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Sense-making: Problematizing Constructs of Literacy for 21st Century Education

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Marilyn J. Narey · Kelli Jo Kerry-Moran

Sense-making: Problematizing Constructs of Literacy for 21st Century Education

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Chapter 1
Sketches as Inquiry, or How Does a Boa Constrictor Digest an Elephant?

Marilyn J. Narey

Abstract Across the globe, nations, institutions, and individuals contemplate the challenge of advancing literacy in 21st century education. Central to this concern is the seeming disconnect between the broad perspectives of literacy promoted by 21st century scholars and the twentieth century print-dominated practices perpetuated in university and pre-K through 12 classrooms. In this chapter, I introduce an inquiry into this disconnect from the standpoint of its particular significance to teacher education. Framing this volume as a series of *sketches*; that is, interrogations that focus on the essence of a subject and that subsequently lead to understandings that inspire further questions and study, I offer a brief overview of the context and the impetus for this book. Next, I explain how a basic inquiry, "what is literacy?" precipitates further queries, and, thus underscores the need to problematize the construct of literacy in order to sketch out a cohesive, coherent direction for approaching literacy in 21st century teacher education.

Keywords 21st century literacy · Inquiry · Literacy definitions · Teacher education · Problematizing literacy

The classic tale, *The Little Prince*, by Antoine de Saint-Exupery (1943/1971) opens with a child narrator puzzling over what he had read in his book, *True Stories of Nature*. In the first pages of de Saint-Exupery's story, the child narrator tells us, "In the [nature] book it said: 'Boa constrictors swallow their prey whole, without chewing it. After that they are not able to move, and they sleep through the six months that they need for digestion'" (p. 3). Pondering over how this process might actually work, the child makes a sketch with his colored pencils, but when adults mistakenly interpret the child's sketch as a picture of a hat, he makes a second sketch to reveal the elephant inside the snake. In earlier writings (Narey, 2009, 2017), I described my ongoing use of this excerpt from de Saint-Exupery's tale as a metaphor to draw attention to the need for adults like my preservice teachers to understand the child's sketches not merely as illustrations, but rather, as examples of a critical meaning-making process. Here, in this chapter, I extend the metaphor to build on the concept

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of sketching (visual, gestural, verbal, aural, etc.) as a method of inquiry employed to make meaning of our experiences with literacy for 21st century education.

Meaning-Making: Understanding the Sketch as Inquiry

Sketches, as meaning-making endeavors, are not limited to creation by children, nor, are sketches produced only by drawing. Many of us, children and adults, create sketches in a variety of ways for a myriad of purposes. A sketch is an inquiry: an interrogation of an actual physical form or an imagined concept. Sketches are scribbled on napkins, rendered in field journals, mapped out with sticky notes on walls, constructed digitally on iPads, scratched in the dust, hummed in the middle of the night, improvised on the street, and extemporized in the studio and on the stage. Sketches are those tangible efforts to sort through our human experiences: the trying on and testing out of assorted "truths" through our fresh and focused sensory lenses in order to make sense of our experiences with the world. Sketches inform and broaden our knowledge of what is before us and what may be beyond us.

When artists, inventors, writers, engineers, musicians, tradesmen, or any persons make sketches, they utilize some medium or media to study a subject in order to understand it and to develop their thinking about it. Unlike a comprehensive detailed and less nimble work, a sketch is focused upon careful study and attention to the perceived essential qualities of an object, idea, or problem, put forth in a concrete form in order to enable examination, communication, and development. As a concentrated attempt to seek the essence of a phenomenon under study, a sketch is immediate and agile and thus, at times, may emerge from the murky milieu of experience as elegant and eloquent in its simplicity and precision. A sketch serves as a flexible framework for data collected in response to a query wherein both the process and the product prompt new queries as the sketch is developed, abandoned, revisited, or reconstructed in the dynamic process of investigation. Its function is to problematize the known, reveal the unknown, and tease us to challenge the existence of the unknowable by providing a critical landing point amid the flux of an ever-changing environment. Sketches are provocations to further questioning and study that dance in the spaces between, around, and through the seemingly static tomes of human knowledge.

It is in this sense that I frame this volume as a sketch, or actually, a series of sketches developed in response to questions about what it means to be literate in the 21st century. Believing that it is important at this time, two decades into the millennium, for teacher educators to pause and take stock of where we are, I argue that each of us must sort through the assorted "truths" of literacy that we encounter in our individual contexts with a fresh and focused lens. In alignment with this position, I purposely refrain from taking an authoritative stance in the presentation of this work. Instead, I choose to emphasize the thinking: the sense-making relative to questions embedded in and arising from experience. In so doing, I seek to resonate with educators looking to bring theory and research in concert with real-world practice as the field faces the challenges of a complex 21st century environment. Framing this book as a "sketch" denotes not only its immediacy and conciseness, but more importantly, its inquiry or "sense-making" function as a model for the proposed construct of literacy as sense-making. And, yes, in case you, the reader of this volume, are wondering, the experience of developing these sketches has been very much like attempting to understand how a boa constrictor digests an elephant.

Pausing to Ponder: What Is Literacy in the 21st Century?

Inquiries may be large or small, brief or expansive, formal or informal. Regardless of the nature of the inquiry, a multiplicity of contextual influences determines the processes utilized and the results derived. Awareness of these contextual influences contributes to greater understanding of the inquiry and of the implications projected. Therefore, I share a brief overview of the context in which the authors' sense-making presented in this volume has evolved.

Context of the Inquiry

I write these pages from an urban/suburban context in the northeastern region of the United States where my colleague in this endeavor, Kelli Jo, and I have worked in some form of preservice and/or inservice teacher education for the greater part of this 21st century. While our individual professional experiences have offered us insights across our global society, the views we express in this book primarily emerge from our work in our regional universities and with local pre-K-12 schools. Since Kelli Jo and I met a decade ago, we have collaborated on numerous projects, conference presentations, and publications. Most of these collaborations have focused upon aspects of literacy.

Although we have diverse backgrounds, Kelli Jo and I share a common perspective that originated in our childhoods as we each grew up as lovers of language and story that eventually drew us into early careers that are typically viewed as outside of the prevailing "school views" of literacy: I, Marilyn, starting out teaching visual arts in the public schools and Kelli Jo, beginning her career by working with children's theater. Upon reflection, we have surmised that perhaps these initial "outsider" perspectives offered us the early freedom to form broad constructs of literacy and that our practical experiences with young learners, particularly those who struggled within those narrow views of school literacy, prompted us to pursue our emerging questions beyond those first professional endeavors. Since those early days, we each went on to earn advanced degrees and certifications that led us to our current work as teacher educators. For me, some of these credentials were within the traditionally recognized realm of literacy instruction (e.g. reading specialist, language arts instructor), whereas other. certifications were in areas within more recent views of literacy teaching (e.g. instructional technology, curriculum supervisor). Beyond this formal education, my ongoing research and scholarly work serve to extend my understandings of literacy within teacher education and across pre-K through 12 institutions as I deliberate questions of literacy that emerge from my own experiences as a teacher educator and a former pre-K-12 practitioner.

Time for a Pause

From this contextual frame, I have come to this space in time that I believe warrants a pause for me and for the field. For years, I have been contemplating how to prepare my teacher education students to meet the needs of their future learners. I have combed the literature to study the recent research and emerging theories. I have dialogued with colleagues across the globe and participated in numerous conferences and colloquia. I have written and presented my own scholarship on 21st century notions of literacy. Yet, when I stop and look across the expanse of teacher education programs and the literacy instruction in pre-K through 12 schools, I discover that what we observe is hardly different than what I saw during the last decades of the previous century. So, I puzzle over this disconnect between 21st century literacy theory and research and the perpetuation of twentieth century literacy instruction in schools. Like the child in *The Little Prince*, I create sketches as a means of figuring out an explanation and I (along with Kelli Jo) will offer some of these inquiries as a potential path for other teacher educators who are in pursuit of a cohesive, coherent direction for teaching literacy for 21st century education.

Examining Early Sketches of the Disconnect

The problem of literacy instruction for the 21st century was first notably sketched out in 1994 when ten scholars gathered in the town of New London, New Hampshire, USA, to discuss “what was happening in the world of communications and what was happening (or not happening but perhaps should happen) in the teaching of language and literacy in schools” (Cope & Kalantzis, 2009, p. 164). Two years later, this “New London Group” of scholars published “A Pedagogy of Multiliteracies: Designing Social Futures” (New London Group, 1996) in which they presented “a theoretical overview of the connections between the changing social environment facing students and teachers and a new approach to literacy pedagogy that they call ‘multiliteracies’” (p. 60).

In this seminal work, the New London Group posited that the fundamental purpose of education is to ensure that 21st century learning leads to full participation in public, community, and economic life and that literacy is key to learning. However, they went on to point out the deficiencies of what they term “mere literacy,” that is, literacy as "centered on language only, and usually on a singular national form of language at that, which is conceived as a stable system based on rules such as mastering sound-letter correspondence" (p. 64). They underscored that the enactment of a pedagogy that promotes a "mere literacy" construct is "a carefully restricted project—restricted to formalized, monolingual, monocultural, and rule-governed forms of language" (p. 61): a situation that they cautioned is at odds with the rich, multimodal literacy landscape of the 21st century. Rather, literacy pedagogy for the 21st century must account for the differences of culture, language, and gender across linguistically and culturally diverse, globalized societies through and beyond the burgeoning variety of textual forms utilized in new technologies (New London Group, 1996). Despite educators' expressed intent to prepare learners for their futures, the scholars of the New London Group contended that literacy instruction had not been keeping pace with the demands of the 21st century. Over two decades later, the disconnect remains. So, what is literacy in 21st century education?

