

# Engaging Readers in the Twenty-First Century: What We Know and Need to Know More

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*If our research efforts become too narrow in focus, then there is a good chance that our proposals for instructional development will follow suit.*

(Winograd & Johnston, 1987, p. 227)

**Abstract** What does it mean to be a successful reader in the twenty-first century? To answer this important question, this chapter discusses the twenty-first century as a new context for reading research and for the development of effective reading instruction. This chapter begins with a description of the twenty-first-century reading context and the challenges that have arisen as a result of new technological and sociocultural developments. Following that, the chapter reviews current trends in research on reading in three related fields, reading motivation, new literacies, and reading strategies, which were critical for developing integrative models to inform reading research. The chapter concludes with a discussion on the need for cross-fertilisation among these fields to develop reformatory reading practices that promote reading engagement and improvement. Teachers' significant role in advancing this reformatory agenda is highlighted. Special research attention is required for supporting reading and reading engagement for students who come from various disadvantaged backgrounds.

**Keywords** New literacies • Reading motivation • Reading engagement • Strategy instruction • Disadvantaged students

Unprecedented attention has been drawn to the questions of how students' engagement in reading can be supported and in what ways their reading abilities and achievement can be improved. In the past several decades, reading researchers have examined how students' reading achievement and engagement can be supported by nurturing cognitive enablers including reading self-efficacy, personal

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interest, and use of cognitive and regulatory strategies (e.g. Lau & Chan, 2007; Smith, Smith, Gilmore, & Jameson, 2012). While remaining important, the research on reading cognitive enablers has increasingly needed to take into consideration of an important contextual consideration—what does it mean to be a successful reader in the twenty-first century, where new technologies are revolutionising access to information, modes of learning, and ways of connecting with people locally and internationally?

To shed light on this important question, this chapter examines the way in which developments in the twenty-first century are creating new contexts for reading research. The chapter reviews current trends in research on reading from three different fields including reading motivation, new literacies, and reading strategies. While these fields are each driven by their own research agenda, the unprecedented demand for improving reading and reading achievement warrants a critical review aimed at exploring creative ways to promote cross-fertilisation. Such creative efforts would allow for the development of integrative models to inform reading research and develop new instructional practices for promoting reading engagement and achievement. This chapter begins with description of the twenty-first-century reading context before moving to the challenges that have arisen as a result of the new developments and how these relate to the need for reading education reform and change. Following this, major trends in the studies of reading in the three related fields identified above are examined. The chapter concludes with a discussion on the need for cross-fertilisation among these fields to develop reformative reading practices that promote engagement in higher-order thinking within technologically-rich environments. The discussion covers important research questions: How can a motivational perspective contribute to the new literacies research agenda and to the development of new reading strategy interventions? How can reading strategy intervention contribute to the development of critical reading skills when using both digital and traditional print-based materials? Does reading in a technology-rich environment demand a new set of reading strategies and an adjustment to reader attitude? The chapter concludes with a discussion of teachers' roles in promoting reading in the twenty-first-century setting.

## 1 The Reader, Text, and Context

Reading is both social and individual in nature. The social nature of reading is reflective of the manner in which reading develops within specific cultural and historic contexts (Smagorinsky, 2001). Cultural models, values, norms, roles, and identities are significant factors that come into play when children read and make meaning. Additionally, collaboration and interaction are important social processes that are often involved in reading (Lee, 2001).

Reading is individual because it requires the deployment of strategies, skills, and knowledge to make sense of the materials that one is reading (Verhoeven, Reitsma, & Siegel, 2011). Engaging in reading also involves cognitive skills and strategies

and their effective implementation requires careful monitoring and control (Paris, Lipson, & Wixson, 1983; Paris & Paris 2001). This is not to say that these strategies, skills, and knowledge do not originate from social learning or do not involve scaffolding or assistance in their development and deployment. Rather, we align with sociocultural researchers (Lee, 2001; Smagorinsky, 2001) who acknowledge the importance of interaction and collaboration in the reading process. The important distinction here is that during this process, each individual needs to make an effort to deploy and control these strategies in order to make sense of their reading.

We further believe that texts, and their meanings, must be interpreted within a specific context as these two are related, mutually dependent, and closely aligned with each other (Lee, 2001). A text without a context will convey vague or inaccurate meanings. In addition, the reader needs to be present and bring forth their own goals, values, and personal understanding in order to make sense of the text together with its interwoven context. In this sense, readers not only need to decode texts using appropriate cognitive skills and strategies, but, more significantly, they need to encode and derive meanings of what they read in relevant contexts. In short, aligning with Ruddell and Unrau (2013), our understanding of reading development involves the following three components: the reader, text, and context (including the teacher). In this chapter, we argue that the reading context in the twenty-first century has significantly changed due to massive globalised processes that pose great challenges to readers, hence demanding the development of new capabilities to read and make sense of texts in multimodal forms in both online and offline settings. Expectedly, teachers can no longer rely on pedagogical models that are inconsistent with new modes of reading in the twenty-first-century context.

## 2 Twenty-First Century as a New Context for Reading

Reading practices and research on reading are situated within specific sociohistoric contexts, influenced by an array of factors derived from sociocultural, economic, political, and technological dimensions (Lee, 2001; New London Group, 1996; Smagorinsky, 2001). While studies have focused on the influences of local contexts (e.g. Lee, 2001), relatively limited attention has been devoted to the role of wider contexts and trends that have influenced reading and reading engagement at the global level (cf. Daniels, 2016). The twenty-first century is a new mega-context for considering reading because it brings with it new modes of reading, which beget new reading practices, especially in out-of-school settings. For example, using Instagram, a photograph-sharing application for mobile devices, young people share photographs and posts with friends and followers through the Internet. The driving force behind this new context of reading is largely driven by globalised processes such as marketisation, movement of people, and the advent of new technologies. Early researchers such as Wittrock (1989) foretold the impact of the new century on the demand for higher-order skills in literacy. More recently,

Alexander (2012) discussed the importance of goal orientation as part of their conception of reading competence in the twenty-first century. Rueda (2013) highlighted the importance of twenty-first-century skills, new literacies, and considerations related to instruction, teachers' roles, and students' motivations.

In the twenty-first century, reading is no longer confined to printed materials. Children and young people learn to read and engage in reading in contrastingly different ways from previous generations, though a similar set of reading skills and strategies are still being utilised. Children and young people, often referred to as digital natives, conduct Google searches, use Wikipedia, scan online news, and seek information from online chat groups, while the previous generations would go to the library, buy newspapers, and speak to librarians (Palfrey & Gasser, 2008). While print-based reading is still a major form of text, children and young people are increasingly engaged in digital forms of reading using computers and mobile devices. Children are growing up in a digital world surrounded by screen-based digital devices, including tablets, mobile phones, and laptop computers. They have abundant opportunities to read when engaged in socialising, gaming, and information-searching activities using the Internet. A dominant characteristic of reading using digital devices is that texts are multimodal. Sounds, images, videos, and words are purposefully combined to effectively communicate with readers. Most children and young people seem to have adjusted well to using digital devices to communicate with each other, resulting in the production of new linguistic forms of communication, such as the use of emojis combined with words, abbreviated textual forms, and combined sounds and images. These practices are generally different from the literacy practices children experience in school.

The new modes of reading are also characterised by flexible access made possible by improved Internet connection and an upsurge of mobile devices. This means that children are able to access all types of text including social media 24/7 and allowing them the opportunity to read materials and messages shared by friends, and friends of friends, in various networks of online communities at any time. It is also clear that youngsters spend a significant amount of time on applying these new modes of reading. Recent reports indicate that children and young people in Britain (Ofcom, 2015), Australia (ACMA, 2016), and the USA (Lenhart, 2015) have increasingly spent more time on the Internet, predominantly for social and entertainment purposes, and increasingly for study, work, and other important literacy-related undertakings.

### 3 Major Challenges

There are challenging issues that come with these changes in reading practices, where children are now combining online and print-based materials. A large amount of texts is made available to children through both online and print-based media. Political thoughts, religious beliefs, and cultural norms quickly spread across the globe through the use of new technologies as well as the older ones. While children still get these materials in printed forms, most log onto the Internet

to seek such information. As a textual environment, the Internet is unstructured, ill-defined, populated with images, sounds, and videos, and connected via hyperlinks that can quickly disorient readers and users, let alone the Internet materials that are intentionally designed to deceive. Navigating through hypertexts is a cognitively demanding task. Reading in this context involves multiple texts and is virtually unbounded as all texts are connected through hyperlinks. This poses multiple problems. For instance, research demonstrates that children have difficulties reading multiple texts from multiple online sources (Bråten, Strømsø, & Samuelstuen, 2008). Effective reading in the digital age further requires critical readers who are able to search, evaluate, and form interpretations of the material they read online or encounter digitally. These processes assume the development and use of inquisitive skills as well as the ability to read critically, which are important skills given that information can be accessed on the Internet at an unprecedented rate and the verification of authenticity requires careful scrutiny. Even though online searches using Google and other search engines can result in millions of returns, users tend to focus on a limited range of popular sources (Griffith & Brophy, 2005). Children and young people rely on the Internet to provide answers to their search queries and tend to settle for the first few responses which are returned by their selected search engine. This is dangerous if children do not, or are unable to, critically assess the validity of information and reflect on arguments and counterarguments.

Another challenge for the teaching of reading in the twenty-first century is the increased cultural and linguistic diversity that students from different backgrounds bring into the classroom. Migration and people movement are occurring at an unprecedented rate, facilitated by increased mobility and ease of travel. Developed countries such as Britain, Australia, and the USA are target countries for migration. Coupled with international refugee movements, classrooms in developed countries are increasingly populated with students whose reading practices and orientations may not align with mainstream schooling expectations. Discontinuities between everyday literacy practices and schooling practices are a primary concern for literacy teachers who intend to develop a more inclusive and engaging literacy approach within their classroom contexts.

