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Children's Reading for Pleasure with Digital Books

Abstract: The tools and technologies through which children engage with narratives are increasingly digital, dynamic, and wearable. The changes to communication in the digital age imply changes to children's everyday literacy practices: today's children engage with narratives embedded in online games, interactive apps, or video stories. Some are commercial and entertainment-oriented and some are specifically designed to support the development of children's reading and writing skills. Many parents and teachers struggle to support children's learning with digital media and the rapidly expanding landscape of interactive print stories. In comparison with adults or even teenagers, young children's engagement with digital literary narratives is little examined. This chapter explores the extent to which digital books nurture children's long-term reader identities and position young children as authors (co-authors) or as co-readers. Specific attention is paid to personalization and interactivity, which have been foregrounded through the digitization of communication but that remain key enduring issues in children's reading for pleasure.

Introduction

This chapter provides an overview of current research developments in children's reading for pleasure, especially reading with digital books. Because these studies are extensive, useful, and sound, the prospect of providing a summary in a single chapter is daunting. To offer a suitable contribution, we will pursue two goals. First, we will provide an overview of the lessons learned from some key studies that compared children's reading of traditional paper books and digital books, pointing out some trends in research that correspond to the 3Cs framework of Context, Content and individual Child. Second, we will probe some enduring topics in children's contemporary reading experiences, which can guide future empirical, theoretical, and methodological developments in the field. This goal is pursued with attention paid to children's reader identities and the possibilities of digital books to support children as (co)authors and (co)readers.

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Digital books offer written text and illustrations just like their predecessors but, in addition, they offer stories via sounds or even short video extracts. Perhaps digital books "remediate" print books, adding new features to older formats and using possibilities that the technical achievements of digital books offer. Bolter and Grusin (2000) explain that newer media remediate older media by improving their functionalities and adding new purposes of use. As an increasing number of children's stories are available in digitized formats, there is growing interest in understanding how these new formats add value to children's reading and possibly introduce new kinds of reading and meaning-making with stories. Studies therefore typically compare digital books with print books to ascertain the added value of one or the other medium in relation to specific reading processes or learning outcomes. Providing a snapshot of this research, conducted in the last decade, the chapter begins with an overview of the primary concepts, followed by a summary of key theoretical frameworks and methodological approaches adopted by researchers studying children's reading experiences with digital books. The main part of this chapter focuses on studies that compare digital and print books and studies that investigate children's experiences in relation to how these experiences profile children's identities.

Primary Concepts

The focus of this chapter is on story books. Story books can have only text or text and pictures (picture books) or only pictures (wordless picture books, see Kümmerling-Meibauer, 2018). Books are defined as written and illustrated objects that can be accessed from virtual/physical bookstores or libraries. Moreover, books may contain fictional or non-fictional narratives or stories. "Story" is a term with many definitions and, in this chapter, we adapt the definition of story put forward by Manfred Jahn (2017): "A sequence of events and actions involving characters" (N 1.2). According to Jahn, events refer to natural and non-natural happenings, while actions more specifically refer to wilful acts by characters. The temporal dimension of story is important as it distinguishes stories from written/pictorial excerpts of text or poetic pieces that are not bound in a narrative arc.

Brewer and Lichtenstein (1982) proposed a theoretical distinction between story schema, narrative comprehension, and plan comprehension. According to their structural affect theory, stories differ from narratives in that they are structured to evoke a particular affective response pattern in readers. Building on this, there seems to be a field consensus that chronological telling (or telling in time) is not a narrative. There are, however, as Sternberg (1992) points out, dis-

ciplinary differences in defining narrative, particularly between sociolinguistic and literary narratology theories. Sternberg (1992) redefines narrative and suggests that narrative rules are

> distinctive, universal roles of sequence which govern (at will assimilate, "narrativize") all other elements and patterns found in discourse at large. These generic master roles (to be called, in shorthand "suspense," "surprise," "curiosity," each with its proper dynamics between the telling and the told) are alone constant as a threefold set; everything else (including established favourites apart from time, such as perspective, space, character, verbal medium, or linear form) turns out to be variable, because nondistinctive by itself, if not dispensable, yet always narrativizable in the generic process (p. 472).

Our pragmatic orientation in this chapter focuses on stories, that is, particular manifestations of narratives, with the distinct components of story characters, story plots, and story lines that readers will be familiar with.

A precondition for understanding children's books, whether in a printed or digital format, is the acquisition of the concept of story. As studies in developmental psychology, literacy studies, and cognitive narratology have shown, this capacity develops in early childhood (from the age of two onwards) and continues until adolescence and beyond (see Kümmerling-Meibauer, 2011; Kümmerling-Meibauer et al., 2015). As well as understanding the prototypical features of a story, where the structure follows the schema of beginning, climax, and ending, children have to grapple simultaneously with other constituents of the story, namely characters, objects, settings, events, and actions. All these elements belong to and construct the storyworld, a concept introduced by scholars working in the realm of transmedia storytelling (Ryan, 2009). There is a scarcity of research on how young children form short- and long-term connections with fictional characters (see Jenning & Alper, 2010). The same applies to the issues of objects, settings, and actions. Mostly, these studies investigate children's comprehension of objects, settings, and events within a real context and how they impact young children's everyday lives (Augustine et al., 2015), while the transfer from the real world to a fictional world, for instance in picture books and digital books, is hardly addressed in studies dealing with young children's literacy acquisition (DeLoache, 2002; Ganea et al., 2008). A comprehensive understanding of the processes involved in children's increasing storying capacities and how these progressively develop towards mature aesthetic concepts and pleasure suggests the need for a wider survey (Stichnothe, 2014).

There is no official nomenclature for the various types of digital books on the market. So we follow the distinction between "simple" and "more advanced" digital books (see, however, Al-Yaquot & Nikolajeva, 2015, who suggest a nomenclature for early types of digital picturebooks). Simple digital books are

those that present the story with minimal input required from the user. Such digital stories play the story's sounds automatically and users need to merely press the "play" button and watch the images unfold in front of them as in a short film. More sophisticated stories engage children in various modes. Children can read a story aloud; they can also add their own audio-recordings, voiceovers or music excerpts (audio mode), or written and pictorial extensions (visual mode) (Yokota, 2017). Such a story engagement process is most accurately described as *storying* (Wohlwend, 2010), rather than story*telling* or story*writing*, as it highlights the multimodal nature of story engagement. While storytelling and storywriting are privileged terms in the school context, storying is favoured in the reading for pleasure or reading for enjoyment literature.

