s) that are directly related to the IE.	*No* actions are taken by the main character(s). Example *Da Junge. Die Hund. Zwei Biene.* *Boy there. The dog. Two bees.*	Actions by main character are not directly related to the IE. Examples *a. Sie ist runtergefallen.* *She fell down.* *b. Sie möchte auf die Stein.* *She wants to go on the stone.*	Attempts by main character are directly related to the IE. Examples *a. Der Junge wacht auf und alles ist durcheinander. Dann sucht er den Frosch.* *The boy wakes up and everything is messy. Then he searches for the frog.* *b. Mal gucken wo der Frosch sich versteckt hat. Er suchte und suchte überall.* *Let's see where the frog is hiding. He searched and searched everywhere.*
Complication - an event that prohibits	*No* complications.	*One* complication that prohibits a plan or action from being accomplished.	*Two* distinct complications that prohibit plans or actions from being accomplished.

the execution of a plan or action taken in response to an initiating event.		Example *Der Junge klettert aufn [:auf einen] Stein und ruft. Hier der Junge wurde Hirsch darauf genommen. Und da rennt es los. Der Hirsch lässt die beiden runterfallen in Baum.* *The boy climbs onto a stone and calls. Here the boy got taken up by a deer. And there it starts running. The deer drops both of them in tree.*	Example *Er suchte den ganzen Schnee durch, aber er hat ihn nicht gefunden (COM-1). […] Und dann ist er runtergefallen und er ruft noch mal. Und er findet nicht (COM-2).* *He searched through the whole snow, but he did not find him (COM-1). […] And then he fell down and he calls again. And he does not find (COM-2).*
Consequence - revolves the problem or does not resolve the problem. It must be related to the IE and be explicitly stated.	*No* consequence to the action/ attempt is explicitly stated. Examples *a. Im Wasser leise sein.* *Be quiet in the water.* *b. Das ist ein Loch.* *This is a whole.*	*One* consequence Example *Jetzt endlich hab ich dich gefunden Frosch. Ich hab dich schon die ganze Zeit nach gesucht. Jetzt hab ich dich aber wieder.* *Now I finally found you, frog. I have been searching for you the whole time. But now I got you back.*	*Two* consequences Example *Und da haben sie die Frösche gefunden (CON-1). Und dann hat ein Frosch von den kleine genehm(t) mit (CON-2).* *And there they found the frogs (CON-1). And then one the little frogs took with them (CON-2).*

CONJUNCTIONS AND MARKERS (COHESION)	**0 points**	**1 point**	**2 points**
Additive markers/ conjunctions und/ and *Note: und dann/ and then was only scored only once, as a temporal conjunction*	*Absence of* additive markers	*One* additive marker Example *Und da war war Biene.* *And there was bee.*	
Temporal markers/ conjunctions dann, danach, sofort, gleich, immer, bevor/vorher, später, jetzt, eines Tages, heute, während,… then, next, immediately, after, always, before, lately, now, once, today, while,…	*Absence of* temporal markers	*One* temporal marker Example *Und jetzt da drinne ist in die Hütte.* And now is inside there in the hut.	*Two or more* different temporal markers Example *Und dann fallen sie runter. Jetzt ist sie nass.* And then they fall down. Now she is wet.
Causal adverbial clauses/ conjunctions weil, deshalb, so dass because, since, so that, therefore, as a result, consequently, thus, hence	*Absence of* causal adverbial clauses	*One* causal adverbial clause Example *Dann sieht er, dass er da rein geht, weil er wach ist.* *Then he sees him going in there, because he is awake.*	

Note. Adapted from INC, Petersen, Gillam, & Gillam (2008). Own examples were included.