Complicating the picture further is the way in which learning in general, and reading in particular, is intricately embedded in social structures. Students' differential levels of engagement in digital literacies add another level of challenge to building a reading programme based on information and communications technologies (ICTs) and which are not accessible to all (Leu, Forzani, Rhoads, Maykel, Kennedy, & Timbrell, 2014). Special attention must be focused on the social divide in reading and reading engagement in the context of the twenty-first century. In particular, there is an urgent need to examine whether children from poor families have been sufficiently equipped to use, and benefit from, digital literacies, not just for personal communicative purposes but also for academic studies and other meaningful purposes. Leu et al. (2014) observed a gap in online reading performance between rich and poor American children, which was attributed to discrepant access to computing technologies and equipment. While additional funding to

finance equipment provision can fill the access gap, more importantly, poor children will need additional training and support for them to use digital devices in ways that they perceive personally beneficial.

Closely related to the issue of reading among disadvantaged students are the accountability regimes developed by many jurisdictions around the world to monitor, and reportedly improve, the reading performance of their students. Both national and international tests are now used to hold schools and teachers accountable for student performance. The challenge is that reading, the associated curriculum, and assessment procedures have not considered sociocultural nature of literacy learning and practices, but often hold onto what Street (1995) described as autonomous model of language, focusing on reading and writing as fixed skill sets. Juxtaposing this practice with our discussion of the twenty-first-century reading environment above directs our attention to some important considerations. First, there are two kinds of literacies, one that is included in the school curriculum and the one that is practised in both out-of-school and online settings. To the extent that students' out-of-school literacy practices play a limited role in literacy learning in school, their skills and knowledge developed in these out-of-school settings are not valued. This serves only to reinforce demarcation between school and out-of-school literacy practices, rendering loss of opportunities to build on students' refined language skills and experiences developed at home and online. Second, for students who fall behind, a focus on basic language skills is often used to hasten their language development, which unintentionally robs them of the opportunity to learn advanced literacy skills, such as evaluation and critical thinking, required for twenty-first-century reading and writing. Such an approach has had limited success (Luke, 2012) and there have been repeated warnings of associated problems, such as narrowing the curriculum and dumbing down content materials. Over the long term, students who are falling behind will be less likely to benefit from a curriculum that conveys low expectations and poses limited challenges for pushing students to read and write using advanced skills.

Integrating digital literacies into the reading curriculum is a challenge. Aggravating the pressure to change are various constraints faced by teachers, including their lack of training in using new technologies and neoliberal management practices in education, such as centralised curriculum control and test-based accountability. While it is important that teachers are given freedom and trust to explore and integrate digital literacies, there are tightened controls on the curriculum, assessment, and teaching. In Australia, for instance, the state-controlled school curriculum has given way to the implementation of a national curriculum, and additional constraints have taken hold due to national testing of students' progress in literacy and numeracy alongside reporting of aggregated school test results through the My School website. In the original design, the national test itself was designed to monitor progress and provide much-needed assistance to students who fall behind. However, its implementation has been problematic, resulting in negative impacts on teaching and learning including narrowing of curriculum and a focus on teaching to the test (Luke, 2012). Few teachers effectively utilise test results to promote reading or to assist students who are falling behind

(Ng, Wyatt-Smith, & Bartlett, 2016). In this, and other cases, it is critical to think of the new context for twenty-first-century reading as a challenge to both students and teachers alike.

Nevertheless, learning to read is more than getting a good test score and developing the skills required to complete literacy tests and examinations. The complexity of social, economic, and political issues that are reported in newspapers, on television, and through social media on a daily basis demands capable readers who are critical, participative, and reflective. There is no way that children can be shielded from issues such as violence, drugs, wars, and other sensitive problems in the social and political arenas. They read about these topics on the Internet; they share and distribute such topics through social media groups and other avenues made available to them through technology-enabled channels. In these contexts, reflection should focus on what reading is for and what important capabilities are required to develop readers to achieve these purposes.

The definition of what constitutes a successful reader requires reconsideration in light of these challenges related to reading and other related literacy activities within the new century. We believe that to be a successful reader in the twenty-first century, one needs to be motivated, strategic, and critical in their reading. This assertion is in line with Alexander's (2012) conception of reading competence required by twenty-first-century students and citizens. There is a need to focus on these capabilities in this century, not just for academic learning but also for empowering reading engagement for personal, social, and work purposes. A focus on reader capabilities is beneficial in several important ways. First, it draws our attention away from reading assessment and scores, as they do not necessarily signify the development of critical reader capabilities. It follows that the current international focus on testing of reading performance falls short of achieving the ultimate education goal of preparing children as capable readers in the twenty-first-century settings. Second, focusing on reader capabilities will aid the formulation of reading curriculum, addressing the development of personal abilities and reader attributes in the midst of our current and continuing information explosion and proliferation of literacy media. Strong alignment between curriculum, teaching, and assessment can be built using the notion of reader capabilities. Such a focus can lead to a coherent reading curriculum that prepares children to meet literacy demands in the twenty-first-century context. An important challenge for teaching reading is how to support the development of these critical reader capabilities. Aggravating this challenge is the presence of many disadvantaged students who are at risk of falling behind in their reading development and achievement. How to help disadvantaged students become engaged and capable readers in the twenty-first century has fast become an international issue. Clearly, the teaching of reading in the twenty-first century is challenging. Teachers are challenged by the curriculum and the teaching decisions that they have to make in terms of what to teach, how, and for whom. Contradictions abound, confusions and debates will continue.

Alexander's (2012) theoretical discussion of reading competence is an example of such work. She developed a taxonomy of reading competence based on an elaborated discussion of the definition of reading, including the changes that new technologies have brought to reading in the twenty-first century. In this chapter,

we take a different approach. We focus on challenges posed to reading and reading education in developed nations in the twenty-first century, and map this knowledge to relevant research literature to design significant research questions that need research attention in order to determine what still needs to be known to promote reading and reading engagement in the twenty-first century. In the sections that follow, we first review relevant research in order to construct an empirical foundation for addressing these challenges. Following this examination, we consider how the lines of research discussed can be cross-fertilised to explore new avenues to advance our understanding of these capabilities in twenty-first-century settings.

## **4 What We Know: Studies on New Literacies, Reading Motivation, and Reading Strategies**

Responding to the challenges to reading in the twenty-first century, we think that three specific fields of reading research are especially relevant. These are new literacies, reading motivation, and reading strategies. Each field has made significant contribution to understanding and promoting reading. To our knowledge, there has been no previous attempt to connect new literacies studies to research on reading motivation and reading strategies. Nevertheless, given the challenges the new century poses for reading and readers, it is important to draw on related fields in order to develop new knowledge and new ways to promote reading in the twenty-first century. These related fields are pivotal to answering fundamental questions about what to teach in reading, how to learn to read effectively and strategically, and what teachers need to know about effective reading in the new century. These fields of reading research are the focal content of this international book. Our discussion in this chapter also serves as an introduction to research and scholarly discussion in different sections of the book.

Below, we provide a concise review of research in these areas with a view to highlight major trends and point out gaps in the literature in relation to efforts to promote reading and reading engagement in each field. Our review is not exhaustive. It is purposefully built to illustrate the importance of reading in the context of the twenty-first century and to point to areas of concerns for promoting reading and reading engagement.

## **5 New Literacies Research**

New literacies research exists across multiple fields and is informed by disparate theoretical frameworks (Coiro, Knobel, Lankshear, & Leu, 2008), such as linguistic, sociocultural, critical, and psycholinguistic theories. Seminal studies have focused on multimodality (Kress, 2009), online reading and comprehension



(Leu, Zawilinski, Castek, Bannerjee, Housand, Liu, & O'Neil, 2007), literacy as social practice (Barton & Hamilton, 1998; Street, 1984), and multiliteracies (New London Group, 1996). In essence, different researchers will take different points of entry to study new literacies. For example, Leu et al. (2007) have investigated individual's learning of skills and strategies for online reading; Street (2003) focused on sociocultural influences on the use of literacy as everyday communication practices; Gee (2003) focused on discourses as new literacies; Kress (2009) discussed multimodal texts; still others, such as the New London Group (1996), draw our attention to the multiplicity of literacies. New literacies are, therefore, defined differently by different researchers, but their development is closely related to globalisation, including increased cultural and linguistic diversity, onset of new information and communication technologies, and increased complexity of text associated with multimodal representation. These changes are global, and collectively, they challenge long-held educational practices that treat reading and writing as mono-text in mono-modal form focusing exclusively on words.

While acknowledging that new literacies is a contested field, Leu et al. (2007) along with Leu, Kinzer, Coiro, Castek, and Henry (2013) highlighted four common features of new literacies, which include the influence of information and computing technologies, the important role of civic participation, the deictic nature of new technologies, and the involvement of texts that are "multimodal, multiple and multifaceted". As a research collective, new literacies researchers have drawn our attention to contexts where literacies are being used and practiced, and how these literacies are shaped and sustained by social and power relationships embedded in these contexts, both locally and globally. Equally important is how children and young people make sense of reading online and in what ways their online literacy engagement in different social media platforms can be supported. It should be noted that there are similarities shared by new and traditional forms of reading. Both require students to activate their background knowledge, use basic reading skills such as decoding, and deploy advanced skills to make interpretations and critical assessment. Recognising this shared foundation is critical to understand why and to what extent new literacies are indeed new (Afflerbach & Cho, 2009; Leu et al., 2007).