Examining the Subject: Notions of "Literate" and "Literacy"

As I prepared to sketch out my inquiry into my experiences with literacy in the 21st century, it seemed logical to begin by attempting to define the subject under investigation, in this case, "what does it mean to be literate?" or "what is literacy?" Yet, a review of the literature reveals that most literacy scholars underscore the difficulty of agreeing upon a clear definition or simple construct. Scholars often point to confusion as to what being literate actually means, for literacy is a socially and politically contested term. Barton (2007) claims the term is a "partisan word: in its make-up there is the idea that an alphabetic writing system is necessary in order to be literate" (p. 21). Others argue that, throughout history, constructs of literacy have changed with societies and that definitions have never maintained a fixed set of skills (Mackey, 2004; Meek, 1991). In fact, Keefe and Copeland (2011) suggest, "'What is literacy?' is a three-word question that deceptively suggests simplicity, but instead opens up a world of complexity" (p. 92).

More "Literacies" and More Questions

Adding to the confusion, the worldwide 21st century thinking about literacy that was initiated by the New London Group (1996) has given impetus to an ever-increasing array of literacy definition add-ons and spin-offs (e.g., multiliteracies; multimodal literacy, New Literacies), many which are accompanied by specific extensions of the term to imply a particular knowledge base (e.g., environmental literacy, financial literacy) or focus (e.g., critical literacy). Sketching out a literacy definition that includes this expanding list of "new" literacy definitions consequently pushes the generation of other questions as I probe further into how the field has responded to the 21st century perspectives and the perceived "disconnect."

Probing Organizational Definitions of Literacy/Literacies

Some professional organizations have formally signaled the shift to a broader characterization of literacy through rebranding or through various position statements. For instance, the International Reading Association (IRA) recently re-established its mission and changed its name to the International Literacy Association (ILA). In 1996, another well-recognized literacy group in the United States, the National Council of Teachers of English (NCTE) issued a formal resolution to "support professional development and promote public awareness of the role that viewing and visually representing our world have as forms of literacy" (http://www2.ncte.org/statement/visualformofliteracy/). NCTE has continued to respond to calls for redefining literacy with a broad position statement in 2005 on Multimodal Literacies (http://www2.ncte.org/statement/multimodalliteracies/) and more recently in 2019 with a definition of literacy in a digital age (https://ncte.org/statement/nctes-definition-literacy-digital-age/).

Additionally, the United Nations Educational, Scientific and Cultural Organization (UNESCO) (2004) recognizes the importance of multimodal texts and multiliteracies. Cambridge Assessment (2013) references a 2013 UNESCO mission statement that states "uses of literacy for the exchange of knowledge are constantly evolving, along with advances in technology" (p. 10). Susan Galloway (n.d.) is one of a number of international scholars who have examined policy issues surrounding 21st century literacy. Regarding the varied literacies that have been promoted over recent decades, Galloway draws attention to some of the challenges brought about by these new perceptions. In her literature review, she underscores that UNESCO "does not accept any of the plethora of 'separate' literacies such as media literacy, information or digital literacy" (p. 24), but rather the organization embraces all of these in a broader construct of literacy necessary for effective participation in 21st century economies and societies.

Lack of Cohesiveness and Coherence

Despite UNESCO's articulated stance, Galloway (n.d.) also notes the flux in the field over recent decades and suggests that any definition of literacy is "blurred by the accumulation of new types of literacy being promoted, by competing definitions and perspectives, and by the continual evolution of new terminology" (p. 1). These new terms have stoked controversy as some stakeholders claim this growing list of modifiers undermine any reference to reading, while others argue that reading skills should be expanded to include interpretations of signs, images, and sounds. The situation leads Perry (2012) in her critical overview of sociocultural perspectives of literacy to caution, “Given these wide definitions of literacy, some of which do not necessarily involve the ability to use print, one legitimate critique of this perspective is that *literacy* can be so broadly defined as to be almost meaningless” (p. 64).

If we accept the premise that the results of broadening our notions of literacy will leave us with so many perspectives of the construct that the term has become meaningless, where do we go from here? It is interesting that when confronted with the slightest extension of the term to add oral functions (i.e., speaking and listening), Halliday (2007/1996) argues for distinction among forms, positing “that if we call all these things literacy, then we shall have to find another term for what we called literacy before, because it is still necessary to distinguish reading and writing practices from listening and speaking practices” (p. 98). The addition of all of the other literacies would seem to be incomprehensible from this view. *So, what are we to call being literate in the 21st century? Does each distinction among forms require its own term? Is there a way to view these many forms within one construct, and if so, what must be considered?* Literacy scholars continue to explore the issue as they develop an array of theoretical depictions. Yet, there is little agreement upon a singular perspective. In the real-world of literacy practice, teacher educators, confronted with the New London Group’s (1996) critique of “mere literacy” (p. 64) that I described previously, have no clear direction to go beyond it (Burnett & Merchant, 2015; Green, 2017). It is clear, that given this lack of cohesiveness and coherence surrounding literacy in the 21st century, that pausing to ponder, “what literacy is,” is not only warranted, but also necessary. Therefore, I sketch out my notions of literacy to examine these perceptions across the fluid contexts of time. In other words, I problematize the construct of literacy for 21st century education.

Problematizing Literacy for 21st Century Education

Problematizing the construct of literacy is not a new idea. Numerous scholars (see for instance, Gee, 2012; Street, 2003) have called for broader perceptions of literacy along with greater awareness of the power relations and hierarchies of knowledge at play in the promotion of literacy. Aligning their views with the New London Group’s “mere literacy” critique, Roswell and Pahl (2015) point particularly to the literacies of schooling, as they contend, “The history, present and future of literacy tends to be linked to schooled, book-ruled literacy which, in our view, limits literacy’s power and potential” (p. 2). The aspect of power is ever-present in the history of literacy. Power permeates questions surrounding the disconnect between 21st century advances in literacy and real-world practices, and while I address this in more depth in chapter two, here I note its influence on definitions of literacy. Since the distinction of *literate* versus *illiterate* emerged in western history, prevailing perspectives of literacy have been called into question, and often, such challenges resulted in expanded definitions.

For instance, as van Kleeck and Schule (2010) describe, in colonial America, being literate meant the ability to read words with no expectation for the ability to write. Or, in the early twentieth century, the then prevailing view that literacy entailed a literal comprehension of what was read eventually gave way to literacy being defined as the ability to analyze and interpret a written text.

Increasing technological advances and globalization in the new millennium have prompted numerous scholars to formally problematize literacy. Among these, as I have previously noted, the New London Group's (1996) manifesto, "A Pedagogy of Multiliteracies: Designing Social Futures" is a pivotal work that put forth a multiliteracies view. Within this multiliteracies movement, there is a renewed attention to multimodality as 21st century texts increasingly feature visual, aural, and gestural elements. Kress (2012) argues

> Whatever view one takes of the social, economic, cultural, political and technological world, it is a world in rapid transition and a world where the pace of 'transport' in all these dimensions has accelerated – out of control nearly. The pace of transport, the instantaneity of access in many domains, have changed the social and political and economic framings of the world and, with that, the framings around – and of – the cultural resources at issue in the semiotic domain, the domain of meaning-making. (p. 47)

Promoting the advancements in thinking about literacy from a linguistic standpoint, Siefkes (2015) confronts the tendency of Western cultures to privilege words over other sign systems and notes, "Linguists have come to realise that language is neither the sole, nor even the dominant sign system" (p. 113), therefore, it is "naïve to hope for adequate theories of language when it is theoretically modeled and empirically investigated in isolation from all the other sign processes that humans use to multimodally interact with each other, and interpret their environment" (p. 114).

Other scholars proposed New Literacy Studies (e.g., Street, 2003) with greater emphasis on the sociocultural aspects of literacy. More recently, some literacy scholars have extended the construct to include the consideration of mobility of meaning-making across space and time, including social interactions, objects, and power relationships across modes and platforms in what is termed as a transliteracies view (Stornaiuolo, Smith, & Phillips, 2017). Alongside these efforts to problematize literacy for the 21st century, edusemiotics is emerging as a new, dynamic theoretical area of inquiry based upon a philosophical foundation of semiosis (i.e., the science of signs) that "brings into sharp focus the often missing dimensions of epistemology, ontology, ethics, and deep existential questions, positing these as especially valuable for education and in urgent need of exploration" (Semetsky, 2017, p. 3). Each of these advances in thinking support the need for ongoing inquiries into the definition of literacy for 21st century education.

Underscoring the Intent of Our Inquiry

We are now in the third decade of our new millennium. Despite widespread acknowledgement by a number of educational stakeholders that being literate in this time requires more than the ability to decode printed text, there is scant evidence of any consistent or coherent effort to achieve enactments of a broadened view of literacy in current practice (Burnett & Merchant, 2015; Green, 2017). Despite the important advances of literacy scholars, the results of problematizing literacy thus far have not changed practice in any substantive manner. Teacher education programs continue to perpetuate a twentieth century construct of literacy by focusing methods courses on print-based decoding strategies and assessments with scant attention to developing preservice teachers' capacities to support the broader literacy needs identified by scholars (Narey, 2017). Moreover, when the newer, broader perspectives are addressed in university-based programs or inservice professional development, teacher education tends to position such 21st century views (e.g., digital literacy, multiliteracies, critical literacy) as "add-ons," or extensions that are subordinate to the primary goal of learning to decode printed text (Galloway, n.d.). In regard to the development of literacy focused on specific groups, a range of research has been undertaken (some of which has given rise to an industry of methods). However, teacher education typically endorses only those practices that support their relative institutions' currently held connotations thereby rendering any claims made for success notable only within a restricted paradigm. Thus, the status quo has perpetuated despite many scholars' efforts to problematize prevailing constructs. As I argued at the start of this chapter, it is time to address this apparent disconnect between our espoused 21st century goals (what we say we going to do) for 21st century learners and our enacted literacy constructs (what we actually do).