This chapter focuses on *reading for pleasure*, which is different from reading for learning or learning to read. Reading for pleasure is volitional, agentic, and enjoyable reading that fosters readers' lifelong identities. Unlike reading for learning that focuses on specific reading skills, reading for pleasure is characterized by delight, desire, and diversity (Cremin et al., 2014). However, some scholars advocate that there is no strict division between reading for pleasure and reading for learning, if one considers the latter concept from a broader perspective. They argue that reading for learning also fosters children's literary literacy, their emotional and cognitive development, as well as their literary knowledge (Nikolajeva, 2014; Kümmerling-Meibauer et al., 2015; Arizpe & Styles, 2016). For instance, reading a humorous (digital) picture book whose storyline and text-picture relationship build on irony may introduce child readers to this rather complex linguistic concept, while at the same time evoking a feeling of pleasure and enjoyment (Kümmerling-Meibauer, 1999). While there is ample research on children's acquisition of verbal irony (Winner, 1988; Creusere, 2007), the question of how children learn to understand and even enjoy ironic texts, is far from understood (Dyer et al., 2000; Kümmerling-Meibauer, 2021). This research lacuna is all the more surprising as it is closely connected to the concept of ludic reading. "Ludic reading," a term coined by Nell (1988), refers to reading for pleasure as a form of ludic play, thus foregrounding the enjoyment dimension of reading. Reading for pleasure, on the other hand, highlights the meaning-making, as well as personal, social, and cultural roles that reading for enjoyment fulfils (Cremin et al., 2014).

Reading for pleasure is not limited to any specific genre or type of text. Indeed, the premise of reading for pleasure is that children can find delight in reading comic books, text inside video games, poems, informational literature, or literary novels – all texts count. The core of school practice and research activity has been on children's enjoyment of reading narrative stories. This chapter, therefore, focuses on fictional narratives that display a fictional storyworld.

Lastly, this chapter summarizes research on young readers, defined as children aged between two to ten years. The choice of these ages is arbitrary, although it does reflect research in the area of *children's* reading. It also reflects the key developmental stage for nurturing lifelong trajectories for children's reading habits. This age group is therefore the main focus of teachers and policy-makers supporting reading for pleasure (Juel, 1988; Lockwood, 2008).

Basic Theories in the Area

The topic of children's reading for pleasure is of interest to developmental psychologists, educational researchers, literary scholars and, in the case of children's reading of digital books, also to researchers in design and human-computer interaction. Given this multi-disciplinary, multi-foci orientation of research in the field, there are diverse theoretical frameworks followed by individual researchers and research groups. Some frameworks are mutually inclusive and some mutually exclusive. Below are two examples that illustrate this variety within what could be considered a "traditional" and a "new literacy" research paradigm.

Traditional literacy approaches have been informed by two principal theoretical frameworks: that of socio-cultural theory and that of media theories. An approach based on media theories seeks to understand the specific affordances of print and digital books. Children's engagement with digital and print books is compared for their relative benefits and limitations related to the print or digital reading medium. Such an approach rests on the premise that there are some book features that are fixed (inherent to the media) and that exert their influence into the human-medium interaction. Media theory began in the 1960s/1970s, when it was advocated by Innis (1972, 2007) and McLuhan (1962/1994), who described media as environments for social communication. Since then media studies have developed multiple theoretical frameworks in relation to the advancement of media, the impact of media on children's cognitive, emotional and aesthetic development, and the complex relationship between media and multimodal storytelling. Media scholars have pointed to the shifts in the medium's features and structures that, together with the content, shape the audience (Buckingham, 2013). Extended to the case of children's digital books, a media theory perspective assumes that the digital book in and of itself, regardless of the content it holds, alters the child's communication. The digital book constitutes a new grammar, a new language, that needs to be studied and understood in its own right.

Media theory sits in contrast to socio-cultural theory that considers learning as social and co-constructed by the individuals using different resources and objects for communication, including books (in any format). According to the father of socio-cultural theory (sometimes referred to as socio-historical theory), Lev Vygotsky, adults play an active and generative role in mediating children's learning (Vygotsky, 1978). From this perspective, it is not the book on its own, but rather the activity of reading the book in a specific socio-cultural context, by people with a specific socio-cultural background, that mediates meaning. Socio-cultural values are embedded in the book, too: the content and format of the book is informed by the meanings of people who designed/wrote it. It follows that, according to the socio-cultural theory, it is the book-adult-child triad that jointly co-constructs meaning, drawing on the "funds of knowledge" (Moll et al., 1992) that the individual constituents embody. Neo-Vygotskian theories take this premise further with the idea that it is not only cognition and learning that are culturally shaped but that the culture itself is creatively appropriated by individuals and that culture transmits and transforms their values (Wertsch, 2002).

Theoretical differences are apparent in traditional approaches to literacy but also in more recently developed learning theories. Another set of contrasting examples from the perspective of new literacy studies and posthuman approaches follows, relying on Candace Kuby's (2017) eloquent explanation of the theoretical differences. In Kuby's explanation, new literacy studies are represented by Gunther Kress (1997, 2005), who calls attention to the various meaning-making modes and objects (e. g., scribbles, drawings, collages) through which children communicate. Kress conceives of children's compositions as a combination of multiple modes that represent and communicate children's ideas and intentions. Children's intentional multimodal representations call into question a language-centric focus on children's reading as being only about written text reception and production. As Kuby writes about Kress' contributions: "Through multimodal creations, children become the agents of their own cultural and social making. Again, the focus is on the human, in this case, intentionally doing something to materials with a future goal in mind" (p. 882). This is different from the poststructural and posthumanist theories that challenge the taken-for-granted literacy approaches. Poststructural theories view children's engagement with stories as "more than human" interactions. Kuby explains that in a posthumanist approach to literacy, the key interest is not on the human but on the "in-between of human and materials" and on the

> agency and newness produced from/with/of tools/with/children and/or children/with/tools. In a quantum physics sense, the individual materials and people are something dif-

> ferent when they are enfolded and entangled in the in-between-ness. Something new comes from the entanglement of all the human and nonhuman parts (p. 883).

In other words, while the two theories agree on the multiplicity of meaning-making, they differ in their emphasis on human agency in activating and transferring this meaning. These are important theoretical distinctions; indeed, they lend themselves to different inquiries and methodologies, as highlighted below.

Theories Explicitly Addressing Reading for Pleasure

Reading for pleasure is a literacy activity characterized by desire, delight, and diversity (Cremin, 2008), and these phenomena have been variously associated with the psychological processes of motivation to read, engagement in reading, and agency. In terms of motivation to read, a body of work documents the relationship between intrinsic reading motivation and literacy achievement (Wigfield, 1997). This relationship is moderated by gender, with adolescent boys consistently identified as a group that is least motivated to read for pleasure (e. g., Wigfield & Guthrie, 1997), with recent studies revealing lower motivation levels also among younger boys (e. g., Serafini, 2013). Gender gaps can be minimized with high quality teaching characterized by effective classroom management, adequate pacing, and a strong focus on language competencies (Hochweber & Vieluf, 2018) as well as systematic gender-related differences in schools, such as early tracking or student-oriented teaching practices that benefit girls more than boys (Hermann & Kopasz, 2019). In addition to gender, there are individual differences directly linked to reading motivation, such as self-efficacy, experience of reading challenging material, and reading for aesthetic enjoyment (Mucherah & Yoder, 2008). These factors are at the heart of approaches to reading for pleasure that focus on the ways reading for pleasure is framed in the national curriculum and how it relates to children's contemporary learning practices that pattern children's everyday lives. While teachers and parents perceive digital media as increasing children's motivation to participate in literacy activities (Neumann et al., 2018), children report that they enjoy reading both print and digital reading materials and there is a well-documented contrast between how adults and children view digital media (Strouse et al., 2019). Significant promise to advance the theoretical understanding of reading for pleasure is held by transmedia theories that acknowledge dynamic literacies in which children read and write or consume and compose stories in formal and informal learning environments in the context of a "porous exchange of knowledge" (McDougall & Potter, 2019, p. 2). These approaches map onto the notions of

readers' volition and agency in shaping their reader identities and the various reading strategies involved in affective engagement with texts (Kucirkova & Cremin, 2020).