With the advent of mobile technologies, new forms of Internet-based social media, such as Facebook, Twitter, and Snapchat, have changed the ways that young people read and write, and the materials involved in reading and writing. These new media form a new social and technological context for literacy practices and enable multimodal communication, allowing young people to combine texts with images, videos, and audio files, participate in various forms of online discussions and virtual communities, build their own online identities, and most importantly, continuously interact with others using mobile devices.

In this new context, texts are commonly multimodal in nature. While written language remains an important semiotic resource, its use in both online and offline settings is increasingly merged with other modes of meaning making, including gestures, sounds, moving, and still images. In this sense, each mode in a specific

literacy event or practice conveys part of the message and each contributes to the meaning making process in different ways. The important question pertains to how people draw on different modal resources to communicate messages and make meaning. Recognising the affordance of each mode and how different modes are combined when making meaning is a current focus of new literacies research. Different modes represent a different set of semiotic resources. On the receiver's end, it is important to understand how the message is read. In other words, how meaning making happens when texts involve multiple semiotic modes. What counts as reading from a multimodal perspective is beyond written language, with all the modes in a literacy event needing to be included in the reading process in order to facilitate meaning making. A new area of research on multimodal semiotics has been developed to describe, explain, and analyse new forms of textual forms and structures, in particular, how words, images, sounds, and other new textual forms are combined to enhance meanings or modify word meanings (Cope & Kalantzis, 2000; Jewitt, 2008). New reading skills are required for reading across different modes, allowing readers to make sense of messages conveyed via the connection of different modes. For example, when reading online advertisements, young people need to understand the extent to which images are used to exaggerate product benefits. Critical reading skills are involved to compare information communicated through written descriptions and those conveyed by images. Often, an informed judgment will also involve reading a customers' review and being able to critically assess whether these reviews are fabricated.

Conceptualising online reading and comprehension as a self-directed problem-based process, Leu et al. (2013) argued that new strategies, attitudes, and social practice are critical in reading new literacies. They argued that new practices for effective reading online include identifying important reading question, isolating, evaluating, synthesising, and communicating information. A growing base of research supports the claim that these new practices require new strategies that are different from reading print-based materials (e.g. Afflerbach & Cho, 2009; Cho & Afflerbach, 2015; Coiro & Dobler, 2007; Leu et al., 2013). For example, Mckennna et al. (2012) provided survey evidence suggesting that recreational digital literacies are rather different from academic print-based and recreational print-based literacies. This suggests that digital reading may involve an additional set of reading strategies. In relation to strategy use, Cho and Afflerbach (2015) showed that strategic processes are involved in realising and constructing potential texts for online reading. Coiro (2007) found that online reading involves evaluation of understanding, relevancy, accuracy, reliability, and bias. In Chapter "Image-Language Interaction in Text Comprehension: Reading Reality and National Reading Tests", Coiro summarised her research in this area focusing on strategies for promoting personal inquiry and critical reading.

Collaboration is a major social resource that facilitates reading and improves comprehension both online and offline. While much is known about positive effects of collaboration on reading offline (e.g. Palinscar & Brown, 1984), there is a growing set of research studies that indicates that similar benefits of collaboration can be found in online reading. For example, Coiro, Castek, and Guzniczak (2011)

found that collaboration in the process of online reading promotes deeper understanding and comprehension of information texts. Recognising the importance of collaboration, Hartman, Leu, and Zawilinski (2007) have redesigned the instructional strategy of reciprocal teaching for online reading. Collaboration is undoubtedly an important part of a participatory culture frequently seen in different Internet-based communities (Jenkins, 2006).

While new skills and strategies are still developing for online reading, research on literacy as a social practice reminds us that reading and writing are not just a set of skills, but involve what people do with these skills and resources and how they use them within localised contexts (Barton, 1994). This approach to reading focuses on the importance of literacy as part of communication and highlights the importance of purposes when reading. Literacy, including reading, writing, and communicating, is social. The focus goes beyond individuals' deployment of effective skills or use of multimodal resources. Rather, the important question is how literacy patterns, or use of these semiotic resources, are established, legitimised, and privileged among members of a specific group, either online or offline. In this sense, reading and other literacy activities are situated and contextualised within specific settings and with specific groups. In essence, what counts as accepted and legitimised literacy materials and semiotic resources varies, and their meanings and ways of reading and using them need to be determined within a specific social and institutional context. This suggests that there are multiple literacy practices associated with different social groups in different settings in our society. In other words, reading means different things to different people who gather and interact for a range of social purposes in school, church, hospital, and various online platforms. It follows that learning to read and write in the context of an online gaming group will be different from learning that occurs in our classroom, though a similar set of reading skills and strategies, including comprehension and making interpretations, will still be involved in the meaning making process across both settings.

This brings to the fore the question of inconsistencies between school and out-of-school literacy practices. Ethnographic studies have improved our understanding of social and cultural practices of reading and writing using a diverse range of digital modes and devices in everyday practices (Street, 2003). For example, Burnett (Chapter "Reading the Future: The Contribution of Literacy Studies to Debates on Reading and Reading Engagement for Primary-Aged Children") provides a critical account of these studies and explains the importance of bridging practices between school and out-of-school contexts. This is possible if we focus on similarities shared between the two forms of literacy practices. For example, reading in both settings requires activation of background knowledge, comprehension, and making interpretations. While much progress has been made in relation to the research of literacy practices in informal settings for various social and communicative purposes (e.g. Beavis, Nixon, & Atkinson, 2005; Sefton-Green & Soep, 2007), we still know very little about how these everyday practices can inform literacy teaching, including the teaching of reading and promotion of reading engagement, though reading in both contexts draws on common skills and knowledge. This issue becomes even more acute as children and young people

around the world increasingly spend more time on the Internet and consider such digital tools as being a vital part of their everyday lives. Children and young people who engage in these out-of-school literacy practices seem to have no issue in locating meaningful purposes for reading and writing, whether it is for personal interest, maintaining social information, or sharing information. Another important feature is the shared understanding and values that link people in an online community of practice. The development of literacy pedagogies in school has much to learn from these purpose-driven and socially oriented out-of-school literacy practices.

It is interesting that this concern about pedagogy remains an issue following the publication of the New London Group's 1996 seminal paper. In this paper, this group of international literacy researchers highlighted important principles for developing pedagogies that address changes brought about by new media on language learning and teaching. Two decades have passed since that seminal work, and the pedagogical concerns raised in this work have not yet been fully alleviated. Instead, it can be argued that they have been aggravated by the widespread proliferation of new technologies and mobile devices. Urgent attention is required to examine issues related to preparing teachers to teach reading and writing in the context of new literacies development. In addition, the progress of integrating technologies into the classroom as part of literacy pedagogy has been rather slow, even though developing such integrated practices has been a focus of reform (Cheung & Slavin, 2013; D'Agostino, Rodgers, Harmey, & Brownfield, 2015). Technology-based literacy pedagogies are still developing, and children and young people are constantly embracing new forms of these technologies throughout their everyday lives. Perhaps, a viable way forward is to allow students to play a leading role in the pedagogical development process to show how new technologies are being adopted in their daily literacy practices in different online communities of practices. Understanding how interaction, collaboration, and sharing occur and are governed in these communities may hold the key for developing pedagogical models for new literacies.

Many students, especially those coming from low SES families, migrant and minority backgrounds, need support to learn and use new literacies. Students coming from disadvantaged backgrounds may fall behind in the new literacies learning due to limited access of computing technologies (Leu et al., 2013). Leu's studies which reported the gap between rich and poor students' experiences in using computing technologies send an important message that access and mastery of new literacies constitute a new form of inequality in education. Disadvantaged students' learning of new literacies is not just an issue of access and provisions. More than this, it is about the disparities in home-school literacy practices. The extent to which schools favour literacy practices that disadvantaged children do not usually practise at home creates an issue for teaching these children to read in school.

Increasingly, successful learning in the twenty-first century involves the development of students' abilities to comprehend online materials, critically assess their validity and usefulness, and use them effectively for problem-solving. Effective learning with multiple literacies requires participating students to be active,

engaged, motivated, explorative, risky, playful, and purposeful. It also involves knowing the basics, incorporating cultural funds of knowledge (Moll, Amanti, Neff, & Gonzalez, 1992), and being a part of the social futures. New literacies research, thus far, has not given sufficient attention to these reader attributes and readers' use of knowledge. In particular, concerted efforts to understand the significant role of motivation and strategy development in using new literacies for promoting reading and reading outcomes have not yet fully crystallised.

## 6 Reading Motivation and Engagement

Motivation is critical for reading engagement, because reading itself is an effortful activity that typically involves deep memory processing, decision-making, preferences, choices, and commitment in the pursuit of meaning making (cf. Kintsch & van Dijk, 1978; Wigfield, Guthrie, Tonks, & Perencevich, 2004). Reading motivation plays an important role in the reading process. Reading motivation can increase time, effort, and amount of reading. Many studies have reported that reading motivation predicts reading achievement (e.g. Retelsdorf, Köller, & Möller, 2011) and better reading comprehension (e.g. Guthrie, Hoa, Wigfield, Tonks, Humenick, & Littles, 2007a, Guthrie, McRae, & Klauda, 2007b). Research (e.g. Anmarkrud & Bråten, 2009) has also shown that reading motivation accounts for unique variance in reading comprehension over and beyond the variance explained by other variables.

According to Guthrie and Wigfield (2000), reading motivation is students' "personal goals, values, and beliefs with regard to the topics, processes, and outcomes of reading" (p. 405). When translated to research, this generic definition gives rise to different conceptualisations and measurements of reading motivation. In a conceptual review, Conradi, Jang, and McKenna (2014) summarised that reading motivation has been researched variously using terms such as self-efficacy, agency, goals, and interest. Despite the differences, past research has generally confirmed that these motivational variables predict reading achievement and reading engagement.