Importantly, questioning beliefs about literacy does not mean arbitrarily throwing away past conceptualizations. Nor does it mean just adding new dimensions (e.g., digital literacy, multiliteracies) onto previous beliefs without analyzing how any of it will address the problem of 21st century education. What it *does mean* is that we must problematize our individual and collective models of literacy. To problematize means to seek out core tenets of a construct with the goal of teasing out overlooked or under-represented dimensions that might advance our understanding. To problematize means to attend to new questions that emerge in transaction with the object of our inquiry, in our reflection upon the experience of the transaction, and within the process of our transformation. Thus, failing to determine a substantive response to the question, "what is literacy?" relative to the disconnect among the many portrayals that I observed within the field, I next tried to come at the construct of literacy from a different angle. I decided that in problematizing literacy for 21st century instruction, I might learn more about what literacy was, if I looked at why it was. Perhaps by understanding *why* literacy is valued in our society, then I could figure out how it should look. By seeking out the core tenets of beliefs and then analyzing enactments of instruction across varied contexts, I might gain new perspectives that will inform literacy instruction in the new millennium.

More Questions, More Sketches

As I noted at the onset, while I originally used the opening narrative in de Saint-Exupery's (1943/1971) *Little Prince* as a metaphor to call attention to adults' need to understand children's drawings as meaning-making processes (Narey, 2009, 2017), here, in this current volume, I suggest that the illustrations depicting the evolution of the child's sketches pose an additional metaphor. Specifically, the child's first drawing offered some understanding of how the boa constrictor might look upon swallowing the elephant (at least to the child), however, it offered no such insight for the adults who interpreted it as a hat. Thus, the child was confronted with a new question, how to represent the phenomenon so that adults would understand? In response, he made a second sketch, this time showing a cross-section of the snake with the elephant visible. Although not part of the story, we reasonably can imagine that the sketches might have prompted the child to generate many more questions: *What is the largest creature that a boa constrictor has swallowed? How wide does the snake's mouth need to open? Is the creature dead when the snake swallows it or is it still alive? If so, does it move around inside the snake? Could the snake really swallow an elephant? How does the digestion work? How long did it take? Did the snake slowly get thinner or did it occur all at once?* Sketching potential explanations to questions in a process of inquiry leads to more questions.

It is the same with my inquiry into literacy. Sketching my first response to the question, "what is literacy?" did not provide a clear understanding of the disconnect I had observed (e.g., 21st literacy constructs in theory and research vs. how literacy instruction is enacted in pre-K through 12 instruction and teacher education programs). Rather, as related in this chapter, my initial attempt to inquire into and explain the disconnect by looking at the question, "what is literacy?" merely opened up more questions. And so, I kept pondering and sketching. Throughout the process, Kelli Jo deliberated upon my sketches and in chapter three, she has added her own sketches in response to her perspective of the teacher educator's dilemma. In the final chapter, we have collaborated to demonstrate how teacher educators might resolve the disconnect between 21st century literacy research and pre-K-12 instructional practices by enacting a literacy as sense-making approach in teacher education.

Reiterating the Intention of Sketching as Inquiry

This volume evolved from questions that emerged from the experience of being a teacher educator in the 21st century. Presented as a series of sketches, the work gives tangible form to an unfolding investigation into this experience. Reiterating my definition put forth at the opening of this chapter:

> Sketches are forms of inquiry focused upon careful study and attention to the perceived essential qualities of an object, idea, or problem, put forth in a tangible form to enable examination, communication, and development. As a concentrated attempt to seek the essence of a phenomenon under study, a sketch is immediate and agile and thus, at times, may emerge from the murky milieu of experience as elegant and eloquent in its simplicity and precision. A sketch serves as a flexible framework for data collected in response to a query wherein both the process and the product prompt new queries as the sketch is developed, abandoned, revisited, or reconstructed in the dynamic process of investigation. Its function is to problematize the known, reveal the unknown, and tease us to challenge the existence of the unknowable by providing a critical landing point amid the flux of an ever-changing environment. Sketches are provocations to further questioning and study that dance in the spaces between, around, and through the seemingly static tomes of human knowledge.

In the next chapter, I tease out how my examination of prevailing beliefs about the "why" of literacy addresses the disconnect and leads to subsequent framing of a construct of 21st century literacy as sense-making. Readers of this volume are invited to examine the evolution of our thinking within and across our individual and collaborative sketches. We hope that some teacher educators and other scholars will reflect, and perhaps, be moved to "ponder deeply" (de Saint-Exupery, 1943/1971, p. 3) upon our ideas and will pursue questions that emerge as we seek a common thread through the discourse surrounding literacy for 21st century education.

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Chapter 2
Starting with the Right Question: Not *What* Is Literacy, but *Why* Is Literacy?

Marilyn J. Narey

Abstract Throughout history, diverse educational stakeholders have framed literacy as critical to the well-being of individuals and societies. In this chapter, this canonical stance is examined across the broader educational discourse. Specifically, I direct attention to what claims are made for literacy and who is making the claim? Do our espoused beliefs about literacy align with our enacted instruction and, more importantly, have our claims for literacy been realized through our enacted efforts? Definitions of literacy are dynamic and wide-ranging. By focusing upon stated expectations for literacy, I reveal salient features of the construct that influence both historic and common interpretations of the term. Noting that the value and promise of what is defined as literacy may be denied to groups or may fail to be achieved by individuals within a society, I draw attention to the power underlying interpretations of this term. This brief overview of sociocultural, economic, and political issues of promise and power provoke questions that problematize constructs of literacy in the 21st century and lay the groundwork for the chapters that follow.

Keywords 21st century literacy · Social justice · Problematizing literacy · Literate/illiterate · Empowerment/disempowerment · Economic opportunity · Socio-political engagement · Personal development · Literacy myth · Functional literacy · Critical literacy

A True Story

> "I can read."
> The university visitor looked up from her papers and smiled at the confident countenance of the cherub-faced seven-year old child who stood before her.
> "That's wonderful!" the visitor exclaimed.
> "Reading is very important…" the child went on solemnly.
> The visitor began to nod enthusiastically in agreement. *Reading is very important*. Then, abruptly the visitor stopped nodding and her smile began to fade as the youngster continued, "… for the test!" (Narey, 2009a, p. 1)

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This exchange, first recounted in the opening pages of *Making Meaning* (Narey, 2009a), serves as one example of a wide range of professional and personal experiences that provoke my queries of literacy and, subsequently, my questions surrounding literacy instruction in the 21st century. In the moment described above, the child reveals her construct of literacy to be the acquisition of a skill (decoding printed text) that has value ("is very important") for an intended purpose ("the test"). The child's understanding has been shaped by her school environment that, in turn, has been influenced by policies generated in the educational milieu of the broader educational, sociopolitical system in which she lives. At the core of the policies and practices enacted in her school on that morning early in the 21st century are the multiple conceptualizations of literacy that trickled down the hierarchy of decision makers to be embraced (or not) by the child's individual teacher as the direct provider of her literacy instruction. That teacher and the student teacher who I was there to observe hold beliefs about literacy that were largely shaped by teacher educators like me. Therefore, it is important to consider 21st century literacy development in juxtaposition with our teacher education programs and our observations of enacted pre-K through 12 classroom practices.

Sketching the Disconnect

Over the years that have passed since my exchange with the young child who proclaimed that reading was important "for the test," I have noted little variation in regard to the literacy constructs enacted in the pre-K-12 classrooms that I visit or across the teacher education discourse in which I engage. Generally, I observe that across schools and teacher education classrooms, early literacy instruction is primarily viewed as teaching learners to decode (interpret) and encode (produce) the symbols representing sound (phonetic) relationships to spoken language. In the upper grades, I typically find that teachers focus on developing learners' capacities for efficient location of information and "correct" meaning in reading along with rule-based production in writing primarily print-based texts. Although there is increasing presence of technology coupled with opportunities for technology-based professional development, I have perceived the primary use of technology in literacy instruction to be merely a new delivery system for perpetuating and/or supporting the existing print-focused literacy curricula.

In seeming contradiction, I note that throughout the scholarly 21st century educational discourse, there is renewed emphasis on cognitive skills (e.g., critical thinking; problem solving; creativity; synthesis) and interpersonal skills (e.g., communication; collaboration; ethical awareness) as well as personal capacities for living in an ever-changing digital and global society (see for instance, Ananiadou & Claro, 2009; Barth, 2009; National Research Council, 2010). I also find that there is widespread acknowledgement among scholars and world organizations that these

21st century goals require a broad view of literacy; a view that has led to the endorsement of the numerous extensions to the terminology that indicate this multimodal shift (e.g., digital literacy). My observations are mirrored in Siegel's (2012) reflection, "It is increasingly rare to open a professional journal or attend a conference without encountering the argument that multimodality is central to literate practice everywhere except schools" (p. 671). So how do we address this disconnect?

As I argued in the previous chapter, the first step to addressing this disconnect is to pause and ponder what literacy means: we need to problematize the construct. Here again, I underscore that I believe that reading *is* "important", and that literacy *is* central to learning, but I also stress that this is only true if we ensure that the definition that we are promoting is one that is relevant to our 21st century world. Throughout my career as a teacher, teacher educator, and scholar, I have witnessed how the growing emphasis on literacy instruction has worked to diminish the time devoted to other subject areas like social studies and the arts as schools and teacher education programs enact the espoused belief that literacy is so valuable that it is central to learners' futures. Interestingly, while educators' explanation of the purpose for literacy may not be denoted specifically or exclusively as "for the test," I have observed that high stakes achievement measures remain within the frequently cited rationale for literacy instruction. I find these enacted constructs of literacy at odds with the stated goals for 21st century learners (see Ananiadou & Claro, 2009; Davies, Fidler, & Gorbis, 2011), as well as with my own experiences teaching children, teens, and adults and my understandings of how learners make meaning.

Constructs of Literacy Matter: Issues of Social Justice

Across the globe, international stakeholders frame literacy as critical to the wellbeing of individuals and societies (see for example, Cambridge Assessment, 2013). When literacy is imbued with such power that it is called for in all corners of the globe, how its meaning and value are interpreted clearly involve issues of individual freedom and opportunity. Each frame for literacy instruction, every enactment of the constructs behind literacy policies, generates critical questions of social justice. Yet, many educators fail to question the conceptualizations of literacy that shape their practices even when their enacted constructs are in direct conflict to their espoused beliefs (Narey, 2017). In other words, educators may say and think that literacy is critical to living in the 21st century (the *espoused* belief), without critically analyzing whether their literacy instruction (the *enacted* construct) is actually successful in preparing all learners for their future worlds. Educators must problematize literacy to ask, what is literacy in this 21st century, why is it important for each learner, and in what contexts will it matter?