Methods in the Studies of Children's Digital Books

The reading for pleasure research field, whether focused on digital or print books, stands on a robust body of evidence from various sources, including observations, surveys, experiments, and theoretical analyses, approached both with qualitative and quantitative methods. The multi-disciplinarity in the field implies that researchers approach their topics of investigation with different lenses for interpretation, generating evidence that adds various implications for practice. Educational researchers are interested in how children's reading of a specific book might be used to encourage children to read and how to ensure that children's reading is supported in formal and informal learning environments. For example, Roskos et al. (2012) documented children's engagement with digital books in the classroom, with the aim of developing a framework or typology for classroom observations, which can assist teachers and researchers in categorizing children's engagement in terms of control, multisensory behaviours, and communication (see also Levy et al., 2012).

Researchers with a psychology background study how children's engagement with a book affects a range of developmental outcomes (e. g., a child's language or literacy development) and their relationship with other children (Reese & Riordan, 2018). They use experimental methods that allow them to carefully control for influencing factors and to determine the effects of specific book features or specific interaction patterns of parents reading with the young children (Strouse & Ganea, 2017). For example, Parish-Morris et al. (2013) compared parent-child reading of electronic console (EC) books, CD-Rom books, and e-book apps in relation to children's story comprehension and parents' use of dialogic reading techniques (that are known to be beneficial for learning). Parents and children read the books in the research laboratory and their language use was compared in the three reading conditions. Such an approach is different from qualitatively-driven psychology methods, which include participant interviews, participatory approaches, or Interpretative Phenomenological Analysis (Brooks & King, 2017). Kucirkova (2018), for instance, analysed patterns in parents' interviews and video-recorded observations of their use of digital books at home. The patterns were theoretically investigated and discussed in relation to the specific features of digital books used by the parents and children. A different approach is followed by human-computer interaction researchers, who

are interested in the specific questions that can generate insights into effective book designs. For example, in a project at University College London, Kucirkova and colleagues have designed the prototype of a digital book that adapts to the child in real time. The project followed the use of cultural probes, which are "designed objects, physical packets containing open-ended, provocative and oblique tasks to support early participant engagement with the design process" (Boehner et al., 2007). The participants' engagement with the cultural probes and their feedback about the prototype provided the researchers, and the designers with whom they worked, with insights into users' perceptions and preferences.

Following the ideas of the New London Group (1996), children's literature scholars with an interest in child development and children's reading skills often apply reader-response theory in their observational studies. Their surveys mostly consist of video-taped sessions undertaken within a home or an institutional setting. Other scholars use interviews with child readers and caretakers to get a better picture of the parameters involved. While the move from paper to screen has been acknowledged by many literary scholars (Nixon & Hateley, 2013), studies on digital books and how they may foster children's reading pleasures are scarce (Hateley, 2013). So far, these studies have focused on media literacy rather than on digital literacy. Both domains analyze the complex ways in which modes mesh and the changing role of children as active meaning makers, thus paving the way for further investigations in the realm of digital literacy (Gilster, 1997).

Comparison Studies of Digital and Print Books

The preceding broad overview of theories and methods in the field is preparation for specific studies comparing digital and print books. Our basic framework of "3Cs: content, context and individual child" can be used to organize the extant literature. In terms of content, we look at the interactive features of digital books; in terms of context, we outline the influence of parents' mediation; and, in terms of child characteristics, we summarize evidence on the benefits of digital books for children with special educational needs. Arbitrarily selected studies for each "C" provide a snapshot of research developments, without fully representing the extensive work that is being undertaken in each area.

Content. Several researchers have documented one practical difficulty faced by teachers and parents when it comes to children's digital books: their content is of low educational quality (Sari et al., 2019). In terms of format, there are many different kinds of digital books currently on offer to young children. Some

are basic translations of print books onto an electronic platform (e. g., e-books or Kindle books), while others are sophisticated interactive apps that, in addition to texts and illustrations, contain interactive features, sounds, and adaptive features (e. g., if a child taps a specific field, they will get a response adapted to their input) (Turrión, 2014; Dezuanni et al., 2015). Given these market developments, most experimental research has been focused on understanding the effects of interactive and multimedia features of digital books on children's story comprehension, vocabulary learning, and other early literacy outcomes. Two meta-analyses provide evidence concerning the limitations of interactive features for two crucial early literacy outcomes: story comprehension and vocabulary. Takacs et al. (2014) conducted a meta-analysis in which they analysed the benefits of multimedia features (animated illustrations, background music, and sound effects) and interactive features (defined as scaffolding supports provided in a print-based story or a print-like story presented on a screen) in 29 studies with 1,272 children. The print-based or print-like stories included only text and static pictures and were presented to the child with and without an adult's support. The meta-analysis found that for children's story comprehension and vocabulary, the multimedia features in digital books are more effective than print books when read without adult support. They also found that in terms of children's story comprehension, there was no difference between multimedia story and paper book when read with adults' support. In a follow-up meta-analysis, Takacs et al. (2015) examined the benefits of multimedia features in comparison to interactive features in children's digital books. Multimedia features were defined as a combination of sounds, illustrations, and texts that were aligned with the storyline, while interactive features were additional activities embedded in the digital books, such as puzzles, memory tasks, amusing visual or sound effects that were not aligned with the text. These interactive features were available through the user's activation and hyperlinks. The meta-analysis included forty-three studies with 2,147 children and compared them in relation to digital and print-based books. The meta-analysis found that the interactive features did not support children's story comprehension and vocabulary learning but multimedia features, which added to the story with pictures, sounds and voiceovers, supported children's story comprehension and expressive vocabulary. This applied to books read to children by adults or stories that were read to children automatically with an audio-recording (Takacs et al., 2015). These findings indicate that individual features of books have strong implications for children's learning outcomes and that designers/publishers need to carefully consider the addition of interactivity/multimedia if they want to preserve the learning benefits of reading digital books (for a critical view, see Zucker et al., 2009).

Context. Children who cannot read are typically introduced to books by their parents or other family members, who read books to them. During shared parent-child book reading, parents use different reading strategies and reading styles and this difference translates into the extent to which children engage with the book, enjoy the session, and learn from it. When it comes to digital books, parents need to negotiate their reading styles in relation to the child's response and the individual book's features. This process has been documented by a number of qualitative studies. For example, Paciga and Quest (2017) used ethnographic methods to document in detail the key role parents play in supporting the digital reading experiences of children engaging with iPad books at home (see also Hoffman & Paciga, 2014). Similarly, Akhter (2016) used ethnographic methods to show how a seven-year-old British Bangladeshi girl and her grandmother engaged with digital texts and how this contributed to the girl's practice of Qur'anic literacy. Ethnographic methods have also been employed in a study of digital books by Ghiso (2016), who examined how digital books (mis)align with a curriculum that would value children's multilingual education in US elementary schools. Nicholas and Paatsch (2018) observed and interviewed parents and children reading digital and print books at home and noted the importance of parents' own confidence in mediating children's engagement with digital media. Their analysis of interview data from 12 Australian mothers of two-year-old children showed that, by and large, parents recognize the importance of reading to their children, but they did not see the reading of digital books offering the same value as the reading of print books. It is likely that parents' negative attitudes towards digital books translate to their inferior reading behaviours with digital books. When researchers compare the educational value of parents reading print and digital books, they find that parents' reading strategies with digital books contain fewer comments on the story and language and are more focused on behavioural and technical aspects than on the story (Krcmar & Cingel, 2014). This means that the amount of language-stimulating dialogic reading strategies that parents use is lower with digital books than with parent-child reading of print books.