More specifically, students' reading self-efficacy has been studied extensively. This research has generally found that efficacious students persist longer in reading difficult texts, expend more effort when reading, read more in general, and read more effectively (e.g. Chapman & Tunmer, 1995; Schunk, 2003; Taboada, Tonks, Wigfield, & Guthrie, 2009). Students who have developed a keen interest in reading or who are intrinsically motivated to read for enjoyment and understanding are typically found to have more engaged patterns of reading behaviours, including a greater willingness to read challenging texts. In addition, students' intrinsic motivation for reading is positively related to reading performance (e.g. Baker & Wigfield, 1999; Taboada et al., 2009; Unrau & Schlackman, 2006) and contributes to the prediction of reading comprehension at various levels of schooling, even after controlling for other significant factors such as past reading achievement levels

(cf. Taboada et al., 2009). Further, Gottfried and colleagues (Gottfried, Fleming, & Gottfried, 2001; Wang & Guthrie, 2004) provided empirical evidence showing that students' intrinsic motivation in year seven related to later reading achievement levels in year eight and nine. More recently, reading researchers have begun to explore the significance of mastery orientations to reading performance from an achievement goal perspective. Emerging results demonstrate that students who employ mastery orientations monitor their reading process, use effective comprehension strategies, and achieve deep levels of understanding and valuing of both outcomes and processes for improving reading (Botsas & Padeliadu, 2003; Nolen, 2007).

Based on these diverse cognitive models, important questions for assessing reading motivation include, to what extent does one have and believe he/she has reading capability, thinks reading is important for a particular purpose, and wants to achieve outcomes related to that purpose? Aligning with these cognitive models, reading motivation has been consistently correlated with students' ratings of corresponding cognitive variables. A wealth of quantitative research has further established the multidimensional nature of reading motivation (Baker & Wigfield, 1999). For example, the Motivation for Reading Questionnaire (MRQ) contains a set of scales based on 11 dimensions of reading motivation (efficacy, challenge, curiosity, involvement, importance, recognition, grades, social, competition, compliance, and work avoidance) which can be collapsed into cognitive variables of competence beliefs, extrinsic reasons, and social purposes for reading adapted from major models of motivation (Klauda, 2009).

Conceptualising reading motivation as multidimensional is important, because students are motivated differently. For some, reading is always about enjoyment, whereas for others, reading is a chance to demonstrate their abilities. Profiling students' motivation for reading provides an important description of why students engage in reading. However, researchers vary in how they conceptualise and measure these different motivational dimensions (cf. Conradi et al., 2014).

Despite disagreements, three important characteristics are observable across studies that examine the multidimensionality of reading motivation. First, reading motivation include both affirming and undermining motivations, and often these contrasting motivations are related (Schaffner & Schiefele, 2007), suggesting that both forms of motivation are operating simultaneously among students. Second, social dimensions of reading, such as collaboration, have been increasingly observed in addition to the dominant cognitive dimensions. This suggests that there is a need to look beyond an individual mind frame and examine how reading is supported through social processes, such as promoting interaction and discussion in class. Third, the affective dimension of reading motivation has not been researched sufficiently. While research studies (e.g. Baker & Wigfield, 1999; see also Chapter "Engaging Students in the "Joy of Reading" Program in Finland") have investigated students' interest and enjoyment as part of intrinsic motivation for reading, we know relatively limited about how reading is affected by negative emotions including anxiety, fear, and boredom.

Given the significant impact of these motivational variables, it is important to create an instructional context that supports reading motivation. A major form of support is the use of texts that students can read successfully, willingly, and with interest. In this way, students' sense of self-efficacy, interest, and personal relevance can be enhanced. Allowing choice for reading, in relation to what and how to read, sends an important message to students that they are in control of their own reading. In addition, there is a need to consider whether reading materials are personally relevant, related to students' personal experiences, and accommodative of diversity and prior knowledge. From a social perspective, the extent to which students are given a chance to share, collaborate, and discuss their reading is an important instructional consideration for supporting reading and reading motivation. Focusing students on the importance of reading and communicating high expectations promote students' motivation to read. In short, a supportive reading context promotes reading motivation and sustains reading engagement, which can subsequently lead to increased reading and achievement.

Reading researchers have begun to develop influential reading intervention programmes for improving reading engagement and performance. For example, instructional interventions to promote mastery motivation (e.g. Miller & Meece, 1997) and reading interest (Wang & Guthrie, 2004) have been developed and tested. There are also comprehensive instruction programmes that draw on motivation and reading strategies. For example, Guthrie et al. (2007b) designed the Concept-Oriented Reading Instruction (CORI) programme to enhance students' reading motivation and provide instruction on reading strategies for comprehension in science and social studies. Empirical evidence supports that the CORI programme is effective in promoting reading motivation, engagement, and achievement (Guthrie & Klauda, 2014).

Accommodating individual differences in reading motivation derived from gender, age, and ethnicity needs to be part of a new wave of intervention design, given the significance of these individual factors (e.g. Baker & Wigfield, 1999; Chiu & McBride-Chang, 2006; Guthrie, Coddington, & Wigfield, 2009; Stanovich, Nathan, & Vala-Rossi, 1986). Additionally, more research attention is still required to examine how reading motivation can inform intervention design and how to explicitly assess the type of motivation that is most effective in promoting engagement and achievement. An example of this type of research is the Finnish Joy for Reading programme (Chapter "Engaging Students in the "Joy of Reading" Program in Finland") that specifically targets the development of reading for enjoyment utilising community-based approach drawing supports on reading from schools, libraries, and clubs in local communities.

While cognitive models have provided an empirical foundation for designing instructional interventions, the effort thus far to transact such knowledge into effective practice has not been consistently effective nor readily realised for students who are at risk of reading failure or who are from disadvantaged backgrounds. Klauda and Guthrie (2015) found that low-achieving students did not benefit from reading motivation as much as typically achieving students did. They argued that the connection between reading motivation and engagement cannot be assumed for



low-achieving or struggling students. Certainly, more studies are needed to help us elicit better outcomes, especially among those students from at-risk categories and different disadvantaged backgrounds. This is particularly important as mounting evidence demonstrates that disadvantaged students from high-poverty backgrounds often lack motivation to read. These children may hold avoidance motivation which reduces their time and effort for reading (Guthrie, Klauda, & Ho, 2013; see also Blackberry & Ng, Chapter “[“Reading was Like My Nightmare But Now it’s My Thing”: A Narrative of Growth and Change of an Australian Indigenous Student](#)”). It is therefore important to examine what motivates these disadvantaged students to read and explore innovative ways to reverse their motivation orientation from avoidance to approach. To do this, there is a need to look closely into not just whether students have developed cognitive enablers such as reading self-efficacy to read, but also to examine what sociocultural conditions and influences support the development of these capabilities. Blackberry and Ng (Chapter “[“Reading was Like My Nightmare But Now it’s My Thing”: A Narrative of Growth and Change of an Australian Indigenous Student](#)”) used a longitudinal case to show how supportive social conditions, including supports derived from the teacher and parent, could sustain reading engagement of an Indigenous student who had previously hidden her genuine interest in reading due to negative peer influences. From a Vygotskian perspective, reading motivation can be viewed as a form of higher mental functioning, with its genesis occurring in the social world. Having teachers, parents, and friends who are motivated to read can be an important social condition that forms an important part of a learning community for promoting reading and reading engagement (see Yamazumi, Chapter “[Engaging Children in Reading Activity Through Collaboration in a Japanese Elementary School: An Activity-Theoretical Case Study](#)”).

## 7 Reading Strategy Research and Critical Reading

To read well and achieve a high level of comprehension, whether it is print-based or online reading, it is critically important for readers to understand and deploy appropriate reading strategies. Paris et al. (1983) proposed the need to develop strategic readers by focusing on selecting appropriate cognitive strategies, monitor their use in light of achieving a specific reading goal, and make appropriate changes in strategic behaviour whenever necessary. Other researchers such as Pressley (1976), Weinstein and Mayer (1986), and Van Dijk and Kintsch (1983) laid the groundwork for investigating cognitive strategies in reading. Reading strategies such as connecting to prior knowledge, creating mental imagery, story maps, questioning, clarifying, summarising, making predictions, inferences, and interpretations (e.g. Pearson, Roehler, Dole, & Duffy, 1992) have been well-documented as effective strategies fluent readers use extensively during the process of reading. There have also been major efforts to combine these strategies into a coherent intervention programme. For example, Palinscar and Brown’s (1984) reciprocal



teaching programme explicitly teaches clarifying, summarising, questioning, and predicting strategies in a small group format to foster and monitor reading comprehension.

Subsequent research has included metacognition and self-regulation as part of students' repertoire of reading strategies. It is important that students know clearly when and how to implement specific reading strategies and exert control over them during the reading process (Paris et al., 1983; Paris & Paris, 2001). For example, in a recent study, Schünemann et al. (2013) combined the teaching of reciprocal teaching and self-regulation in an intervention setting to promote reading achievement among German students.

Another focal area of research on strategy instruction is text structure and structure strategy instruction. Meyer's prose analysis system (1975) has identified different major organisation patterns in expository texts, including description, sequence, compare/contrast, problem-solution, and causation. Understanding the structural properties of text and using this understanding to guide reading comprehension allows readers to guide and structure their understanding of text. Accumulated research evidence supports the contention that text structure instruction facilitates recall, locating main ideas, and writing effectively (e.g. Armbruster, Anderson, & Ostertag, 1987; Bartlett, 2010; Meyer & Poon, 2001; Meyer, Middlemiss, Theodorou, Brezinski, McDougall, & Bartlett, 2002; Williams et al., 2005; see also Chapter "The Potential for Better Outcomes of Looking at What Our Language Tells Us about What We Do When We Read for Memory and Meaning Outcomes" by Bartlett). Learning text structures promotes the development of reading efficacy (Meyer et al., 2002).