The New London Group (1996) set forth a model for such questioning, by asking, "What is appropriate education for women, for indigenous peoples, for immigrants who do not speak the national language, for speakers of non-standard dialects? What is appropriate for all in the context of the ever more critical factors of local diversity and global connectedness?" (p. 61). They point out that enactments of literacy pedagogy that merely promote great literature or grammar in a singular national form of language "will characteristically translate into a more or less authoritarian kind of pedagogy" (p. 64) and fail to achieve espoused goals for 21st century literacy. Advocating for a broader definition of literacy, they propose, "In some cultural contexts—in an Aboriginal community or in a multimedia environment, for instance—the visual mode of representation may be much more powerful and closely related to language than "mere literacy" would ever be able to allow" (p. 64). Further, they argue for acknowledgement of the dynamic nature of literacy in 21st century in a "different kind of pedagogy, one in which language and other modes of meaning are dynamic representational resources, constantly being remade by their users as they work to achieve their various cultural purposes" (p. 64).

From a perspective that is deeply focused upon the development of socially just practices of literacy instruction that can prepare all learners for their current and future 21st century lives, I contend that the field can no longer continue to accept the status quo (Narey, 2009b, 2017, 2018). Further, I posit that it is unproductive to merely tweak twentieth century delineations of literacy by adding on modifiers (e.g., *digital* literacy, *critical* literacy). Rather, I argue that educational stakeholders must take the time to rethink our conceptions to determine what 21st century literacy must be, how it should be valued, and what purpose it will be expected to serve. We teacher educators, particularly, must subject our beliefs to careful review and analysis by problematizing the construct in the context of the past and future as well as the present. As we consider the value and purpose of literacy, it is critical to examine the promise and power that we attribute to literacy through the lens of our espoused beliefs and the results of actual enactments of our literacy constructs. *What claims are made for literacy, who is making them, and for whom are they making them? How is the power that is given to literacy used and abused?*

Using and Abusing the Power of Literacy

As a scholar, I view the history of literacy through a critical lens. Thus, I take seriously those blatant issues of social justice that are related to literacy. For example, an obvious direct abuse of literacy is evidenced in the literacy tests that were used to deny voting rights during the Jim Crow era in the United States (Tischauser, 2012). As described on the National Museum of American History (n.d.) website, while literacy tests were promoted by those in power as a means of guaranteeing an educated and informed electorate, generally the tests were devised "to disqualify immigrants and the poor, who had less education. In the Southern states, literacy tests were used heavily to prevent African Americans from registering to vote" https://americanhistory.si.edu/democracy-exhibition/vote-voice/keeping-vote/state-rules-federal-rules/literacy-tests.

Beyond such recognizable abuses, it is also important to be aware that often, there are more subtle abuses of power as claims for literacy are advanced in the rhetoric across national agendas. Highlighting this "rhetorical value" literacy holds, Branch (2015) notes

> the ways that the idea of literacy could, and would, be used in service of ends that have nothing to do with reading and writing. Discourses surrounding literacy in the United States and elsewhere have long relied on the salutary associations of literacy to support measures promoting a variety of unrelated or partially related ends. Indeed, the history of educational reform, and in particular the reform movements of the late 20th and early 21st centuries, largely bear out the value of leaning on the inarguable benefit of literacy to promote agendas that stretch well beyond literacy. (p. 62)

As a teacher educator whose career encompasses work with learners of all ages and in a variety of settings, I have witnessed the negative impact of narrowly defined views of literacy. Given that my background began "outside" of literacy education, it may not be surprising that my views emerge from a broader perspective. A large part of my vision for literacy began with studying the works of theorists and scholars (see for example Egan, 1999; Eisner, 1994, 1998; Freire, 1994; Goodman, 1996, 2005) who advanced notions of literacy within contexts of learning and the world rather than for the sake of literacy itself. Thus, I have found some institutional or policy promoted instruction (e.g., overemphasis on commercialized teaching techniques for phonemic awareness; assessing fluency in words per minute) concerning. When literacy instruction is limited to such narrow foci and neglects the development of the learners' critical, meaning-making processes, it becomes a social justice issue.

Referring back to my "true story" at the opening of this chapter: like the child who announced that reading was "important for the test," learners in classrooms across the world are subject to decision makers' (i.e., governments, institutions, administrators, teachers) constructs of literacy. Despite calls for 21st century learning, these decision makers' constructs of literacy remain untransformed and fail to respond to the demands of 21st century communication (Mills, 2009). This follows a global pattern of the implementation of 21st century goals in general. Voogt and Roblin (2012) summarize the situation:

> at a policy level, many countries around the world have adopted the development of 21st century competences as a major national goal—although to different extents—and have a strong commitment towards facilitating its implementation. However, these initiatives do not necessarily reflect what occurs in the daily classroom activities. (p. 315)

What is espoused or promoted is often very different from what is done or enacted as varied characterizations of literacy are subject to be used and abused in political rhetoric and struggles for power. It is only by problematizing our literacy constructs and subjecting the institutional or political promotion of these constructs to critical review that we can gain insight. While there are various influences upon decision makers' enactments of literacy, including the previously noted accountability measures of testing, the problem of literacy for 21st century education must first be addressed by encouraging teachers and teacher educators to interrogate their espoused and enacted constructs. As Dede (2010) contends, 21st century education requires re-defining what should be core in the curriculum. This redefinition demands questioning our current beliefs, values, and assumptions about learning.

The Unique Role of Teacher Education

Within the literacy education hierarchy, we, teachers and teacher educators, are the direct providers of instruction and thus, if we choose, it is *we* who make the ultimate determination regarding the construct of literacy enacted in our classrooms. To do this responsibly, we must begin by individually taking up our own efforts to problematize literacy. Notwithstanding other influential factors (see Chapter 4), each of us must rethink what we are teaching and why. We must question the value of literacy: how do our constructs of *what literacy is* align with *what we believe literacy does* relative to our learners' lives; how (if at all) is literacy central to learners' 21st century futures; what purposes does/might literacy serve; and how might our constructs be shaped by and positioned within both a historical and current context?

Starting with the Right Question

My earlier question, "what is literacy?" introduced in the previous chapter is also relevant to the social justice grounding of my ongoing work (see for example, Narey, 2009b, 2017, 2018). Definitions of literacy "determine perceptions of individuals who fall on either side of the standard (what a literate or nonliterate is like) and thus in a deep way affect both the substance and style of educational programs" (Scribner, 1984, p. 6). Personally, I seek to define literacy because I understand the serious impact that these constructs have on learners' experiences and opportunities. Yet, as I noted in chapter one, definitions are elusive amid so many sign systems.

While I agree with Perry (2012) that there is "benefit to understanding specific semiotic systems" (p. 65), I urge caution when separating out individual sign systems for study (e.g., efforts targeted to achieve visual literacy or learn digital coding). There are two primary reasons why I believe focusing on individual sign systems is problematic within a social justice lens. First, as a practical matter, I see scant value in accepting any singular form of practice as the locus for a definition of literacy amid a wide dynamic field of jointly independent and interdependent practices. Such categorization holds the potential to artificially constrict definitions through generalization that can cause focus on some features while ignoring others within that system and across a definition of literacy in general. Secondly, as a social justice concern, categorizations can work to privilege or constrain literacy practices that ultimately have an impact on individuals' lives. How we define literacy and its practice is ultimately how we will come to define people as we derive who is literate or illiterate from the perspective of our construct. We must refrain from objectifying human capacities in narrowly defined, decontextualized constructs of literacy as we struggle to answer the question, "what is literacy?" Expectations for who should be or could be literate within an espoused definition have changed over time. We find cases from past as well as current times where specific populations have been targeted for improved literacy development. We also note times when literacy has been withheld from certain groups either through failing to provide adequate instruction or by outright denial even to the extent of making it unlawful.

Bartlett (2008) writes, "definitions of literacy are not innocent: they incorporate beliefs and assumptions that have political implications" (p. 739). Our perceptions of literacy influence research, policy, and practice (Gee, 2015a; Kell & Kell, 2013; UNESCO, 2004). Conversely, we might also contend that research, policy, and practice influence our views of literacy (Narey, 2017), and thus, we are caught up in a cycle that merely goes round and round, unable to move constructs of literacy forward to address changing needs and contexts.

Therefore, rather than frame our characterizations to stress a multiplicity of forms using terms like multiliteracies or to expand the list of modifiers created to accommodate varied forms (e.g., digital literacy, visual literacy), might we instead seek out what is common across all forms? Rather than beginning with the question, "what is literacy?" might we propose a different question: "why is literacy?" Exploration of "why" empowers us to move beyond perpetuating the disjointed collection of what literacy is (or will be) to discern the essence of literacy across the range of past, current, and future perspectives. This essence might then be evaluated as the potential core for developing a clearer and more focused construct for literacy and literacy instruction in the 21st century.

"Why" Is Literacy?

In examining the "why" of literacy I am looking to tease out the espoused valued attributes and the observed results of its realization while suspending commitment to any specific definition. I focus upon arguments and enactments of what literacy is for, what it does, to discover qualities most relevant to constructs of literacy for 21st century education. This examination of *what literacy is for* (the *why*) is situated primarily in issues of power. Further, I consider voices promoting the empowerment attributed to being/becoming literate as well as those challenging such contentions.

Embracing Green's (2017) contention that inquiries into the future of literacy must be grounded in the plurality of the history of literacy, I believe that definitions of literacy for 21st century education need to be constructed from critical analysis of the evolving notion of *literate* versus *illiterate* across time and context. In problematizing literacy, I encourage more careful scrutiny of claims made for literacy including who is making these claims and for what purpose: in other words, the why of literacy.