Child Characteristics. Children who are not developing typically (also referred to as children with special needs or with educational difficulties) often engage with digital books as part of their technology-mediated individual learning instruction. A significant added value of digital books is that they can be adjusted to the needs of individual children: while a print book cannot be changed once printed out, a digital book can be customized in terms of text and illustration display, individualized voice-over, or translation into different languages. To adjust a digital book to individual children's needs, however, researchers and designers need to work closely together. Véliz et al. (2017) worked

with deaf and hard of hearing children to co-design digital books adjusted to the children's individual characteristics. Their model of participatory design could be emulated by other research teams interested in individualized design of children's digital books. It is also important to acknowledge the role of adults who typically adjust their response to children's reading engagement. Rees et al. (2017) studied the added value of digital books with typically developing children and children with language impairments. They found that children's dispositions and individual responses to the books were reflected in their parents' response during joint book reading: parents of typically developing children coordinated their responses in relation to the child's engagement, whereas parents of children with language impairments asked more questions and demanded more responses from their children.

Taken together, the 3Cs provide a useful framework for considering the extant literature, but overall evaluation requires a combination of the influences of context, content, and individual child. As Courage (2019, p. 8) writes:

> Although these three sets of factors provide a convenient organizational framework in which to review the literature on the effectiveness of digital media, it is important to note that it is the nature of the interactions among them that will primarily affect learning and literacy outcomes from all formats. In particular, it can be difficult to separate the effects of the content of any medium on outcomes from the effects of the affordances (e. g., amount of interactivity) provided by the medium itself (e. g., e-book, paper book).

It follows that a representative review needs to take into account these interconnected influences and interpret the value of digital books in their entirety. Such an interpretation would be difficult with a meta-analysis but it is possible with a substantive literature review. Indeed, several such reviews on children's digital books have been undertaken, with a detailed and substantive overview (see Biancarosa & Griffiths, 2012; Miller & Warschauer, 2014; Reichet al., 2016; Kucirkova, 2019a).

This chapter does not repeat these summaries but, instead, offers an insight into research that speaks to some enduring themes in the research of children's reading experiences, foregrounding the potential of digital books to motivate young children to read and nurture their reader identities. Rather than understanding the value of digital books against the backdrop of print books, it is useful to examine their unique socio-technological potential to nurture reading for pleasure. This is an attempt to follow what Courage described as the intertwined influences of the 3Cs and to approach the influence of digital books from a more holistic perspective. Reading for pleasure is sustained when children identify as "readers" and, to perceive themselves in this way, they need to find pleasure and satisfaction in the reading process. After all, "pleasure is ex-

actly what chiefly motivates people to read literature" (Mangen & van der Weel, 2017, p. 5). In what follows, we discuss digital books in relation to children's reader identities, further divided into children as authors and children as (co)readers.

Children's Reader Identities

Our focus on children's identities as readers is an attempt to align the discussion of children's contemporary reading for pleasure with the characteristics of the era in which they live. The concept of reading engagement and the theoretical framework of five reading engagements proposed by Kucirkova et al. (2017) identifies six key features of story books that support children's reading for pleasure, namely: affective, shared, sustained, creative, personalised, and interactive engagement. These six facets map onto Craft's (2012) definition of contemporary childhoods, framed as the "4Ps" or four underlying structures of childhoods: participation, pluralisation, possibility awareness, and playfulness. Considering reading engagement with contemporary texts (digital or print), Qvortrup (2006) notes the difficulties in evaluating technology influences that are based on old assumptions of how society and communication work. He writes that "a certain social era can be related to a media complex with identifiable, stable features [...] medium theory works well for earlier societies, i. e. for so-called oral, writing and print eras" (p. 347). In contrast, the modern era is characterized by globalized, highly inter-connected communication patterns that respond to *and* generate complexity. From this perspective, a firm boundary between print and digital media has little practical value as their joint influence is intertwined in daily communication. Qvortrup (2006) explains his reasoning by drawing on the differences in communication via static oral/written modes and dynamic oral/written communication via the Internet. The previous section addressed the findings from studies that compared static features of print versus digital books formats. This section focuses on studies that conceptualize digital books from a dynamic perspective.

The dynamic perspective involves a socio-cultural theoretical perspective that conceives of learning as a socio-cultural activity that is co-constructed in diverse social contexts and that is not limited to these contexts but rather distributed across tools and humans. Understanding such complex contexts requires a good understanding of active meaning-making. Children are not passive observers of stories; they actively engage with material manifestations of story worlds, whether this manifestation happens on paper or on screen (or an-

other surface). As such, active meaning-making is about children's authorship or co-authorship of stories that demonstrate and shape their identity.

Children as Authors. Children's authorship might seem counter-intuitive: children's books are written for a special readership but not, normally, by members of that readership, since "children's literature and other children's media are usually created, published and bought by adults" (Kümmerling-Meibauer, 2016, 64). For children, some digital books, namely those that offer authorship options, can change this status quo. Such books are called personalized books. Personalization as an umbrella term refers to both products and processes, that is, to books that are personalized for individual children. Personalized books are a fast-growing area of children's publishing, with publishers of personalized books reporting record revenues in the past few years. For example, in the UK, the publisher Wonderbly sold 132k copies of their personalized book titled "Lost My Name" in the year of its launch and more than three million copies worldwide between 2014 and 2017. Printed and digital books contain different levels, forms, and types of personalization. An analysis of personalization features in a hundred most popular children's digital books in 2016 revealed that current titles focus on personalization in three ways: story characteristics, narrative, and appearance (Kucirkova, 2018). These three key personalization possibilities are not fundamentally different from personalization in children's printed books. Story characteristics (such as the main character's name, story location) can be personalized in several printed titles. For example, with Snowflake Stories, users can, according to the publisher, "personalize the entire story" with the child's name and age written into the story, names and roles of cast members integrated into the story, or inserting the child's photo for the dedication with a fully personalized cover (https://www.snowflakestories.com/).

Once parents/guardians personalize the digital template, the final book is a personalized artefact. However, while a printed personalized book can no longer be changed once it is printed and becomes a one of a kind valuable artefact, a digital personalized book can accommodate a potentially unlimited number of different story characteristics. For instance, with the *Mr Glue Stories* app, children can seamlessly and simultaneously change the name of the main story character as they read the story, and this name then automatically appears on all book pages. As for personalizing story narrative, this is a reminder of parallels with the printed book series "Choose Your Own Adventure" (1980 ff.) by R. A. Montgomery, which offers children a choice of various story endings. While in the printed book children are guided to different page numbers depending on which ending they choose for their adventure, in the digital book

(e. g., *Little Red Riding Hood* by Nosy Crow), they can simply tap on different hotspots (Kümmerling-Meibauer, 2016).