A notable trend that occurred in the research on reading strategies was moving from teaching a single strategy (e.g. Pressley, 1976; Singer & Donlan, 1982) to an intervention programme that focused on teaching a set of strategies (e.g. Palinscar & Brown, 1984), and subsequently, on metacognition that helped students use reading strategies effectively. Much improvement has been achieved in these subsequent lines of research focusing on strategy sets and metacognition. There has also been an attempt to link motivation with strategy use. Alexander, Graham, and Harris (1998) argued that reading strategies are not just a form of procedural knowledge, their effective use is purposeful, effortful and requires motivational drive. Different researchers have explored the connection between reading strategy instruction and various forms of motivation such as goal setting (Johnson & Graham, 1997), self-efficacy (Schunk & Rice, 1991), and attribution (Borkowski, Weyhing, & Carr, 1988).

An interesting feature of past studies on reading strategies was that most investigations were conducted using a single piece of mono-modal text in a bounded reading environment. Children were asked to read the text that either they had selected or that was assigned to them, whether in an experimental or classroom setting. This traditional textual environment is different from reading across an array of sites, modes, and sources on the Internet where multiple layers of texts are linked in complex ways. As a result, several key questions are critical for understanding students' reading strategies in a digital world. First, how do children read online texts? How can children read multiple texts drawn from different web pages

or websites? How do they stitch them together with other printed materials to make meaning? How can students be taught to read with a critical orientation to make informed judgements about views and ideas that may contradict each other across multiple websites and discussion forums? Finally, how do children read multimodal texts and construct meaning based on different semiotic modes?

In relation to online reading, researchers such as Leu et al. (2013), Coiro (2007), as well as Cho and Afflerbach (2015) have developed a critical empirical foundation for understanding reading strategies required for comprehending texts online. For example, Cho and Afflerbach (2015) have deduced from a case study a list of important reading strategies, including “explore and select”, “interconnect and learn”, “evaluate and critique”, and “monitor and adjust” that are essential for strategic and critical reading on the Internet.

From a critical media literacy perspective, Luke (2003) wrote about the importance of developing students’ “meta-knowledge of traditional and newly blended genres or representational conventions, cultural and symbolic codes, and linguistically coded and software-driven meanings” (p. 401). In the context of reading online, Lankshear and Knobel (2006) highlighted the importance of meta-knowledge of text veracity, which are critical skills for today’s adolescents who go directly to the Internet to seek information for various purposes. Focusing on text veracity, Braten and Braasch (Chapter “[Key Issues in Research on Students’ Critical Reading and Learning in the Twenty First Century Information Society](#)”) reviewed research in critical reading of source materials and explain the importance of the skills for evaluating source information critically as essential skills in the twenty-first century. They claim that

one viable path to improving students’ critical reading and learning is through developing their source evaluation skills, that is, their ability to judge the credibility or trustworthiness of sources by attending to available or accessible information about the source, such as who authored it or what kind of source it is.

Critical reading strategies are also essential to help children understand why a text on the Internet was created, legitimised, and distributed, and in what ways they may serve other personal and political purposes.

Another concern is what strategies are required for reading multimodal texts, while it can be expected that strategies such as clarifying, connecting with prior knowledge, questioning, summarising, and making inferences and interpretations should apply equally to both mono-modal and multimodal texts. Alvermann and Wilson (2011), using an example from a science lesson, showed that reading multimodal elements in science requires the application of strategies focusing students to make connections, set goals, and distinguish salient and less salient information. It is important to note that children need to be taught about the affordances and limitations associated with each type of semiotic resource.

Another important declarative knowledge about multimodality concerns the relationship between different types of modalities and how images are used to enhance or complement text-based messages. Unsworth (Chapter “[Image-Language Interaction in Text Comprehension: Reading Reality and National](#)”

Reading Tests”) examines the important links between language and image, and he argues that current assessment design does not given sufficient attention to assessing students’ understanding of image–language interaction. This brings to fore the question of the extent to which multimodality is integrated into school curriculum and classroom teaching.

Reading strategies are cognitive constructs. Their use, however, is always situational and contextual. In other words, the deployment of reading strategies depends on readers’ goals, interest, prior knowledge, and their perceptions of reading in a specific context. Knowledge about reading strategies is not confined to simply knowing a strategy and how to use it, but also includes using these strategies to achieve specific reading goals in a specific context. It is important to raise the question about how children read for different purposes and how different sets of reading strategies are applied in different reading settings. Children and young people, when reading postings and messages on Twitter, Facebook, and WhatsApp, may not always engage in critical reading if what they read is solely for personal enjoyment or other social purposes. It is hard to imagine that children will employ strategies such as comparison and evaluation in a systematic manner when engaging in this form of social reading on the Internet. However, it is possible, and likely in many instances, that children have automated these critical strategies and deploy them without any conscious effort. In either case, there is a need to examine the use of reading strategies for social and entertainment purposes. This kind of research can provide better understanding of children’s everyday reading practices and the extent to which such reading strategies are used in school.

Using a science lesson as an example, Alvermann (2004) argued that multimodal reading and print-centric reading share similar comprehension strategies that focus students on making connection and inferences, setting a purpose for reading, and distinguishing salient and less salient information. Undoubtedly, multimodal reading requires purposeful integration of semiotic resources. The extent to which children can do this effectively seems to rely on: (1) their understanding of the relationship between different types of semiotic modes and materials and (2) their abilities to manage and monitor the meaning making process effectively without being distracted by some of the modes.

In the case of struggling readers who predominantly come from disadvantaged backgrounds, there is a need to research the extent to which they can combine images, sounds, and texts to develop critical understanding of what they can read from different sources. Reading is contextual, and comprehension relies on situating the text in its relevant context. Strategy instruction, to date, has often ignored this important consideration. Given the importance of readers’ abilities to use these strategies across different contexts and reading media in the new century, there is a need to determine if strategies learnt in one context can be applied in another context and to what extent the strategies are modified and what factors are critical for supporting this transfer of understanding.

## 8 Engaging Readers in the Twenty-First Century: What We Need to Know More

Each of the three fields just reviewed has its own predominant focus. New literacies research concentrates on the impact of new modes of reading enabled by digital devices and online settings. The research on reading motivation and strategy instruction focuses on how to motivate and provide support to enable students to read with interest, confidence, and strategic deployment of appropriate strategies. While significant in their own right, the challenge of developing twenty-first-century readers who are engaged, critical, and strategic in reading both print-based and Internet-based texts warrants a transdisciplinary approach to combine multiple theories and research traditions to develop new conceptual models and research methods to address a shared research problem. Infusing related fields of studies in creative ways enriches our understanding of the nature of reading in the new century and develops an empirical foundation to inform decision-making in relation to what to teach, learn, and assess in reading.

Cho (2013) provided an example of such transdisciplinary research. Cho combined research of intertextuality, reading strategies, and new literacies studies to develop a detailed account of how proficient adolescent readers use different strategies to engage in reading. More generally, the type of research conducted by Cho was foregrounded in a quote by Winograd and Johnston (1987) which appeared at the beginning of this chapter. The quote suggests that an expanded focus of research drawing from different fields of studies benefits subsequent efforts in developing instruction models addressing the shared concern of improving reading in the twenty-first century.

A challenging and demanding research programme can be developed when we draw from these three fields of research. From the perspective of new literacies practices, the question is related to what motivates a person to use a specific set of strategies for reading online and across a number of social media platforms. Empirical answers to this question can provide important insight from children's out-of-school literacy practices using social media and may provide useful pedagogical models for bridging in and out-of-school literacies.

Furthermore, we must ask how different types of motivation are present in various new literacies practices and the ways in which these motivations are linked with strategy use. It is erroneous to assume that all forms of motivation engage children in the same ways, if at all, to read using online resources and new media. In a similar vein, it is erroneous to assume that online resources and new media must be motivating and will drive children to use appropriate reading strategies effectively.

Reading online and contributing to social media communities may require motivation more than enjoyment. Currently, we do not have sufficient empirical knowledge about the factors that contribute to learners' participation in literacies as part of social practice. Lave and Wenger (1991) discussed the notion of legitimate peripheral participation. In this conceptualisation, motivation, in terms of changing

identity and levels of participation, energises individuals in the process of learning and becoming. It seems reasonable to assume that during the process of participation, individuals' sense of self-efficacy, mastery orientations, and personal interest is influenced, and ideally improved. Incorporating a motivation perspective on new literacies research should enable a better understanding of the role of motivation derived from individual perceptions and socially derived influences.

Special attention should be directed at examining children's motivation in using computing technologies and the Internet for reading and writing. The available research suggests that theorising students' motivation in different new media is required in order to understand better motivational properties in the context where these new literacies are applied. The multidimensional conception of motivation is important in these contexts, as reading in daily social practices involves a diversity of reasons and purposes beyond mastery and performance orientations, which are vitally important to reading in school. Expectedly, social motivation, such as maintaining social relations with friends, will be a main form of motivation that drives children and young people to engage in new literacies practices. Nevertheless, we know very little as to how social motivation can be utilised to promote engagement in reading using the Internet and other Internet-based devices in school. This occurs despite the fact that new literacies research was rooted in the conception of literacy as a social practice. Social factors such as relationships, interactions, and goals have not been sufficiently researched in terms of how they promote, develop, and consolidate social practices in new literacies. We consider this important, as language itself denotes social relationships and often the use of language, including word choice, forms, and grammatical structure, is dependent on the type of social relationship and roles assumed by the reader and communicator.