"Literacy as Empowerment" of Individuals and Society

Throughout history, diverse educational stakeholders have framed literacy as critical to the well-being of individuals and societies. Subsequently, concepts of literacy have become inextricably linked to notions of power: to be literate is to have power; to be illiterate is to be denied power. The work of Paolo Freire (1921–1997) among the disadvantaged poor of Brazil and the titles of two of his books–*Pedagogy of the Oppressed* (1984) and *Pedagogy of Hope* (1995)–indicate both the repressiveness of illiteracy and the emancipatory power of literacy. While power can be viewed in a variety of ways, Bartlett (2008) points out that many popular constructs of literacy promote the belief that being literate empowers individuals and societies (1) by bringing about improved employment opportunities and (2) by increasing social/political engagement. Although definitions of *what literacy is* change with time and context, I find these two "why" themes: economic and socio-political power, prevalent across the current international discourse as well as within my own research.

In regard to the international discourse, for instance, nations across the globe promote education reforms that emphasize literacy for economic and social reasons. Beyond accentuating literacy as necessary for competing in the global economy, in the National Literacy Trust Report 'Literacy Changes Lives,' Morrisroe (2014) makes associations between low levels of literacy and employment in the United Kingdom while extending these with further links to health and crime. As Kell and Kell (2013) explain, there are "detrimental effects poor literacy has on individuals. This is often supported by data demonstrating that people with poor literacy are overrepresented in prisons, on the register of the long term unemployed and the chronically ill" (p. 9). In another instance, Cambridge Assessment (2013) references UNESCO as putting forth the statement, "A literate community is a dynamic community, one that exchanges ideas and engages in debate. Illiteracy, however, is an obstacle to a better quality of life, and can even breed exclusion and violence" (p. 10). In a report from the World Literacy Foundation, Cree, Kay, and Steward (2012) underscore a similar point in noting that the cost of illiteracy to the global economy is estimated at 1.19 trillion dollars. More recently, a white paper published by this same organization (i.e., World Literacy Foundation, 2018) attributes societal issues surrounding illiteracy as relative to decreased economic growth. Further, it extends the problem to take in concerns about citizens' abilities to distinguish between real and fake news reports, or even to access basic health information or other educational resources. While Morrisoe (2014) acknowledges that viewing low literacy abilities in isolation may not account for all factors leading to disadvantage, she stresses that improved literacy is necessary for economic and social gains.

Although my discussion to this point has centered on two common promises cited in the discourse for why literacy is valued: (1) improved employment opportunities and (2) greater social/political engagement, literacy also is valued as a means of personal development: intellectually, physically, and emotionally. Intellectually, humans gain knowledge. Physically, they acquire information for healthy living. Emotionally, they can engage in and reflect upon experiences gained through the literary media that are both individually and socially relevant. Therefore, I suggest that literacy for the 21st century might be directed toward three attributes that appear to be of value: (1) improved employment opportunities; (2) greater social/political engagement; and (3) personal development.

Sketches from Real World Experiences

My own research aligns with these conceptualizations of literacy as empowerment. For instance, several examples from data collected in my grant-funded study offer a snapshot of how literacy was valued in one particular urban-suburban middle school in lower socio-economic neighborhood in northeastern United States. The purpose of the study (Narey, 2013) was to examine relationships among literacy teachers' (N = 6) and 7th and 8th grade students' (N = 108) constructs of reading and the instructional context to inform further development of the middle school language arts curriculum. Figure 2.1 was drawn by one teacher participant in response to the research question: "How do you see literacy as being important for your particular group of students now or in the future?"

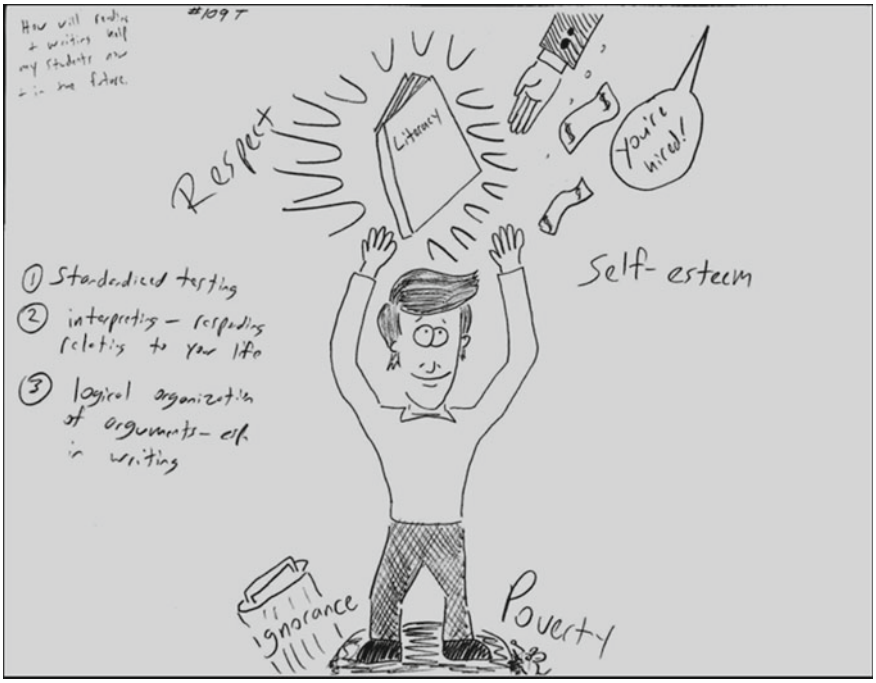
How will reading & writing help my students now & in the future.
#109 T
Respect
Literacy
You're hired!
Self-esteem
① Standardized testing
② interpreting – responding relating to your life
③ logical organization of arguments – esp. in writing
ignorance
Poverty

Fig. 2.1 Teacher's drawing of his espoused construct of literacy as "a step to a better future" (from Narey, 2013)

The illustration shows the teacher participant's espoused belief that literacy will lift his students out of their current situation. The teacher's visual representations of a garbage can and a rat at the student's feet symbolize his view of the negative situation implied by the printed labels: "ignorance" and "poverty." The teacher has drawn the figure of the student with arms reaching upward towards a book titled "literacy" that is surrounded by light beams and the words "respect" and "self-esteem." Reaching down towards the student is a hand emerging from what appears to be a suit with its connotations of business attire along with two bills with dollar (money) symbols and the cartoon balloon text "you're hired" that implies the promise of future employment through attaining literacy.

In the individual follow-up interview conducted to clarify my interpretation of the drawing and obtain the teacher participant's further beliefs regarding language arts/reading, the teacher participant further explained:

> I see it [literacy] as a step out of the socioeconomic situation on which they are, and a step to a better future. That literacy—being able to read, being able to write, being able to communicate effectively—is a means for them to get a career and a life where they have self-esteem, respect, both for themselves and from others, and either get out of whatever situation they might be in, or to ensure that they have the chance to fulfill their dreams. (Participant #109)

The other teachers voiced similar views and although some student participants in the study echoed the teachers' responses by focusing on employment, a larger percentage tended to offer more personal accounts for why literacy was important. For example, one student participant described how his drawing (Fig. 2.2) showed literacy was important to him as a means of escaping situations he wished to avoid.

His drawing shows him walking past a row of lockers imagining scenes from the book he has drawn next to his figure showing the cover labeled with the title of a popular children's series. He explains:

> Sometimes people are talking about stuff, and I don't want to get into that conversation, so I just go and I read and get away from them. I'm walking past and hear people talking about other people, and it kind of gets me mad sometimes to talk about friends. So I would just [go], for lunch, sometimes if people are saying stuff, I would just read and, you know, eat my lunch. I imagine everything in my head, and I go to different places [in my head]. (Participant #29)

In another student participant's drawing (Fig. 2.3) a different understanding of literacy is represented. Here he shows a view of literacy that is depicted as being produced and interpreted through the textual forms of a Facebook page on his computer screen and text messages on his cell phone in the out-of-school space of his bedroom. During his interview, he explains the importance of literacy to him as the ability to keep abreast of information critical to his current social life:

> Text messages, Facebook. People send me messages…it could be something important that I would need to know. Important messages that you need to know about. Say I have a basketball game that I don't know about, and one of my friends tells me in a message. (Participant #32)

Teacher and student participants in the study frequently noted the importance of literacy for "school learning" of varied subject matter for standards, test scores,

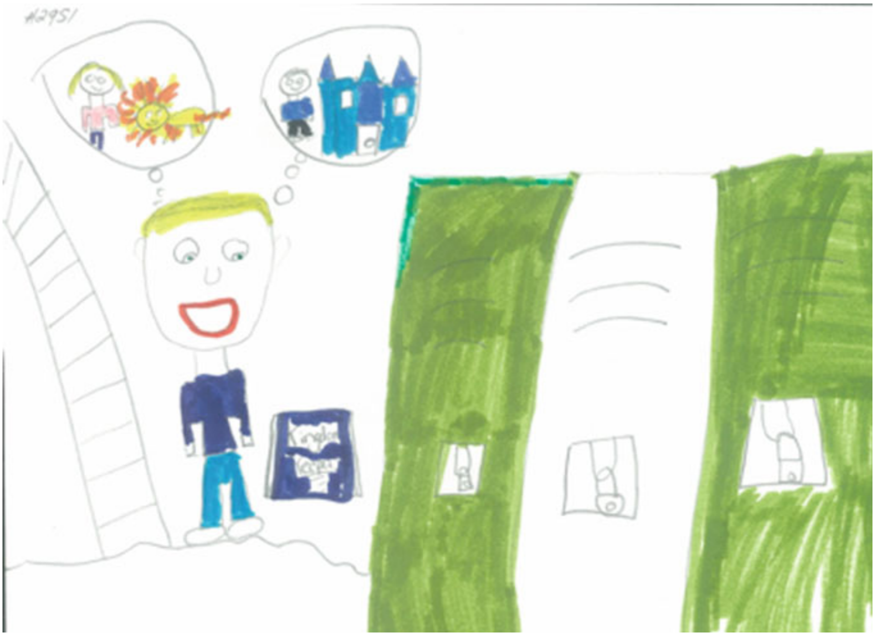
#295/
Kingdom
Keepers

Fig. 2.2 Literacy is important because it helps me avoid situations I don't like (from Narey, 2013)