Digital books position children as (co)authors when they give children possibilities to add their own drawings, scribbles and writings, music sounds, voiceovers, or short video snippets. In embellishing their books, children respond to the books' existing content in an embodied, haptic, or interactive way. When determining a child's response to both kinds of personalization features, it is helpful to consider the so-called "5As of personalization" (authorship, autonomy, attachment, authenticity, and aesthetics) which relate to a set of five agency indices (control, intention, volition, ownership, and singularity) (Kucirkova, 2018). These indices indicate the extent to which children are authors or not. When children produce their own content, they become the content owners and assume control of their own products. With the *Our Story* app, co-developed by Kucirkova at The Open University, children can make their own multimedia stories and share them with friends and family. There are no limits to their authorship – children can make stories on any topic they wish, using any combination of sounds, pictures, and texts. Sharing needs to be authorized by their parents and offers the option of shared multimedia stories or printed booklets.

Children as Co-readers. Shared reading is a well-established routine in many families and one of the most intensively studied areas in early childhood education. With print books, there is a body of research (mainly from the '80s and '90s) showing consistent benefits of "shared reading" between pre-schoolers and their parents on children's literacy development. A meta-analysis by Bus et al. (1995) showed that parent-child reading is related to outcome measures such as children's vocabulary development, story comprehension, and language growth (see Snow, 1983; Snow & Ninio, 1986; Kümmerling-Meibauer et al., 2015). These emergent literacy skills are linked to children's subsequent reading achievement, which predicts children's academic achievement and success in life. Given these considerable benefits, researchers have explored the possibilities of digital books to support shared reading between parents and children. The unique advantage of digital books is that they can support shared reading at a distance. This possibility has been harnessed with the "Family Story Play," in which grandparents can read books together with their grandchildren over the Internet. The system was designed by human-computer interaction researchers (Raffle et al., 2010) and it involves a paper book, a sensor-enhanced frame, video conferencing technology, and video content of a Sesame Street Muppet (Elmo). Similarly, with People in Books, designed by Follmer et al. (2012), children and family members can interact with the same digital book at distance. The possibility in the system to impersonate different story characters has been found to encourage a range of literacy activities and parents' edu-

cational reading practices. Chang et al. (2012) capitalized on the playful element of digital books and combined reading and playing in their prototype called *TinkRBook*, a book that encourages 2–5 year-olds to actively explore and modify a story through voice and touch. These examples show that, if digital books are explicitly designed for shared interactions, they can encourage a set of supportive reading strategies on the part of the parent, such as, for example, dialogic reading strategies that draw the child's attention to the story and encourage the child to speak and practice literacy skills. Chang et al. (2012) describe the parent's and child's roles with the terms of "parent as good instructor" and "child as active explorer." These are new roles assigned to children's identities and they reflect the changing context engendered by digital books, as well as the future orientation towards co-participating models in children's reading for pleasure.

Children's Reader Identities in Relation to Story Characters

From the perspective of digital literacy in early childhood, there is a close connection between child development research and narratology. Knowing how children learn to understand the concept of a story character and are able to comprehend the relation of story and character from a multimedia product, like a digital book, is an interdisciplinary task. Although apps have become the subject of empirical studies that investigate young readers' engagement with this new medium (Mackey, 2011, 2016; Merchant, 2014; Manresa, 2015), there are hardly any studies that focus on children's relationship to fictional characters in digital literature. An exception is the study by Zhao and Unsworth (2017) that discusses the app version of *The Heart and the Bottle* by Oliver Jeffers. They investigated how this story enhances young readers' empathy with the fictional characters.

It should be clear that characters play an eminent role in children's literature as they immerse child readers into the story. Moreover, characters may serve as role models when they open a personal pathway by evoking the child's identification with a certain character. The concept of identity in relation to story characters is central to many narratological studies that investigate the impact of characters on children's understanding of the narrative (Eder et al., 2014). Studies in the domain of cognitive poetics or cognitive studies ponder the crucial question of why readers care about fictional characters (Hogan, 2011; Vermeule, 2011). In this regard, psychologists and other scholars emphasize the significance of theory of mind, that is, the ability to understand and anticipate other people's feelings, thoughts, and actions (Wellman, 2014). Since theory of

mind is not innate but acquired at age four in a basic sense, this framework is key when it comes to the analysis of literary texts that target young readers (Kidd & Castano, 2013). Characters in children's books may be experienced as alternative selves, particularly in those digital books that offer the option of creating an avatar. However, exposing young children to such an option carries the risk of cognitive overload, since they are still in the stage of identity development. To orchestrate the multiple steps in understanding fictional characters' motivations and actions is demanding for young readers, especially if they act as avatars within a narrative. While personalization has been empirically investigated in several studies, not much is known about the impact of story characters on children's developing sense of empathy or their capacity for reflective self-awareness (Kümmerling-Meibauer, 2012; Shedlosky-Shoemaker et al., 2015; Kucirkova, 2019b). In recent years, empathy has become a hot topic in developmental psychology, literary studies, and media studies that focus on the crucial issue of how literature can arouse empathic feelings in readers and on the possible connections between reading enjoyment and the emotions portrayed in literary works (Koopmann & Hakemulder, 2015; Borba, 2016).

Conclusions

In our era, digital literature is likely the first kind of multimodal text young children (at least in the Western world) encounter. Successfully developed apps introduce young readers to the affordances of the digital medium. However, much is not known about what children can learn from reading digital literature and how this new medium contributes to and even enhances the pleasures of reading. Empirical studies that explore young children's use of digital literature, whether on their own or in child-adult dyads, are a popular topic in literacy studies, media studies, and developmental psychology. In this respect, studies of child readers' identities are promising because they can yield fresh insights into the child's agency – as authors and active participants in the reading process – as well as into young readers' engagement with story characters. While each new medium has its own educational and aesthetic values, it is necessary for scholars and educators to acknowledge the new pleasures and skills young readers may find in digital books.

For further progress in the field, interdisciplinary cooperation among researchers in different fields is indispensable. Only such an encompassing approach will enable us to paint a detailed picture of the multiple facets of "digital

literacy" and how it impacts young children's pleasures of reading digital books and how such pleasures are connected with processes of learning.

References

Akhter, P. (2016). A young child's intergenerational practices through the use of visual screen-based multimodal communication to acquire Qur'anic literacy. *Language and Education, 30*(6), 500–518. https://dx.doi.org/10.1080/09500782.2016.1141935

Al-Yaquot, G., & Nikolajeva, M. (2015). Re-conceptualizing picturebook theory in the digital age. *BLFT. Nordic Journal of Childlit Aesthetics, 6*(1), 26971. http://dx.doi.org/103402/blft.v6.26971

Augustine, E., Jones, S. S., Smith, L. B. & Longfield, E. (2015). Relation among early object recognition skills: Objects and letters. *Journal of Cognition and Development, 16*(2): 221–235. https://doi.org/10.1080/15248372.2013.815620

Biancarosa, G., & Griffiths, G. G. (2012). Technology tools to support reading in the digital age. *The future of children, 22*(2), 139–160. http://www.jstor.org/stable/23317415

Boehner, K., Vertesi, J., Sengers, P., & Dourish, P. (2007). *How HCI interprets the probes.* Paper presented at the Proceedings of the SIGCHI conference on Human factors in computing systems (pp. 1077–1086). https://doi.org/10.1145/1240624.1240789

Bolter, J. D., Grusin, R., & Grusin, R. A. (2000). *Remediation: Understanding new media*. MIT Press.