In addition to what motivates children to use new literacies, it is important to raise the question about the extent to which new literacies can motivate reading engagement and improve reading achievement. The likely answer to this question may depend on what we focus on and how new literacies are being used. For example, using an experimental design, we can test a hypothesis that focusing a Facebook community on sharing reading materials and writing about enjoyable reading can motivate their members to read more and write better. In contrast, young people who are members of a Facebook community that focuses on personal hobbies may devote less time to reading, especially reading in school. These examples show that there are opportunities for teachers to use new media to motivate students to read. Nevertheless, equal attention is needed to help young people guard against the potentially distracting influence that new media may have on their reading development.

There is an entrenched belief that computing technologies are inherently motivating to children, and it follows that they should be utilised for promoting reading motivation online. This hypothesis needs verification and is likely to be somewhat of a moving target. Using a new technology may initially be a motivating experience, but with familiarity and repeated use over time, this motivation declines accordingly. In terms of many of the new literacy tools, it is likely that children are motivated by moving images as well as rich colour and animation. Yet, the extent to

which these semiotic resources can sustain reading engagement and enhance meaning making capacity is unclear. The answer to questions such as these are likely to be extremely complicated and nuanced, especially if different types of children who differ by personal attributes, learning orientations, experiences, and knowledge are involved. The interaction effects of these personal variables, including gender, goals, and content knowledge, in the context of online reading remain unexplored. Bringing this discussion to the development of online reading as a social practice, it is important to consider the changing roles of these online reading elements in motivating readers, crafting certain reader identities, and contributing to sustaining a community of practice. For example, some children may just be motivated to read particular type of texts via the Internet. Moreover, we do not know if students' abilities to read critically on the Internet and for school will be undermined if they are exposed to a prolonged period of reading that is brief, multimodal, and involves topics that lack coherent relatedness.

In short, it can be concluded that there are mutual influences between motivation and new literacies practices. On the one hand, children who are motivated to seek out specific reading materials online are driven by their own interest and motivation. On the other hand, online materials and their inherent multimodal characteristics can be an important source of motivation to sustain reading engagement. Future research is needed to explore these mutual influences.

Connecting reading motivation to strategy instruction is also important. Being strategic involves more than the acquisition of a specific set of reading strategies. Paris et al. (1983), in their seminal work on reading strategies, highlighted the importance of goals, tasks, and individual processes for strategy implementation. In the context of reading in the twenty-first century, knowing why one uses specific strategies is important. First, children read for different reasons and goals. Interest, enjoyment, mastery, and achievement are common goals for reading and support the multidimensional nature of reading and reading motivation. In addition, children may want to read to please others, fill in time, or seek information. The list of possible reasons is substantial. An important consideration is that different goals may set off different patterns of engagement that calls for different set of strategies. For example, if a child reads solely online materials related to their personal hobbies, they are likely to persist, try different websites, use different search engines, and scan frequently for materials that address this interest. In contrast, when a child's goal is to complete an assignment which they do not find interesting, they may simply ask their friends to share websites that can help them to complete the task. Alternatively, they may be satisfied with whatever the search engine brings forth for them on the first displayed page. Thus far, research on motivation and strategy use in reading has not adequately taken into consideration students' goals and how these goals influence their use of strategies. It follows that students' deployment of comprehension strategies can be a function of their personal interest on a topic.

In addition, there is a need to better understand the motivation–strategy link from a process perspective. The reciprocal relationship between motivation and strategy use on reading is still elusive. Does the successful deployment of strategies promote

motivation to read? Is such a link mediated by factors such as comprehension level or related achievement scores or a higher sense of self-efficacy?

It is also important to note that capable readers often do not use strategies in a rigid way. They alter their reading strategies depending on the nature of the reading tasks, text genre, their interest, prior knowledge, goals, and other additional resources such as reading with others in a group. Capable readers further alter their strategies when reading for different subject areas. Future research is needed to better understand students' flexible use of reading strategies in different online and offline settings. Linking this to students' motivation, task characteristics, and the extent to which interaction and collaboration are present during the reading process should promote a better understanding of the complexity of motivated and strategic reading using new literacies.

Promoting students' motivated, strategic, and critical engagement during Internet-based reading is important. Directing current research attention deliberately on Internet-based literacy is a value judgement that needs appropriate policy endorsement. This requires more careful planning than that which is currently summoned for designing online assessment of reading performance (OECD, 2016). To advance this line of thinking and policy formulations, there is a need for research evidence supporting the significant role of new literacies in actualising what Tierney, Bond, and Bresler (2006) touted the "genre power" of texts, both printed and online, in terms of cognitive and social possibilities where learners' motivation and strategic skills should form part of the desirable outcomes. Accumulating evidence (e.g. Hagood, 2008) has shown how engagement in specific texts and new media may have an impact beyond just language skills to identity formation and community membership. A related research direction is the effect of collaboration. For example, to what extent, does having a peer read alongside or act collaboratively during a search promote reading performance and deeper engagement? Will the presence of a peer be a source of distraction during online reading?

In a range of natural settings, whether it is at home using a laptop computer or in front of a McDonalds' tablet menu, we have observed dyads work together to achieve the task at hand. It seems that collaboration in everyday literacy practices is an accepted practice. It requires researchers' creative design to incorporate collaboration in developing instructional practices to promote reading online (Leu et al., 2014).

## **9 Concluding Remarks: The Role of Teachers and Intervention**

Ending our discussion, we draw the reader's attention to the important role that teachers play in promoting reading motivation, strategy development, and integrating online reading into their literacy programmes. While much attention has been given to the importance of teachers and teacher intervention, two important areas need additional attention. First, most of the teachers who come to teach do not

have first-hand experience in understanding how disadvantage and poverty may impact literacy development. It is important that teachers understand the constraints that arise from poverty and other forms of disadvantage. In the UK, Ellis (Chapter “[Generating Data, Generating Knowledge: Professional Identity and the Strathclyde Literacy Clinic](#)”) leads this type of work through a literacy clinic where pre-service teachers are provided opportunities to work directly with students from disadvantaged backgrounds. Ellis discusses how such interactions benefit pre-service teachers and their development. Another related concern is how to narrow the achievement gap. Much of the effort to date has focused on basic skills training. To the extent that disadvantaged students are provided limited opportunities to learn advanced literacy skills, basic skills training may unintentionally reinforce students’ deficiency. Innovative designs are required to address the achievement gap (Chapter “[Transforming Literacy Outcomes in High-Poverty Schools: An Evidence-Based Approach](#)”) and to ensure effective dissemination of evidence-based practices (Chapter “[A University-School Partnership Teacher-Teaching-Teacher Intervention Model to Promote Reading in Hong Kong: Issues and Challenges](#)”). In this context, equal attention should be directed at considering the impact of political pressure on teachers to promote stronger reading performance. Political pressures placed on reading, acknowledged three decades ago by Winograd and Johnston (1987), still prevail in today’s reading class. Teachers still struggle with instructional time issues, the use of prescribed curriculum, and attention to high-stakes test outcomes. In fact, it can be said that pressures have intensified as reading performances are used to monitor educational development and compare educational effectiveness at the systemic level.

The new context of the twenty-first century indeed poses challenges to reading and reading education. To develop capable readers is never an easy task. Autonomous models are incomplete, and new initiatives and understandings are required. In this regard, both basic and applied research is required. Graham and Harris’s work on the reading–writing connection (Chapter “[Reading and Writing Connections: How Writing Can Build Better Readers \(and Vice Versa\)](#)”) points to the possibility of developing new intervention and strategies, connecting reading and writing in purposeful ways to promote literacy development. We expect that more intervention designs will take this integrative perspective, capitalising on benefits of the reading–writing connection.

In conclusion, we extend our discussion to students from various disadvantaged backgrounds who are over-represented in the group of students failing to meet national benchmarks in literacy development across many developed countries. The current practices in Australia and other Western democracies rely on test scores to locate these students and provide them with basic training in essential literacy skills. Such practices ostensibly meet students’ needs, but overly focus on basic skills, thereby actually contradicting the complexity of reading and writing in the twenty-first century. Such an approach fails to take into account constraints and affordances surrounding the literacy development of these students. There is certainly a need to understand “*what people do with literacy*” (Barton & Hamilton, 2000, p. 7) at school, outside school as well as online. Just as importantly, we need



to know more about *why* and *how* people read and write in specific ways, highlighting the importance dynamic and social approach to reading that goes beyond the text or the media itself. We hope the discussion in this chapter sparks cross-field interest in developing new models of literacy engagement that captures how children's motivation, strategies, and interactions come into play across both print-based and online reading settings.