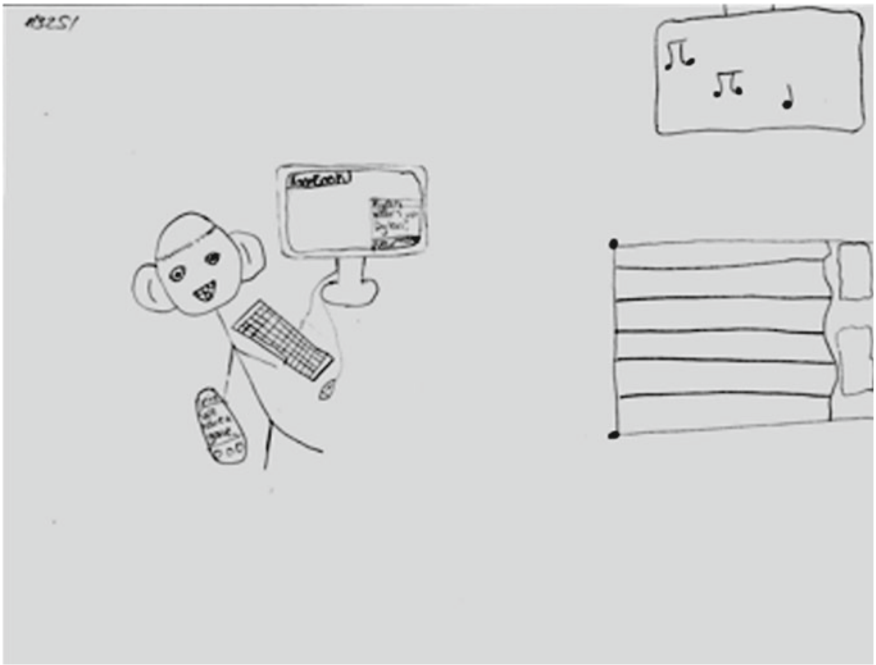
#325/
facebook

Fig. 2.3 Literacy is important for getting important messages (from Narey, 2013)

and grades that would ensure entry into academic institutions and/or the job market and while the student participants often cited a multiplicity of textual forms, most notably digitally-based, like the two student examples provided here, most participants held to a definition of literacy limited to encoding and decoding traditional print whether on paper or screen. Interestingly, several students who indicated that they believed literacy was the ability to read books and that their own literacy was inadequate showed enactments of literacy that we find quite compelling for 21st century constructs. For instance, one of these student participants, stated:

> Whenever you usually read in school, like sometimes you read out loud, and maybe you're not good at reading out loud. And whenever you're reading at home, you usually read inside your head, and you might be a little bit better and read fluidly (sic) more than you do out loud. I'm not a real good reader. (Participant 28)

Yet, further interview data from this student revealed that not only did he read extensively as he engaged in learning about his favorite bands and selecting affordable keyboards and other equipment on the Internet, he also had taught himself to play guitar from watching YouTube videos, and spent hours experimenting with composing songs with Garage Band that he planned on someday developing into a series of podcasts. Similarly, another student described how he and two of his older friends had a small business doing odd jobs around their neighborhood. They researched legal and financial issues, debated equipment purchases, locations, and advertising, produced fliers and business cards, and created scripts for a door-to-door campaign. Clearly, while students like these may not consider themselves highly literate in the "school sense," they demonstrate wide ranging literacy skills that are valued in our 21st century.

Varied characterizations of literacy were evidenced in this study, and while the original purpose of the investigation was to inform the redesign of the Language Arts curriculum at the school site, a review of the data collected is useful here in that it offers an authentic example of literacy beliefs at one school, thus offering a microcosm to ponder as we attempt to understand why literacy is valued in the 21st century. It is significant to note that the students' and teachers' views on the importance of literacy in this study are in alignment with the "why" of literacy proposed at the start of this section: (1) improved employment opportunities; (2) greater social/political engagement; and (3) personal development. These goals for empowering individuals and societies are important to keep in mind as we look toward developing a construct of literacy that is relevant to the 21st century.

Power of Literacy: A Closer Look

As teachers and teacher educators inquire into the promise of power that literacy is purported to afford, it is useful to reflect upon another image of literacy created by a young learner. The drawing (Fig. 2.4) was created by an 11-year-old student with whom I was working during a week-long summer literacy program for children

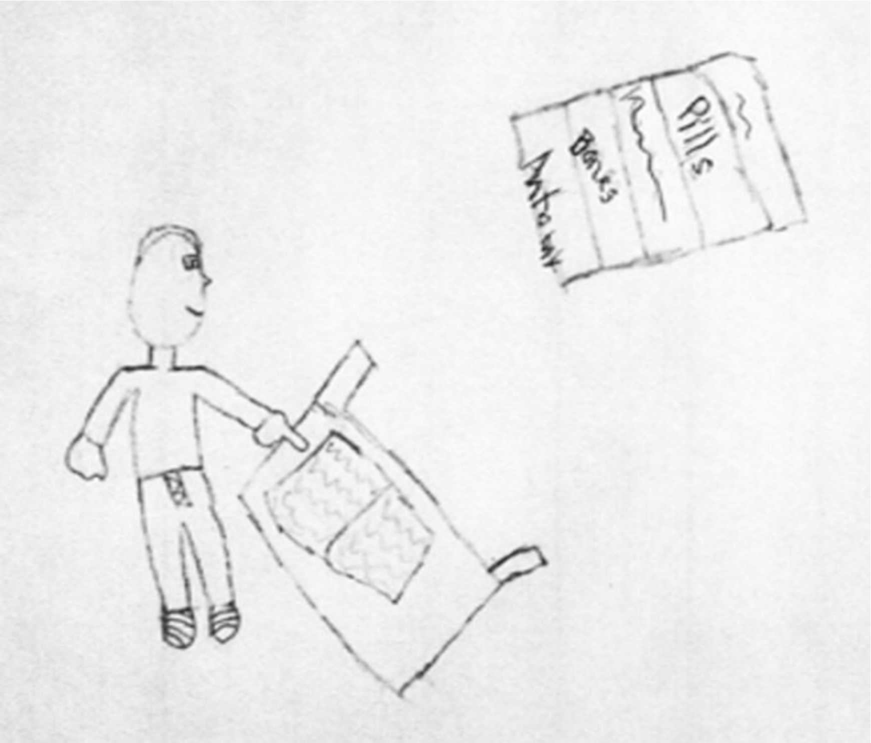

Fig. 2.4 "Reading can help me be a doctor." Example of a drawing by an eleven-year-old boy participating in a summer literacy program for children of migrant farm workers (Narey, Field notes journal)

of migrant farm workers. An entry from my field journal reflecting on the program experiences offers a perspective on the promise and power of literacy in the lives of learners:

> In his drawn response to the question of why attending the (literacy) program is important to him, Devon (pseudonym) shows himself reading in a library, the books piled around him have images of bones, and titles indicated they are medical texts. Verified by our subsequent discussion, a content analysis of the drawing indicates that Devon's construct of literacy is that he sees reading as a means for him to become a doctor; it is career/goal oriented (doctors need to read), traditional texts (books) and site (library).
>
> As we move on to the QRI (Qualitative Reading Inventory) that I am required to administer on this first meeting, I wonder if his classroom teachers at his regular school are aware of his aspirations to be a doctor? Devon's construct (career/goal oriented, traditional texts and site) tends to align with typical notions of school-based literacy—yet, do his teachers put forth this construct for this eleven-year-old student who is reading two grade levels below his current grade level and has already been held back a year, and who may face further challenges of his socioeconomic status as a child of migrant farm workers? Might teachers only envision career/goal-oriented construct for students who have demonstrated achievement and how

> does this influence the type of instruction provided to those like Devon who have shown limited achievement in reading? (Narey, field journal)

In attempting to understand the power of literacy in the 21st century, it may be noted that many international and individual calls for literacy tend to promote what is called "functional literacy" or, "the level of skill in reading and writing that any individual needs in order to cope with adult life" (Lawton & Gordon, 1996, p. 108). The term, *functional literacy*, has been used by UNESCO, the United Nations Educational Scientific and Cultural Organization, since the middle of the twentieth century and is defined as the capacity of an individual to "engage in all those activities in which literacy is required for effective functioning of his or her group and community" (Barton, 2007). UNESCO and other international agencies have used this characterization to push forth literacy campaigns with the end goal of economic development and socio-political engagement. Yet, given these vague descriptions of functional literacy, this definition can be interpreted as not bound to any clear-cut universal set of skills.

Generally, though, the term is often characterized as the ability to decode one's written national language in order to hold a job and get by day-to-day. This utilitarian notion emerged from the US Army's need to defer 433,000 draftees in 1942 because they were unable to understand written directions for basic military jobs and while the standards for meeting the requirements have been modified to meet the shifting demands of various nations' labor forces, the utilitarian notion has held (McArthur, Lam-McArthur, & Fontaine, 2018).

It is important to recognize that the kind and level of literacy that may actually be "required for effective functioning" is subject to change with group and community and may vary with context within and across an individual's lifetime. Further, such stances by UNESCO and other entities that treat literacy as a measurable variable that is tied to economic development implies a causality that many scholars find questionable. As Vágvölgyi, Coldea, Dresler, Schrader, and Nuerk (2016) point out, although functional literacy is a highly publicized subject, the definition, assessment of, and investigation into diagnosis of development issues is lacking. Importantly, from human development and social justice standpoints, although proponents endorse the promotion of a minimal requirement for literacy necessary for preparing workers for jobs, absent from this view is the individual growth and socio-political engagement that also might be required for effective functioning.