Borba, M. (2016). *UnSelfie: Why empathetic kids succeed in our all-about-me world*. Simon & Schuster.

Brooks, J., & King, N. (2017). *Applied qualitative research in psychology*. Macmillan International Higher Education.

Brewer, W. F., & Lichtenstein, E. H. (1982). Stories are to entertain: A structural-affect theory of stories. *Journal of Pragmatics*, *6*(5-6), 473–486. https://doi.org/10.1016/0378-2166(82)90021-2

Buckingham, D. (2013). Making sense of the 'digital generation': Growing up with digital media. *Self and Society, 40*(3), 7–15. https://doi.org/10.1080/03060497.2013.11084274

Bus, A. G., Van Ijzendoorn, M. H., & Pellegrini, A. D. (1995). Joint book reading makes for success in learning to read: A meta-analysis on intergenerational transmission of literacy. *Review of Educational Research, 65*(1), 1–21. https://doi.org/10.3102/00346543065001001

Chang, A., & Breazeal, C. (2011). *TinkRBook: Shared reading interfaces for storytelling*. Proceedings of the 10th International Conference on Interaction Design and Children (pp. 145–148). https://doi.org/10.1145/1999030.1999047

Chang, A., Breazeal, C., Faridi, F., Roberts, T., Davenport, G., Lieberman, H., & Montfort, N. (2012). *Textual tinkerability: encouraging storytelling behaviors to foster emergent literacy.* Paper presented at the CHI'12 Extended Abstracts on Human Factors in Computing Systems. https://doi.org/10.1145/2212776.2212826

Cope, B., and Kalantzis, M. (Eds.) (2015). *A pedagogy of multiliteracies: Learning by design*. Palgrave Macmillan.

Courage, M. L. (2019) From print to digital: The medium is only part of the message. In J. Kim, & B. Hassinger-Das (Eds.) *Reading in the digital age: Young children's experiences with e-books. Literacy studies* (pp. 23–43). Springer. https://doi.org/10.1007/978-3-030-20077-0_3

Craft, A. (2012). Childhood in a digital age: Creative challenges for educational futures. *London Review of Education*, *10*, 173–190. https://doi.org/10.1080/14748460.2012.691282

Cremin, T. (2008). Revisiting reading for pleasure: Diversity, delight and desire (Chapter 10). In K. Goouch, & A. Lambirth (Eds.) *Understanding phonics and the teaching of reading: Critical perspectives.* (pp. 166–177). Open University Press.

Cremin, T., Mottram, M., Collins, F. M., Powell, S., & Drury, R. (2014). *Researching literacy lives: Building communities between home and school*. Routledge.

Creusere, M. A. (2007). A developmental test of theoretical perspectives on the understanding of verbal irony: Children's recognition of allusion and pragmatic insincerity. In R. W. Gibbs & H. L. Colston (Eds.), *Irony in language and thought: A cognitive science reader.* (pp. 409–424). Erlbaum.

DeLoache, J. (2002). Early development of the understanding and use of symbolic artifacts. In U. Goswami (Ed.), *Blackwell handbook of childhood cognitive development.* (pp. 206–226). Blackwell.

Dezuanni, M., Dooley, K. Gattenhof, S., & Knight, L. (2015). *iPads in the early years: Developing literacy and creativity*. Routledge.

Dyer, J. R., Shatz, M. & Wellman, H. M. (2000). Young children's storybooks as a source of mental state information. *Child Development, 15*(1), 17–37. https://doi.org/10.1016/S0885-2014(00)00017-4

Eder, J., Jannidis, F., & Schneider, R. (Eds.). (2010). *Characters in fictional worlds: Understanding imaginary beings in literature, film, and other media (Vol. 3)*. De Gruyter.

Follmer, S., Ballagas, R., Raffle, H., Spasojevic, M., & Ishii, H. (2012). People in books: Using a FlashCam to become part of an interactive book for connected reading. In *Proceedings of the ACM 2012 conference on computer supported cooperative work* (pp. 685–694). https://doi.org/10.1145/2145204.2145309

Ganea, P. A., Bloom-Pickard, M. & DeLoache, J. (2008). Transfer between picture books and the real world by very young children. *Journal of Cognition and Development, 9*(1), 46–66. https://doi.org/10.1080/15248370701836592

Ghiso, M. P. (2016). The Laundromat as the Transnational Local: Young Children's Literacies of Interdependence. *Teachers College Record, 118*(1), n1.

Gilster, P. (1997). *Digital literacy*. Wiley.

Goldbart Clark, D. (2006). Hyperread: Children's literature, CD-ROMs, and the new literacy. *The Lion and the Unicorn, 30*(3): 337–359. https://doi.org/10.1353/uni.2006.0030

Hateley, E. (2013). Reading: From turning the page to touching the screen. In Y. Wu, K. Mallan, and R. McGillis (Eds.), *(Re)imagining the world: New frontiers of educational research* (pp. 1–13). Springer. https://doi.org/10.1007/978-3-642-36760-1_1

Hermann, Z., & Kopasz, M. (2019). Educational policies and the gender gap in test scores: A cross-country analysis. *Research Papers in Education*, 1–22. https://doi.org/10.1080/02671522.2019.1678065

Hochweber, J., & Vieluf, S. (2018). Gender differences in reading achievement and enjoyment of reading: The role of perceived teaching quality. *The Journal of Educational Research*, *111*(3), 268–283. https://doi.org/10.1080/00220671.2016.1253536

Hoffman, J. L., & Paciga, K. A. (2014). Click, swipe, and read: Sharing e-books with toddlers and pre-schoolers. *Early Childhood Education Journal, 42*(6), 379–388. https://doi.org/10.1007/s10643-013-0622-5

Hogan, P. C. (2011). *Affective narratology: The emotional structure of stories*. University of Nebraska Press.

Innis, H. A. (2007). *Empire and Communications*: Rowman & Littlefield.

Jahn, M. (2017). *Narratology. A guide to the theory of narrative*. Online Resource. http://www.uni-koeln.de/~ame02/pppn.htm (accessed August 25, 2020).