## References

- ACMA. (2016). *Aussie teens and kids online*. Retrieved from <http://www.acma.gov.au/theACMA/engage-blogs/engage-blogs/Research-snapshots/Aussie-teens-and-kids-online>. Accessed July 2, 2016.
- Afflerbach, P., & Cho, B. Y. (2009). Identifying and describing constructively responsive comprehension strategies in new and traditional forms of reading. In S. Israel & G. Duffy (Eds.), *Handbook of research on reading comprehension* (pp. 69–90). New York, NY: Routledge.
- Alexander, P. A., Graham, S., & Harris, K. R. (1998). A perspective on strategy research: Progress and prospects. *Educational Psychology Review*, 10(2), 129–154.
- Alexander, P. A., & The Disciplined Reading and Learning Research Laboratory. (2012). Reading into the future: Competence for the 21st century. *Educational Psychologist*, 47(4), 259–280.
- Alvermann, D. E. (2004). Multiliteracies and self questioning in the service of science learning. In E. W. Saul (Ed.), *Crossing borders in literacy and science instruction: Perspectives on theory and practice* (pp. 226–238). Newark, DE and Arlington, VA: International Reading Association and National Science Teachers Association.
- Alvermann, D. E., & Wilson, A. A. (2011). Comprehension strategy instruction for multimodal texts in science. *Theory into Practice*, 50(2), 116–124.
- Anderson, E. (2015, May 11). Teenagers spend 27 hours a week online: How internet use has ballooned in the last decade. *Telegraph*. Retrieved from <http://www.telegraph.co.uk/finance/newsbysector/mediatechnologyandtelecoms/digital-media/11597743/Teenagers-spend-27-hours-a-week-online-how-internet-use-has-ballooned-in-the-last-decade.html>
- Anmarkrud, Ø., & Bråten, I. (2009). Motivation for reading comprehension. *Learning and Individual Differences*, 19(2), 252–256.
- Armbruster, B. B., Anderson, T. H., & Ostertag, J. (1987). Does text structure/summarization instruction facilitate learning from expository text? *Reading Research Quarterly*, 22, 331–346.
- Baker, L., & Wigfield, A. (1999). Dimensions of children's motivation for reading and their relations to reading activity and reading achievement. *Reading Research Quarterly*, 34(4), 452–477.
- Bartlett, B. J. (2010). Learning about written language, literacy and meaning: A metalinguistic gift. In M. Raich, P. Schober, & J. Zelger (Eds.), *Linguistic structures, theory and practice* (pp. 47–64). Innsbruck, Austria: Studien Verlag.
- Barton, D. (1994). *Literacy: An introduction to the ecology of written language*. Oxford: Blackwells.
- Barton, D., & Hamilton, M. (1998). *Local literacies: Reading and writing in one community*. London: Routledge.
- Barton, D., & Hamilton, M. (2000). Literacy practices. In D. Barton, M. Hamilton, & R. Ivanic (Eds.), *Situated literacies: Reading and writing in context* (pp. 7–15). Abingdon: Routledge.
- Beavis, C., Nixon, H., & Atkinson, S. (2005). LAN cafés: Cafés, places of gathering or sites of informal teaching and learning? *Education, Communication & Information*, 5(1), 41–60.

- Borkowski, J. G., Weyhing, R. S., & Carr, M. (1988). Effects of attributional retraining on strategy-based reading comprehension in learning-disabled students. *Journal Educational Psychology*, 80(1), 46–53.
- Botsas, G., & Padeliadu, S. (2003). Goal orientation and reading comprehension strategy use among students with and without reading difficulties. *International Journal of Educational Research*, 39(4), 477–495.
- Bråten, I., Strømsø, H. I., & Samuelstuen, M. S. (2008). Are sophisticated students always better? The role of topic-specific personal epistemology in the understanding of multiple expository texts. *Contemporary Educational Psychology*, 33(4), 814–840.
- Chapman, J. W., & Tunmer, W. E. (1995). Development of young children's reading self-concepts: An examination of emerging subcomponents and their relationship with reading achievement. *Journal of Educational Psychology*, 87(1), 154.
- Cheung, A., & Slavin, R. (2013). Effects of educational technology applications on reading outcomes for struggling readers: A best-evidence synthesis. *Reading Research Quarterly*, 48(3), 277–299.
- Chiu, M. M., & McBride-Chang, C. (2006). Gender, context, and reading: A comparison of students in 43 countries. *Scientific Studies of Reading*, 10(4), 331–362.
- Cho, B. Y. (2013). Adolescents' constructively responsive reading strategy use in a critical internet reading task. *Reading Research Quarterly*, 48(4), 329–332.
- Cho, B.-Y., & Afflerbach, P. (2015). Reading on the Internet: Realizing and constructing potential texts. *Journal of Adolescent & Adult Literacy*, 58(6), 504–517.
- Coiro, J. (2007). *Exploring changes to reading comprehension on the Internet* (Unpublished doctoral dissertation). University of Connecticut, Storrs, CT.
- Coiro, J., Castek, J., & Guzniczak, L. (2011). Uncovering online reading comprehension processes: Two adolescents reading independently and collaboratively on the Internet. In P. J. Dunston, L. B. Gambrell, K. Headley, S. K. Fullerton, & P. M. Stecker (Eds.), *60th yearbook of the literacy research Association* (pp. 354–369). Oak Creek, WI: Literacy Research Association.
- Coiro, J., Castek, J., & Quinn, D. (2016). Personal inquiry and online research: Connecting learners in ways that matter. *The Reading Teacher*, 69(5), 483–492.
- Coiro, J., & Dobler, E. (2007). Exploring the comprehension strategies used by sixth-grade skilled readers as they search for and locate information on the Internet. *Reading Research Quarterly*, 42, 214–257.
- Coiro, J., Knobel, M., Lankshear, C., & Leu, D. J. (2008). Central issues in new literacies and new literacies research. In J. Coiro, M. Knobel, C. Lankshear, & D. J. Leu (Eds.), *The handbook of research on new literacies* (pp. 1–22). Mahwah, NJ: Lawrence Erlbaum.
- Conradi, K., Jang, B. G., & McKenna, M. C. (2014). Motivation terminology in reading research: A conceptual review. *Educational Psychology Review*, 26(1), 127–164.
- Cope, B., & Kalantzis, M. (2000). *Multiliteracies: Literacy learning and the design of social futures*. South Yarra, Victoria, Australia: Macmillan.
- D'Agostino, J. V., Rodgers, E., Harme, S., & Brownfield, K. (2015). Introducing an iPad app into literacy instruction for struggling readers: Teacher perceptions and student outcomes. *Journal of Early Childhood Literacy*, 16(4), 522–548.
- Daniels, H. (2016). *Vygotsky and pedagogy*. London: Routledge College Press.
- Gee, J. P. (2003). *What video games have to teach us about learning and literacy*. New York: Palgrave Macmillan.
- Gottfried, A. E., Flemming, J. S., & Gottfried, A. W. (2001). Continuity of academic intrinsic motivation from childhood through late adolescence: A longitudinal study. *Journal of Educational Psychology*, 93(1), 3–13.
- Griffiths, J. R., & Brophy, P. (2005). Student searching behavior and the web: Use of academic resources and Google. *Library Trends*, 53(4), 539–554.
- Guthrie, J., & Wigfield, A. (2000). Engagement and motivation in reading. In M. L. Kamil, P. B. Mosenthal, P. D. Pearson, & R. Barr (Eds.), *Handbook of reading research* (Vol. 3, pp. 403–422). Mahwah, NJ: Erlbaum.

- Guthrie, J. T., Coddington, C. S., & Wigfield, A. (2009). Profiles of reading motivation among African American and Caucasian students. *Journal of Literacy Research*, 41(3), 317–353.
- Guthrie, J. T., Hoa, A. L. W., Wigfield, A., Tonks, S. M., Humenick, N. M., & Littles, E. (2007a). Reading motivation and reading comprehension growth in the later elementary years. *Contemporary Educational Psychology*, 32(3), 282–313.
- Guthrie, J. T., & Klauda, S. L. (2014). Effects of classroom practices on reading comprehension, engagement, and motivations for adolescents. *Reading Research Quarterly*, 49(4), 387–416.
- Guthrie, J. T., Klauda, S. L., & Ho, A. N. (2013). Modeling the relationships among reading instruction, motivation, engagement, and achievement for adolescents. *Reading Research Quarterly*, 48(1), 9–26.
- Guthrie, J. T., McRae, A., & Klauda, S. L. (2007b). Contributions of concept-oriented reading instruction to knowledge about interventions for motivations in reading. *Educational Psychologist*, 42(4), 237–250.
- Guthrie, J. T., Wigfield, A., Barbosa, P., Perencevich, K. C., Taboada, A., Davis, M. H., ... Tonks, S. (2004). Increasing reading comprehension and engagement through concept-oriented reading instruction. *Journal of Educational Psychology*, 96(3), 403.
- Hagood, M. C. (2008). Intersections of popular culture, identities, and new literacies research. In J. Coiro, M. Knobel, C. Lankshear, & D. J. Leu (Eds.), *Handbook of research on new literacies* (pp. 531–551). Mahwah, NJ: Lawrence Erlbaum.
- Hartman, D., Leu, D., Zawilinski, L. (2007). *Protocol for Internet Reciprocal Teaching (IRT)*. Unpublished document. University of Connecticut, Storrs, CT. Retrieved from [www.newliteracies.uconn.edu/carnegie/documents/IRT.pdf](http://www.newliteracies.uconn.edu/carnegie/documents/IRT.pdf)
- Jenkins, H. (2006). *Fans, bloggers, and gamers: Exploring participatory culture*. NYU Press.
- Jewitt, C. (2008). Multimodality and literacy in school classrooms. *Review of Research in Education*, 32(1), 241–267.
- Johnson, L., & Graham, S. (1997). The effects of goal setting and self instruction on learning reading comprehension strategy: A study of students with learning disabilities. *Journal of Learning Disabilities*, 30, 80–92.
- Kintsch, W., & Van Dijk, T. A. (1978). Toward a model of text comprehension and production. *Psychological Review*, 85(5), 363.
- Klauda, S. L. (2009). The role of parents in adolescents' reading motivation and activity. *Educational Psychology Review*, 21(4), 325–363.
- Klauda, S. L., & Guthrie, J. (2015). Comparing relations between motivation, engagement and achievement among struggling and advanced adolescent readers. *Reading and Writing*, 28(2), 239–269.
- Kress, G. (2009). *Multimodality: A social semiotic approach to contemporary communication*. Abingdon: Routledge.
- Lankshear, C., & Knobel, M. (2006). *New literacies: Everyday practices & classroom learning*. New York: Open University Press.
- Lau, K. L., & Chan, D. W. (2007). The effects of cognitive strategy instruction on Chinese reading comprehension among Hong Kong low achieving students. *Reading and Writing*, 20(8), 833–857. doi:10.1007/s11145-006-9047-5.
- Lave, J., & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation*. Cambridge university press.
- Lee, C. D. (2001). Is October Brown Chinese? A cultural modeling activity system for underachieving students. *American Educational Research Journal*, 38(1), 97–141.
- Lenhart, A. (2015). *Teens, social media & technology overview 2015*. Pew Research Center, 9. <http://www.pewinternet.org/2015/04/09/teens-social-media-technology-2015/>
- Leu, D. J., Forzani, E., Rhoads, C., Maykel, C., Kennedy, C., & Timbrell, N. (2014). The new literacies of online research and comprehension: Rethinking the reading achievement gap. *Reading Research Quarterly*, 50(1), 37–59.
- Leu, D. J., Kinzer, C. K., Coiro, J., Castek, J., & Henry, L. A. (2013). New literacies: A dual-level theory of the changing nature of literacy, instruction, and assessment. In R. B. Ruddell,