Barton (2007) joins the scholars who take issue with the popular notion that functional literacy can promote economic advancement and alleviate social inconsistencies, as he contends

> Books are still being published which talk about overcoming 'the scourge of illiteracy' and such phrases are still common. In my view, in such statements international bodies are trying to incorporate new approaches while still keeping hold of a rigid functional approach. This is one of several areas in the study of literacy where I see attempts to fit new ideas into the creaking framework of outworn theories which cannot take the strain. UNESCO and other international agencies still need to reassess the ideas and theories underlying their aims and methods. (p. 192)

The need to think beyond mere *functional literacy* was importantly advanced by leading British intellectual, Richard Hoggart (1957/2009) who developed the concept of *critical literacy* as he noted the cultural change across society. Rather than empowering individuals and societies, Hoggart (1998b), maintains that holding to a perspective of functional literacy can actually result in disempowerment. He points out that merely teaching people to decode written language is not literacy, but rather "becomes a way of subordinating great numbers of people [by leaving them open to being] conned by mass persuaders" (p. 56). Hoggart (1998a) argues that critical literacy is what is crucial to empowerment because critical literacy promotes meaningful political engagement through informed and reasoned thinking, and it offers a means of combatting the negative mass consumer culture of a capitalistic society. Critical literacy deals with the process of meaning making and the individuals and groups involved. As Janks (2012) posits, critical literacy means "critical engagement with the ways in which we produce and consume meaning, whose meanings count and whose are dismissed, who speaks and who is silenced, who benefits and who is disadvantaged" (p. 159). Critical literacy capacities are integral to the 21st century literacy construct of sense-making put forth in this book. I draw particular attention to its use as the process relates to problematizing notions of the power and promise of literacy.

Challenges to the Literacy Myth: The Contextual, Critical *Who*

Reinforcing a deficit discourse that links illiteracy to economic and sociopolitical challenges can also work to mask the real causes of economic and social inequalities (Hamilton & Pitt, 2011). Further, Gee (2015b) notes, in many societies, including Britain, Japan, and the United States, although literacy was promoted among the poor, it also was viewed as a "possible threat" because it could be used against the higher class as the poor become aware of and fought back oppressive tactics. Ethnicity rather than literacy, Gee argues, often determined an individual's advancement in the workplace: "It was not because you were 'illiterate' that you finished up in the worst jobs but because of your background (e.g., being black or an Irish Catholic rendered literacy much less efficacious than it was for English Protestants)" (p. 44). Graff (2010) cautions against perpetuating what he calls the "literacy myth" pointing out, "Literacy's power and influence were seldom independent of other determining and mediating factors" (p. 19). However, across the globe, institutions and individuals like the teacher in the study highlighted previously (see Narey, 2013) continue to hold on to what Graff terms a literacy myth: the false belief that literacy will be

> sufficient for overcoming poverty and surmounting limitations rooted in racial, ethnic, gender and religious differences. Implicit in this formulation is the belief that individual achievement may reduce the effects of ascribed social and structural inequalities. Despite such expectations, that literacy and education can and have been used to stimulate democratic discourse

> and practices, literacy has been used to foster political repression and maintain inequitable social conditions. (Graff, 2010, p. 18)

Gee (2015a) joins Graff and the chorus of scholars who have pulled back the curtain on the literacy myth and cautions how the power of literacy has often been used to disempower certain individuals and groups:

> The most striking continuity in the history of literacy is the way in which literacy has been used, in age after age, to solidify the social hierarchy, empower elites and ensure that people lower on the hierarchy accept the values, norms and beliefs of the elites, even when not in their self-interest, or group interest to do so. (p. 84)

Yet, Graff (2011) suggests that rather than attempt to disprove the literacy myth, we should try "to understand it, and reinterpret it to serve more equitable, progressive humane goals" (p. 73). Drawing upon the work of critical literacy scholars (see for instance, Comber & Simpson, 2001; Freire, 1984; Giroux & McLaren, 1994), I underscore that it is important to understand that "why is literacy," is inextricably tied to the critical "who" as well as the contextual "where" and "when." As teacher educators concerned with literacy for 21st century education, we must ask who benefits (or not) from literacy and who decides? How does this change with individuals and contexts?

Assertion of Privilege and Limitation of Access

As I sketch out how a construct of literacy has been used to acquire or maintain power, I note two main methods employed. One frequently used method is the assertion of privilege of a particular form. Throughout history, literacy has been used as a means of exerting power over others by asserting privilege to a particular connotation of literacy. As historian, Jill Lepore (2018) notes in *These Truths,* Euro-American colonizers manipulated the power of literacy over peoples of indigenous and African descent. Lepore employs seventeenth century English vicar, Samuel Purchas' (1648, as cited in Lepore, 2018) term, "literall advantage" to demonstrate the early misuse of the power of literacy. Lepore explains that the Euro-American colonizers would only acknowledge cultures as literate and therefore, sovereign if they utilized a record of language that the Euro-Americans deemed as literate. Thus, they could justify their taking over of the land, labor, and people on the basis of a claim of illiteracy. Standing as an example of the multiple episodes in which constructs of literacy have been weaponized to claim or exert power is Lepore's chronicle of Christopher Columbus' actions against the Haitians in 1492:

> Every difference he saw as an absence. Insisting that they had no faith and no civil government and were therefore infidels and savages who could not rightfully own anything, he claimed possession of the land by the act of writing. They were a people without truth; he would make his truth theirs. (Lepore, 2018, p. 13)

This "seeing difference as absence"; this non-recognition of other valid and valuable literacies whether consciously employed as a political weapon or an unconscious ethnocentrism, calls attention to the aspect of power exerted in defining the terms of literacy; making one definition of literacy more important, more powerful than another.

Other episodes in history demonstrate how power is proffered by controlling access. Sometimes this has meant access to the physical product or materials and at other times it is withholding access to the process. Access to product is ascribed to the physical literacy product as the vehicle for ideas or meaning making and power is manifested through limiting access to or with the destruction of the literary materials. Of these, we note the infamous Nazi book burning that began in Berlin in 1933 to eliminate the books that the Nazi's claimed were "responsible for the collapse of Germany" (Fishburn, 2007, p. 223). Hitler's attack on literary materials extended to other literary media such as with the 1937 Munich exhibition of Degenerate Art that demonstrated the Third Reich's "power to exercise its will with impunity" (Levi, 1998, p. 41) by staging the show to incentivize public disdain for ideas the Nazis wanted to quash.

Such eliminating or limiting another society's or culture's literacy as a powerful means of replacing or controlling it can be seen from ancient times through today. Knuth (2003) documents the multiple political upheavals during which the contents of the Library of Alexandria was burned. Another historian, Hillerbrand (2006) describes how works by philosophers Giordano Bruno and Jan Hus were burned and their authors executed because their ideas were counter to the Catholic Church. Tun (2014) writes about the quipu, a unique literacy mode made of complex knotted colored cord used in the ancient Inca Empire that was destroyed in part by followers of Atahualpa in order to obliterate memory and record of the previous Inca leaders. Moving forward to current times, in 2012 we see militant Islamists backed by al-Qaida who sought to destroy ancient manuscripts housed in libraries in Timbuktu that another faction believed contradicted their interpretation of Islam.

Less violent, though equally destructive examples of access also occur as authorities limit media-based and digital products in order to control what is available to a society. This control of literacy is sometimes used to quell dissent and promote an authority's views. For instance, Gehlbach and Sonin (2014) argue that the Kremlin's power to dictate NTV's editorial line is an example of state-controlled media that demonstrates this misuse of power.

Beyond controlling the products of literacy, various authorities also attempt to control processes of literacy. Power is exerted or maintained by restricting who may be literate. From the 1830s through the American Civil War, three states—North Carolina, South Carolina, and Georgia–"banned anyone from teaching any African-American, whether slave or free, to read or write" (Wallenstein, 1997, p. 42). Dalton (1991) includes an excerpt from the November 9,1897 issue of *Harper's Weekly* that blatantly frames efforts to use denial of print literacy to control a population: "The alphabet is an abolitionist. If you would keep a people enslaved, refuse to teach them to read."

These methods of using literacy to wield power continue to play out in our world today. The problematizing of literacy undertaken in this volume is in great part, a recognition of the privilege afforded to verbocentric constructs of literacy in our schools over other forms of literacy. Further, problematizing literacy for 21st century education necessitates consideration of issues of access to products and processes of these other literacies, and thus, underscores social justice concerns. As Janks (2000) stresses, “Students have to be taught how to use and select from all the available semiotic resources for representation in order to make meaning, while at the same time combining and recombining these resources so as to create possibilities for transformation and reconstruction” (p. 177). Janks goes on to argue, “If, on the other hand, we deny students access, we perpetuate their marginalization in a society that continues to recognize the value and importance of these forms” (p. 176).

It is important for educators to be aware of literacy as a social justice issue and to make efforts to deal with assertion of privilege and limitations of access that play out in schools. For instance, Edelsky (2006) notes the positive aspects of whole language instruction in providing greater equity across the classroom context:

> Whole language undermined sorting and ranking people through testing and tracking, demanded teacher autonomy for developing their own curricula with students in their own classrooms, decreased reliance on commercial reading programs and commercially prepared assessment systems… and promoted the questioning of authority (through theories that argued for multiple interpretations of texts). (p. 156)

The position that I articulate does not argue against the teaching of print literacy skills. Rather, I argue that concern must be on the learners’ needs for literacy in the 21st century and contend that while print literacy needs to be a part of 21st century literacy, teachers and teacher educators must look more closely at what we are promoting and why. To that end, I closely attend to Lisa Delpit’s (1995) wisdom so eloquently articulated in *Other People’s Children: Cultural Conflict in the Classroom.* In this classic text, Delpit draws attention to the need to examine our characterizations of literacy in the context of the classroom and the broader world; the importance of understanding potential disconnects between the *what* we are advocating for *whom.*

Discrepancies Within the Notion of Literacy as Empowerment

Print literacy is important and print literacy can empower individuals. Yet, we educators also must be cautious about the power that we give to the print literacy myth. Goals for literacy stated earlier: (1) improved employment opportunities; (2) greater social/political engagement; and (3) personal development will not be achieved; we will not empower individuals and societies in this 21st century with a construct of literacy that is limited to, or that privileges print above other literacy forms. What many perceive to be a set of capacities that objectively denote the literate person, are actually a subjective assertion of value judgments (Knoblauch, 1990) put forth by those in power. If we promote the notion that literacy empowers individuals and societies, we must critically assess whether the capacities truly lead to empowerment of all and we are not merely endorsing instruction based upon values that may or may not align with those of the individuals or context in which it is enacted.