Story structure levels			
	Does the story have a temporally related sequence of events?	No → **Descriptive Sequence**	1 point
	↓ Yes		
	Does the story have a causally related sequence of events?	No → **Action Sequence**	2 points
	↓ Yes		
	Does the story imply goal-directed behaviour?	No → **Reactive Sequence**	3 points
	↓ Yes		
	Is planning or intentional behaviour explicit?	No → **Abbreviated Episode**	4 points
	↓ Yes		
	Can an initiating event, attempt and consequence be identified?	No → **Incomplete Episode**	5 points
	↓ Yes		
	Complete Episode		6 points

Note. As displayed in Paul (2007, p. 497); also see Westby (2005).

EVALUATIVE LANGUAGE	**0 points**	**1 point**
Knowledge of dialogue - a comment or statement made by a character or by characters engaging in conversation. Indirect reports of speech (e.g., "He said that…") were not coded.	*Absence of* dialogue	*A* character makes a comment or statement Examples - *Und der sagt: ‚Das stinkt.'.* *And he says, 'That smells'.* - *Und dann rufen er und mit dem Hund: „Wo bist du Frosch?"* *And then he and with the dog shout, 'Where are you, frog?'*
Modifiers (adjectives/adverbs)	*Absence* of a modifier	Presence of *at least one* modifier Examples - *Frosch ist immer noch nicht da.* *Frog is still not there.* - *Und da riecht ekelig.* *And there smells gross.*
Expressions of intent	*Absence* of expression of intent	Presence of *at least one* expression of intent Examples *a.* *Und der will die Bienen fressen.* *And he wants to eat the bees.* *b.* *Er versuchte das Glas raus zu machen.* *He tried making out of the jar.*
Metacognitive verbs	*Absence* of a metacognitive verb	Presence of *at least one* metacognitive verb Example *a.* *Und dann die Biene auch nicht. Die weiß nich(t) wo da die Frosch.* *And then the bee not, as well. It does not know where the frog.*
Emotional state terms	*Absence* of an emotional state term	Presence of *at least one* emotional state term Examples *a.* *Dann wird er böse.* *Then he gets angry.* *b.* *Er ist mit seiner Familie und er ist froh.* *He is with his family and he is happy.*
Physical state terms	*Absence* of a physical state term	Presence of *at least one* physical state term Examples *a.* *Dann ist der müde geworden.* *Then he got tired.* *b.* *Der Hund ist jetzt tot.* *The dog is dead now.*

C Narrative Scoring Sheet Including Scoring Example

Transcript: Frog Story_XXX			
Date:		**Scored by:**	
	Examples	**Child utterance**	**Points**
Character	Junge, Hund (boy, dog)	Hund, Junge (dog, boy)	1
Setting	Bett, zu Hause, Zimmer, Nacht, schlafen, dunkel, Frosch im Glas (bed, at home, room, at night, sleep*ing, dark, frog in a jar)	Der schläft. (He is sleeping.)	1
Initiating Event	Frosch hüpft aus dem Fenster/ wo ist/weg (frog jumps/climbs out/ where is/ gone)	Und der geht aus dem Glas. (And he goes out of the jar.)	2
Action/ Attempt	suchen/ rufen/gucken (search/call/look)	Und der guckt wo der Frosch geblieben ist. (And he looks where the frog went.)	2
Complication	runterfallen/ andere Tiere/ Frosch ist nicht da (fall down/ other animals/ frog is not there)	Und dann fallen die in Wasser. (And then they fall into water.)	1
Consequence	Frosch gefunden/ Frosch ist bei Familie/ zusammen spielen/ Junge nimmt Frosch mit nach Hause (found frog/ frog is with family/ play together/ boy takes frog home)	Jetzt haben sie die Frosch gefunden! (Now they found the frog!)	1
Additive markers/ conjunctions	und (and)	und (and)	1
Temporal markers/ conjunctions	dann, und+dann, jetzt, gleich, vorher, später (then, and+then, now, soon, before, later)	und dann, jetzt, danach (and then, now, after that)	2
Causal adverbial clauses/ conjunctions	weil, deshalb, so dass (because, since, so that, therefore, as a result, consequently, thus, hence)	–	0
Knowledge of dialogue		Und der sagt „da ist was“. (And he says, “there is something”.)	1
Story structure levels			2
Modifiers (adjectives/ adverbs)	klein, schön, ganz (small, pretty, very)	ganz, groß (very, big)	1
Expressions of intent		Und der Hund möchte die Bienen fressen. (And the dog wants to eat the bees.)	1
Metacognitive verbs	wünschen, denken, wissen (wish, think, know)	–	0
Emotional state terms	froh, sauer (happy, upset)	böse (angry/upset)	1
Physical state terms	müde, krank (tired, sick)	–	0
		Overall points	**17**