- M. R. Ruddell, & H. Singer (Eds.), *Theoretical models and processes of reading* (6th ed., pp. 1150–1181). Newark, DE: International Reading Association.
- Leu, D. J., Zawilinski, L., Castek, J., Bannerjee, M., Housand, B., Liu, Y., et al. (2007). What is new about the new literacies of online reading comprehension? In A. Berger, L. Rush, & J. Eakle (Eds.), *Secondary school reading and writing: What research reveals for classroom practices* (pp. 37–68). Chicago, IL: NCTE/NCRL.
- Luke, A. (2012). After the testing: Talking and reading and writing the world. *Journal of Adolescent & Adult Literacy*, 56(1), 8–13.
- Luke, C. (2003). Pedagogy, connectivity, multimodality, and interdisciplinarity. *Reading Research Quarterly*, 38(3), 397–403.
- McKenna, M. C., Conradi, K., Lawrence, C., Jang, B. G., & Meyer, J. P. (2012). Reading attitudes of middle school students: Results of a US survey. *Reading Research Quarterly*, 47(3), 283–306.
- Meyer, B. J. F. (1975). Identification of the structure of prose and its implications for the study of reading and memory. *Journal of Reading Behavior*, 7, 7–47.
- Meyer, B. J. F., Middlemiss, W., Theodorou, E., Brezinski, K. L., McDougall, J., & Bartlett, B. (2002). Effects of structure strategy instruction delivered to fifth grade children using the Internet with and without the aid of older adult tutors. *Journal of Educational Psychology*, 94(3), 486–519.
- Meyer, B. J. F., & Poon, L. W. (2001). Effects of structure strategy training and signaling on recall of text. *Journal of Educational Psychology*, 93(1), 141–159.
- Miller, S. D., & Meece, J. L. (1997). Enhancing elementary students' motivation to read and write: A classroom intervention study. *Journal of Educational Research*, 90(5), 286–299.
- Moll, L., 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.
- New London Group. (1996). A pedagogy of multiliteracies: Designing social futures. *Harvard Educational Review*, 66(1), 60–93.
- Ng, C., Wyatt-Smith, C., & Bartlett, B. (2016). Disadvantaged students' voices on national testing: The submersion of NAPLAN's formative potential. In R. Lingard, G. Thomson, & S. Sellar (Eds.), *National testing in schools: An Australian assessment* (pp. 152–163). London: Routledge.
- Nolen, S. B. (2007). Young children's motivation to read and write: Development in social contexts. *Cognition and Instruction*, 25(2–3), 219–270.
- OECD. (2016). *PISA 2015 assessment and analytical framework: Science, reading, mathematics and financial literacy*. Paris: OECD Publishing. doi:10.1787/9789264255425-en.
- Ofcom. (2015). Children and parents: Media use and attitude report. Retrieved from <https://www.ofcom.org.uk/research-and-data/media-literacy-research/children/children-parents-nov-15>
- Palfrey, J., & Gasser, U. (2008). *Born digital: Understanding the first generation of Digital Natives*. New York: Basic Books.
- Palinscar, A. S., & Brown, A. L. (1984). Reciprocal teaching of comprehension-fostering and comprehension-monitoring activities. *Cognition and Instruction*, 1(2), 117–175.
- Paris, S. G., Lipson, M. Y., & Wixson, K. K. (1983). Becoming a strategic reader. *Contemporary Educational Psychology*, 8(3), 293–316.
- Paris, S. G., & Paris, A. H. (2001). Classroom applications of research on self-regulated learning. *Educational Psychologist*, 36(2), 89–101.
- Pearson, P. D., Roehler, L. R., Dole, J. A., & Duffy, G. G. (1992). Developing expertise in reading comprehension. In S. J. Samuels & A. E. Farstrup (Eds.), *What research has to say about reading instruction* (pp. 145–199). Newark, DE: International Reading Association.
- Pressley, G. M. (1976). Mental imagery helps eight-year-olds remember what they read. *Journal of Educational Psychology*, 68(3), 355–359.
- Retelsdorf, J., Köller, O., & Möller, J. (2011). On the effects of motivation on reading performance growth in secondary school. *Learning and Instruction*, 21(4), 550–559.

- Ruddell, R. B., & Unrau, N. J. (2013). Reading as a meaning-construction process: The reader, the text, and the teacher. In D. Alvermann, N. Unrau, & R. Ruddell (Eds.), *Theoretical models and processes of reading* (6th ed., pp. 1015–1068). Newark, DE: International Reading Association.
- Rueda, R. (2013). 21st-Century skills: Cultural, linguistic, and motivational perspectives. In D. Alvermann, N. Unrau, & R. Ruddell (Eds.), *Theoretical models and processes of reading* (6th ed., pp. 1241–1068). Newark, DE: International Reading Association.
- Schaffner, E., & Schiefele, U. (2007). The effect of experimental manipulation of student motivation on the situational representation of text. *Learning and Instruction*, 17(6), 755–772.
- Schünemann, N., Spörer, N., & Brunstein, J. C. (2013). Integrating self-regulation in whole-class reciprocal teaching: A moderator–mediator analysis of incremental effects on fifth graders' reading comprehension. *Contemporary Educational Psychology*, 38(4), 289–305.
- Schunk, D. H. (2003). Self-efficacy for reading and writing: Influence of modeling, goal setting, and self-evaluation. *Reading & Writing Quarterly*, 19(2), 159–172.
- Schunk, D. H., & Rice, J. M. (1991). Learning goals and progress feedback during reading comprehension instruction. *Journal of Reading Behavior*, 23(3), 315–364.
- Sefton-Green, J., & Soep, E. (2007). Creative media cultures: Making and learning beyond the school. In *International handbook of research in arts education* (pp. 835–856). Springer Netherlands.
- Singer, H., & Donlan, D. (1982). Active comprehension: Problem-solving schema with question generation for comprehension of complex short stories. *Reading Research Quarterly*, 17, 166–186.
- Smagorinsky, P. (2001). If meaning is constructed, what is it made from? Toward a cultural theory of reading. *Review of Educational Research*, 71(1), 133–169.
- Smith, J. K., Smith, L. F., Gilmore, A., & Jameson, M. (2012). Students' perceptions of reading ability, enjoyment of reading and reading achievement. *Learning and Individual Differences*, 22, 202–206. doi:10.1016/j.lindif.2011.04.010.
- Stanovich, K. E., Nathan, R. G., & Vala-Rossi, M. (1986). Developmental changes in the cognitive correlates of reading ability and the developmental lag hypothesis. *Reading Research Quarterly*, 21(3), 267–283.
- Street, B. (2003). What's "new" in New Literacy Studies? Critical approaches to literacy in theory and practice. *Current Issues in Comparative Education*, 5(2), 77–91.
- Street, B. V. (1984). *Literacy in theory and practice*. Cambridge, England: Cambridge University Press.
- Street, B. V. (1995). *Social literacies*. Harlow, England: Pearson Education
- Taboada, A., Tonks, S. M., Wigfield, A., & Guthrie, J. T. (2009). Effects of motivational and cognitive variables on reading comprehension. *Reading and Writing*, 22(1), 85–106.
- The Pew Research Center's Internet and American Life Project. (2013). *Trend data (Teens)*. Retrieved from <http://www.pewinternet.org/Static-Pages/Trend-Data-%28Teens%29.aspx>
- Tierney, R. J., Bond, E., & Bresler, J. (2006). Examining literate lives as students engage with multiple literacies. *Theory into Practice*, 45(4), 359–367. doi:10.1207/s15430421tip4504\_10.
- Unrau, N., & Schlackman, J. (2006). Motivation and its relationship with reading achievement in an urban middle school. *The Journal of Educational Research*, 100(2), 81–101.
- Van Dijk, T. A., & Kintsch, W. (1983). *Strategies of discourse comprehension* (pp. 11–12). New York: Academic Press.
- Verhoeven, L., Reitsma, P., & Siegel, L. S. (2011). Cognitive and linguistic factors in reading acquisition. *Reading and Writing*, 24(4), 387–394.
- Wang, J. H. Y., & Guthrie, J. T. (2004). Modeling the effects of intrinsic motivation, extrinsic motivation, amount of reading, and past reading achievement on text comprehension between US and Chinese students. *Reading Research Quarterly*, 39(2), 162–186.
- Weinstein, C. E., & Mayer, R. E. (1986). The teaching of learning strategies. In M. Wittrock (Ed.), *Handbook of research on teaching* (pp. 315–327). New York: Macmillan.

- Williams, J. P., Hall, K. M., Lauer, K. D., Stafford, K. B., DeSisto, L. A., & deCani, J. S. (2005). Expository text comprehension in the primary grade classroom. *Journal of Educational Psychology*, 97(4), 538–550.
- Winograd, P., & Johnston, P. (1987). Some considerations for advancing the teaching of reading comprehension. *Educational Psychologist*, 22(3–4), 213–230.
- Wittrock, M. C. (1989). Generative processes of comprehension. *Educational psychologist*, 24(4), 345–376.

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