Jenning, N., & Alper, M. (2010). Young children's positive and negative parasocial relationships with media characters. *Communication Research Reports, 33*(2), 96–102. https://doi.org/10.1080/08824096.2016.1154833

Juel, C. (1988). Learning to read and write: A longitudinal study of 54 children from first through fourth grades. *Journal of Educational Psychology, 80*(4), 437–447. https://doi.org/10.1037/0022-0663.80.4.437

Kaplan, N., & Chisik, Y. (2005). Reading alone together: Creating sociable digital library books. In *Proceedings of the 2005 conference on interaction design and children* (pp. 88–94). https://doi.org/10.1145/1109540.1109552

Kidd, D. C., & Castano, E. (2013). Reading literary fiction improves theory of mind. *Science*, *342* (6156), 377–380. https://doi.org/10.1126/science.1239918

Koopman, E. M., & Hakemulder, F. (2015). Effects of literature on empathy and self-reflection: A theoretical-empirical framework. *Journal of Literary Theory*, *9*(1), 79–111. https://doi.org/10.1515/jlt-2015-0005

Krcmar, M., & Cingel, D. P. (2014). Parent-child joint reading in traditional and electronic formats. *Media Psychology, 17*(3), 262–281. https://doi.org/10.1080/15213269.2013.840243

Kress, G. (2005). *Before writing: Rethinking the paths to literacy*. Routledge.

Kucirkova, N. (2018a). Children's agency and reading with story-apps: Considerations of design, behavioural and social dimensions. *Qualitative Research in Psychology*, Published online. https://doi.org/10.1080/14780887.2018.1545065

Kucirkova, N. (2018b). A taxonomy and research framework for personalization in children's literacy apps. *Educational Media International, 55*(3), 255–272. https://doi.org/10.1080/09523987.2018.1512446

Kucirkova, N. (2019a). Socio-material directions for developing empirical research on children's e-reading: A systematic review and thematic synthesis of the literature across disciplines. *Journal of Early Childhood Literacy*, Published online. https://doi.org/10.1177/1468798418824364

Kucirkova, N. (2019b). How could children's storybooks promote empathy? A conceptual framework based on developmental psychology and literary theory. *Frontiers in Psychology*, *10*, 121. https://doi.org/10.3389/fpsyg.2019.00121

Kucirkova, N. & Cremin, T. (2020) *Children reading for pleasure in the digital age: Mapping reader engagement*. SAGE.

Kucirkova, N., Littleton, K., & Cremin, T. (2017). Young children's reading for pleasure with digital books: Six key facets of engagement. *Cambridge Journal of Education*, *47*(1), 67–84. https://doi.org/10.1080/0305764X.2015.1118441

Kümmerling-Meibauer, B. (1999). Metalinguistic awareness and the child's developing sense of irony: The relationship between pictures and text in Ironic picturebooks. *The Lion and the Unicorn, 23*(2), 157–183.

Kümmerling-Meibauer, B. (Ed.) (2011). *Emergent literacy. Children's books from 0 to 3*. John Benjamins.

Kümmerling-Meibauer, B. (2012). Emotional connections: Representation of emotions in young adult literature. In M. Hilton & M. Nikolajeva (Eds.), *Contemporary adolescent literature and culture. The emergent adult* (pp. 127–137). Ashgate.

Kümmerling-Meibauer, B. (2016). The impact of new digital media on children's and young adult literature. In M. Manresa & N. Real (Eds.), *Digital literature for children. Texts, readers and educational practices* (pp. 57–72). Peter Lang.

Kümmerling-Meibauer, B. (Ed.). (2018). *The Routledge companion to picturebooks*. Routledge.

Kümmerling-Meibauer, B. (2021). Irony. In P. Nel, L. Paul, & N. Christensen (Eds.), *Keywords for children's literature*. Second Edition (pp. 113–116). New York UP.

Kümmerling-Meibauer, B., Meibauer, J., Nachtigäller, K., & Rohlfing, K. (Eds.) (2015). *Learning from picturebooks. Perspectives from child development and literacy studies*. Routledge.

Levy, R., Yamoda-Rice, D., & Marsh, J. (2012). Digital literacy in primary classrooms. In K. Hall, T. Cremin, B. Comber, and L. Molle (Eds.), *International handbook of research on children's literacy, learning, and culture* (pp. 333–343). Sage.

Lockwood, M. (2008). *Promoting Reading for Pleasure in the Primary School*. Sage.

Mackey, M. (2011). The case of the flat rectangle: Children's literature on page and screen. *International Research in Children's Literature*, *4*(1), 99–114. https://doi.org/10.3366/ircl.2011.0010

Mackey, M. (2016). Digital picturebooks. In E. Arizpe and M. Styles (Eds.). *Children reading picturebooks: Interpreting visual texts* (pp. 169–179). Routledge.

Manresa, M. (2015). Traditional readers and electronic literature: An exploration of perceptions and readings of digital works. In M. Manresa & N. Real (Eds.). *Digital literature for children: Texts, readers and educational practices* (pp. 105–120). Peter Lang.

Mangen, A., & van der Weel, A. (2017). Why don't we read hypertext novels? *Convergence, 23* (2), 166–181. https://doi.org/10.1177/1354856515586042

McDougall, J., & Potter, J. (2019). Digital media learning in the third space. *Media Practice and Education*, *20*(1), 1–11. https://doi.org/10.1080/25741136.2018.1511362

McLuhan, M., & Lapham, L. H. (1994). *Understanding media: The extensions of man*. MIT Press.

Merchant, G. (2014). Young children and interactive story-apps. In C. Burnett et al. (Eds.). *New literacies around the globe: Policy and pedagogy* (pp. 121–138). Routledge.

Miller, E. B., & Warschauer, M. (2014). Young children and e-reading: Research to date and questions for the future. *Learning, Media and Technology, 39*(3), 283–305. https://doi.org/10.1080/17439884.2013.867868

Moll, L. C., Amanti, C., Neff, D., & Gonzalez, N. (1992). Funds of knowledge for teaching: Using a qualitative approach to connect homes and classrooms. *Theory Into Practice, 31*(2), 132–141. https://doi.org/10.1080/00405849209543534

Mucherah, W., & Yoder, A. (2008). Motivation for reading and middle school students' performance on standardized testing in reading. *Reading Psychology*, *29*(3), 214–235. https://doi.org/10.1080/02702710801982159

Nell, V. (1988). The psychology of reading for pleasure: Needs and gratifications. *Reading Research Quarterly*, *23*, 6–50. https://doi.org/10.2307/747903

Neumann, M. M., Merchant, G., & Burnett, C. (2018). Young children and tablets: the views of parents and teachers. *Early Child Development and Care*, 1–12. https://doi.org/10.1080/03004430.2018.1550083

New London Group (*1996*) A Pedagogy of multiliteracies: Designing social futures. *Harvard Educational Review*, *66*(1), 60–93. https://doi.org/10.17763/haer.66.1.17370n67v22j160u

Nicholas, M., & Paatsch, L. (2018). Mothers' views on shared reading with their two-year olds using printed and electronic texts: Purpose, confidence and practice. *Journal of Early Childhood Literacy*. https://doi.org/10.1177/1468798418792614

Nikolajeva, M. (2014). *Reading for learning. Cognitive approaches to children's literature*. John Benjamins.

Nixon, H., & Hateley, E. (2013). Books, toys, and tablets: Playing and learning in the age of digital media. In K. Hall, T. Cremin, B. Comber, & L. Molle (Eds.), *International handbook of research on children's literacy, learning, and culture* (pp. 28–40). Wiley.

Paciga, K. A., & Quest, M. (2017). It's hard to wait: Effortful control and story understanding in adult-supported e-book reading across the early years. *Journal of Literacy and Technology, 18*(1), 35–79.