D Clinicial Feedback and Prompts Use in the PT Intervention

Both tutees and tutors received feedback on their narrative productions. Procedures were modelled after McGregor (2000). Feedback on use of story elements was provided via requests and expansions. For example, if the tutor began a story by saying "She was at home," the clinician said either, "who was at home?" or "yes, the girl was at home" in order to remind the child to make reference to the main character(s) of the story. In another example, if the child said, "She got a balloon. The bird broke the balloon," the clinician said, "Right, she got a balloon and then a bird broke the balloon" to model the use of a cohesive element.

Thus, clinician scaffolds were always embedded in the child's previous utterance and story elements were prompted only as opportunities arose within the stories. To control for feedback, a maximum number of four clinician prompts/feedback was applied per narrative.

E Supplementary Analyses

Table E.1 *Pretest Comparison of EINC Elements among Tutees (Chi-Square Test of Independence)*

Variable	Group	Points assigned			*p*
		0	**1**	**2**	
Additive markers/ conjunctions	CG	3	5	—	.180
	PT	2	6		
	PP	0	8		
Temporal markers/ conjunctions	CG	4	3	1	.822
	PT	3	3	1	
	PP	4	1	3	
Causal adverbial clauses/ conjunctions	CG	8	0	—	1.00
	PT	8	0		
	PP	8	0		
Knowledge of dialogue	CG	6	2	—	.098
	PT	8	0		
	PP	4	4		
Modifiers	CG	1	7	—	.568
	PT	1	7		
	PP	0	8		
Expressions of intent	CG	6	2	—	.704
	PT	8	0		
	PP	4	4		
Metacognitive verbs	CG	8	0	—	.568
	PT	7	1		
	PP	7	1		
Emotional state terms	CG	8	0	—	.568
	PT	7	1		
	PP	7	1		
Physical state terms	CG	8	0	—	.091
	PT	6	2		
	PP	8	0		

Regression Analysis Story Grammar

To complement the regression analysis in Study I, the current analysis examined the amount of variance the three variables age in months, expressive language, and nonverbal intelligence would account for in the story grammar score i.e., the sum of used story grammar elements (independent variable, see table E.2).

When computed by multiple regression, the model was statistically significant: $F(3, 46) = 12.85$, $p < .01$, $R^2 = .46$, $R^2_{Adj} = .42$. The three independent variables accounted for 45.6% of variance in the expression of narrative story grammar.

Table E.2 *Summary of Regression Analyses for Variables Predicting Story Grammar*

	Univariate analysis		
Factor	***B***	***SE B***	***ß***
Age	0.26	0.06	.54**
Expressive language[a]	0.12	0.03	.51**
Nonverbal intelligence	0.33	0.12	.38**
	Multivariate analysis		
Factor	***B***	***SE B***	***ß***
Age	0.13	0.06	.27
Expressive language[a]	0.09	0.03	.39**
Nonverbal intelligence	0.25	0.10	.28*

Note. $N = 51$. Expressive language is a sum based on LiSe-DaZ expressive subtests (Schulz & Tracy, 2011); nonverbal intelligence is based on Raven Coloured Progressive Matrices (CPM) (Raven, 1995). Provided data are raw scores. Reported are Spearman's correlation coefficients (two-tailed).
[a] $n = 50$.
* $p < .05$. ** $p < .01$.