Parish-Morris, J., Mahajan, N., Hirsh-Pasek, K., Golinkoff, R. M., & Collins, M. F. (2013). Once upon a time: Parent-child dialogue and storybook reading in the electronic era. *Mind, Brain, and Education, 7*(3), 200–211. https://doi.org/10.1111/mbe.12028

Qvortrup, L. (2006). Understanding new digital media: Medium theory or complexity theory? *European Journal of Communication, 21*(3), 345–356. https://doi.org/10.1177/0267323106066639

Raffle, H., Ballagas, R., Revelle, G., Horii, H., Follmer, S., Go, J., Reardon, E., Mori, K., Kaye, J., & Spasojevic, M. (2010). *Family story play: Reading with young children (and Elmo) over a distance*. Proceedings of the SIGCHI Conference on Human Factors in Computing Systems. https://doi.org/10.1145/1753326.1753563

Rees, K., Nadig, A., & Rvachew, S. (2017). Story-related discourse by parent-child dyads: A comparison of typically developing children and children with language impairments. *International Journal of Child-Computer Interaction, 12*, 16–23. https://doi.org/10.1016/j.ijcci.2017.01.001

Reese, E., & J. Riordan (2018). Picturebooks and developmental psychology. In B. Kümmerling-Meibauer (Ed.). *The Routledge companion to picturebooks* (pp. 381–390). Routledge.

Reich, S. M., Yau, J. C., & Warschauer, M. (2016). Tablet-based ebooks for young children: What does the research say? *Journal of Developmental & Behavioral Pediatrics, 37*(7), 585–591. https://doi.org/10.1097/DBP.0000000000000335

Roskos, K., Burstein, K., & You, B.-K. (2012). A typology for observing children's engagement with ebooks at preschool. *Journal of Interactive Online Learning, 11*(2), 7–65.

Ryan, M.-L. (2009). From narrative games to playable stories: Toward a poetics of interactive narrative. *StoryWorlds: A Journal of Narrative Studies*, *1*(1), 43–59. https://doi.org/10.1353/stw.0.0003

Sari, B., Takacs, Z. K., & Bus, A. G. (2019). What are we downloading for our children? Best-selling children's apps in four European countries. *Journal of Early Childhood Literacy*, *19*(4), 515–532. https://doi.org/10.1177/1468798417744057

Serafini, F. (2013). Supporting boys as readers. *The Reading Teacher*, *67*(1), 40–42. https://doi.org/10.1002/TRTR.1187

Shedlosky-Shoemaker, R., K. A. Costabile, & R. M. Arkin (2014). Self-expansion through fictional characters. *Self and Identity, 13*(5): 556–578. https://doi.org/10.1080/15298868.2014.882269

Simpson, A., & Walsh, M. (2015). Children's literature in the digital world: How does multimodality support affective, aesthetic and critical response to narrative? *English Teaching: Practice & Critique, 14*(1), 28–43. https://doi.org/10.1108/ETPC-12-2014-0005

Sternberg, M. (1992). Telling in time (II): Chronology, teleology, narrativity. *Poetics Today*, *13* (3), 463–541. https://doi.org/10.2307/1772872

Stichnothe, H. (2014). Engineering stories? A narratological approach to children's book apps. *BLFT. Nordic Journal of ChildLit Aesthetics, 5*(1) https://doi.org/10.3402/blft.v5.23602

Strouse, G. A., Newland, L. A., & Mourlam, D. J. (2019). Educational and fun? Parent versus preschooler perceptions and co-use of digital and print media. *AERA Open*, *5*(3). https://doi.org/10.1177/2332858419861085

Snow, C. (1983). Literacy and language: Relationships during the preschool years. *Harvard Educational Review, 53*(2), 165–189. https://doi.org/10.17763/haer.53.2.t6177w39817w2861

Snow, C. E., & Ninio, A. (1986). The contracts of literacy: What we learn from learning to read books. In W. Teale & E. Sulzby (Eds.). *Emergent literacy: Writing and reading* (pp. 116–138). Ablex.

Snow, C. E., & Dickinson, D. K. (1990). Social sources of narrative skills at home and at school. *First Language, 10*(29), 87–103. https://doi.org/10.1177/014272379001002901

Strouse, G. A., & Ganea, P. A. (2017). Parent-toddler behavior and language differ when reading electronic and print picture books. *Frontiers in Psychology, 8*, 677. https://doi.org/10.3389/fpsyg.2017.00677

Takacs, Z. K., Swart, E. K., & Bus, A. G. (2014). Can the computer replace the adult for storybook reading? A meta-analysis on the effects of multimedia stories as compared to sharing print stories with an adult. *Frontiers in Psychology, 5*, 1366 https://doi.org/10.3389/fpsyg.2014.01366

Takacs, Z. K., Swart, E. K., & Bus, A. G. (2015). Benefits and pitfalls of multimedia and interactive features in technology-enhanced storybooks: A meta-analysis. *Review of Educational Research, 85*(4), 698–739. https://doi.org/10.3102/0034654314566989

Turrión, C. (2014). Multimedia book apps in a contemporary culture: Commerce and innovation, continuity and rupture. *BLFT. Nordic Journal of ChildLit Aesthetics, 5*(1) http://dx.doi.org/10.3402/blft.v5.24426

Véliz, S., Espinoza, V., Sauvalle, I., Arroyo, R., Pizarro, M., & Garolera, M. (2017). Towards a participative approach for adapting multimodal digital books for deaf and hard of hearing people. *International Journal of Child-Computer Interaction, 11*, 90–98. https://doi.org/10.1016/j.ijcci.2016.10.003

Vermeule, B. (2010). *Why do we care about literary characters?* Johns Hopkins UP.

Vygotsky, L. (1978). Interaction between learning and development. *Readings on the Development of Children, 23*(3), 34–41.

Wellman, H. M. (2014). *Making minds: How theory of mind develops*. Oxford UP.

Wertsch, J. V. (2002). *Voices of collective remembering*. Cambridge UP.

Wigfield, A. (1997). Reading motivation: A domain-specific approach to motivation. *Educational Psychologist*, *32*(2), 59–68. https://doi.org/10.1207/s15326985ep3202_1

Winner, E. (1988). *The point of words: Children's understanding of metaphor and irony*. Harvard UP.

Wohlwend, K. E. (2010). A is for avatar: Young children in literacy 2.0 worlds and literacy 1.0 schools. *Language Arts, 88*(2), 144–152. http://www.ncte.org/journals/la/issues/v88-2

Yokota, J. (2017). Telling stories in different formats: New directions in digital stories for children. In C. Beauvais and M. Nikolajeva (Eds.), *The Edinburgh companion to children's literature* (pp. 203–216). Edinburgh UP.

Zhao, S., and L. Unsworth (2016). Touch design and narrative interpretation. In N. Kucirkova & G. Falloon (Eds.). *Apps, technology and younger learners* (89-102). Routledge.

Zucker, T. A., Moody, A. K., and McKenna, M. C. (2009). The effects of electronic books on pre-kindergarten-to-grade 5 students' literacy and language outcomes: A research synthesis. *Journal of Educational Computing Research, 40*(1), 47–87. https://doi.org/10.2190/EC.40.1.c