Girls Score Higher Literacy Achievement Lower Economic Opportunity

To this end, Levy (2016) looks at relationships among gender, literacy achievement, and the labor market that appear to challenge the literacy myth that literacy leads to higher employment. Citing a breadth of studies that find girls' literacy achievement is typically higher than boys and noting statistics that reveal income inequality between men and women, Levy maintains, "Given that girls outperform boys in literacy, yet women are substantially over-represented in low-paid work, this raises some very important questions about the relationship between attainment in literacy in school and outcome in the labour market" (p. 280).

Being Literate Varies with Cultural Context

Taeko (2014), argues that narrow portrayals of literacy must broaden to take in tradition and culture. Taeko's research and analysis of the narratives of three Maasai women, found "(1) these "illiterate" women have their own literacy through which they read the world (their community); (2) these women use this self-determined literacy to raise critical awareness on community issues; and (3) these women have become "organic intellectuals" in that they have the capacity to synthesize information and skills in order to solve community issues by themselves" (p. 826).

Who May Be Deemed "Literate"?

Noting that the United Nations Educational, Scientific and Cultural Organization (UNESCO) characterizes literacy as being a fundamental human right (UNESCO Institute for Statistics, 2008), Keefe and Copeland (2011), underscore their concern of how this applies to people with extensive needs for support. They ask, "First, what comprises the literacy to which people have a right? Second, do all people, regardless of ability perceived or otherwise, share in this right?" (Keefe & Copeland, 2011, p. 93). Over the years, there has been an on-going struggle to challenge the powers that control who may be deemed "literate," and who may not (Dukes & Ming, 2014; Kliewer, Biklen, & Kasa-Hendrickson, 2006). Kliewer et al. detail two cases: one, Phillis Wheatley, an adolescent female slave and a second, Helen Keller, a young woman born with profound disabilities. The authors point out that within the course of their lives, each woman had produced written works that people questioned as impossible due to their "status of slave or profoundly disabled" (p. 167). Viewed as less than human and thus assumed as incapable of literacy, they were called in front of tribunals that challenged their authorship of their writings. As Kliewer et al., note, "Themes of literate control and disconnection continue to reverberate in the lives of individuals with significant disabilities" (p. 186). Although, ongoing resistance based upon scientific demonstration of literacy ability is important, Kliewer et al. argue that morals must change before the science:

> denial of literacy is insidious, as is racism, and is nearly impervious to conflicting evidence. It is hegemonic: a part of an ideology of control imposed on the marginalized by those who lay claim to the center. As such, we recognize that an overarching science of literacy is distinctly possible but extremely unlikely until a seismic shift takes place in the moral fabric of how people with disabilities are understood. Only after we establish a democratic morality that assumes citizenship and challenges marginalization will the science of literacy follow that supports the general acceptance of literate individuals who are also significantly disabled. (p. 186)

Many of us across the field of education (and beyond) have proclaimed the value of literacy as a means of empowerment. Yet, how often, if at all, have we teacher educators interrogated these notions of power ourselves or with our teacher candidates or in relation to literacy curricula? While many across the broader education community continue to uncritically advance the "literacy myth" (Graff, 2010, 2011), in this section I have highlighted how constructs of literacy have served to disempower and control certain populations, frequently, women, people of color, the poor, and the differently-abled. Like Graff (2011), I do not aim to disprove the literacy myth, but rather seek "to understand it, and reinterpret it to serve more equitable, progressive humane goals" (p. 73) as I seek a new understanding of what literacy is/may be in the 21st century.

From "Why" Back to "What"

As teacher educators, we struggle to find a direction for literacy in 21st century education. Knowing that "the meaning of literacy depends upon the social institutions in which it is embedded" (Street, 1984, p. 8), how do we respond to the multiple and diverse needs of individuals and contexts? Freebody (2007) reminds us that what is effective in literacy education can differ depending on variations in cultural practices, available technologies, and societal needs, noting that a better definition of literacy would be "how people use and produce symbolic materials fluently and effectively" (Freebody, 2007, 9). Learners are

> diverse social actors, who are variably situated in social, cultural, political, and economic contexts, read and write disparate texts for different purposes and with unpredictable outcomes. Social and cultural factors that are only perceptible and understandable in the local context influence how students understand and "take up" literacy practices and literacy pedagogies. (Bartlett, 2008, p. 751)

Further, we must keep in mind that to view literacy as a single phenomenon that has a causal effect is misleading (Bartlett, 2008; Kell & Kell, 2013) and this holds true whatever construct we might hold or develop. As teachers and teacher educators it is our responsibility to attempt to understand this truth and refrain from accepting and perpetuating unchallenged platitudes. Instead, we must interrogate both our espoused and enacted perspectives of literacy within the context of learners' lives and relevant to societal demands in the 21st century to ensure our espoused goals for literacy (our *why*) can be achieved through the construct of literacy that is at the heart of what we are teaching.

It is clear that the power of literacy does not always empower. At times it can be used to disempower. As Macedo (2003) underscores, "literacy is an eminently political phenomenon, and it must be analyzed within the context of a theory of power relationships and an understanding of social and cultural reproduction and production" (p. 13). As educators, we must be aware of the impact that unchallenged connotations of literacy have on policies, research, and practices, and consequently, on the individual learners in our pre-K through 12 classrooms and university programs. What literacy *is* should emerge from *why it is*, why it is of value and this *why* is inextricably tied to *who* as well as the contextual *where* and *when.*

If the why of literacy, as I have discerned in this chapter, is to advance individual human development, socio-political engagement, and economic well-being for all people in the uncertain times of the 21st century, then a critical examination of these espoused goals relative to the results of our enactments of practice indicates that a more relevant construct of literacy is needed to guide our 21st century literacy instruction. In the next chapter Kelli Jo explores the many "literacies" that have garnered attention over the past decades. Readers will be provoked to consider if and how these other literacies might address the goals for 21st century literacy, as they examine the dilemma faced by teacher educators that a growing body of literacies precipitates.

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Chapter 3
A Dilemma for the Teacher Educator: Navigating the 21st Century Literacy Landscape

Kelli Jo Kerry-Moran

Abstract Twenty first century scholars argue that literate persons must encode and decode across a multiplicity of sociocultural contexts and sign systems. Print no longer dominates the 21st century literacy landscape, but images, sound, and other modal texts share equal importance. In this chapter, I introduce the teacher educator's dilemma of deciding which literacies to teach. There is a disconnect between the many literacies proposed by scholars and what is actually valued in pre-K-12 schools and taught in teacher education. The profusion of literacies can overwhelm teachers, teacher educators, and students who may confuse and conflate overlapping literacy constructs. I focus on some of the literacies most frequently encountered when working with practitioners by examining literacies included in the *What's Hot* report published by the International Literacy Association during the 21st century. Literacies included in the report are defined and examined for the contributions they make to addressing the goals of 21st century literacy learning.

Keywords 21st century literacy · *What's Hot* report · Teaching literacies

As a teacher educator, I want to prepare my students to understand and teach literacy that is necessary for living and thriving in the 21st century. Every literacy scholar, teacher educator, or classroom teacher would agree with this goal, but there is a disconnect between 21st century literacies described in the scholarly literature and literacy instruction that is practiced within the context of public schools and teacher education programs. Which literacy theories and approaches are needed to prepare students for 21st century demands? Scholarly journals and professional conferences include articles and presentations focused on the importance of digital literacy, multimodal literacy, disciplinary literacy and many others; however, there is a lack of clarity to what these terms mean. Where do the boundaries of one literacy end and another begin? Where do literacies overlap? How can a teacher or teacher educator know what to teach when disciplinary standards, accrediting bodies, textbooks and school curricula focus almost exclusively on one literacy—print while also declaring that students need to be prepared for 21st century

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learning that includes more than printed text? As I wonder about what I should teach, I also wonder about the "why" that Marilyn sketched out in chapter two. She noted that across the field, literacy is valued because it (1) improves employment opportunities, (2) supports greater social and political engagement, and (3) contributes to and enhances individual human development. As we contemplated these "whys," we agreed that print-based literacy would continue to be necessary in a 21st century environment. However, we suspected that if this is all we taught in teacher education courses, it would not be enough to accomplish the three primary aims (employment, social/political engagement, personal development) in our increasingly technological and global world.

And more literacies keep coming. Literacy scholars are prolific in proposing and elaborating on the many literacy acts that are evident in human practices, so that the past several decades have seen literacies like critical literacy, multimodal literacy, and disciplinary literacy gain increasing exposure. Nevertheless, reading and writing remain the primary focus of literacy instruction in pre-K-12 schools and teacher education. So back to my question; what should I teach to my teacher education students, and why?

Teaching Literacy: Sketching My Own Literary Landscape

My own literacy landscape reveals how important it is for teachers to embrace a broad view of literacy. As I wrote about in a previous volume (Kerry-Moran, 2017), I struggled with much of the academic work in kindergarten, and the first few years of school were excruciating for me. My mother recalls me coming home from school, climbing into her lap and crying that I wished I could be good at something. As a child, I excelled in arts-based meaning-making, but since this wasn't valued by my kindergarten teacher, I had stomach aches, worrying about making mistakes writing numbers and letters. It wasn't until a substitute teacher praised my artwork one day that the "memory engraves into my young mind as the only time I have been good at something that matters to a teacher" (Kerry-Moran, 2017, p. 275). I believe all meaning-making should matter to teachers, but too often we focus so heavily on school-based literacies that children and youth who excel in other areas feel "stupid" in school or neglect their talents and proclivities in a single-minded pursuit of the "mere literacies" that matter so greatly in school settings. Over the years, I have heard and observed stories similar to my own where children and youth who demonstrate tremendous skill and promise in areas such as entrepreneurship, arts, athletics, computers, public speaking, leadership, or a variety of other capacities are labeled deficient because of lack of achievement in school-based literacies. This negative labeling hurts students' school-based prospects to the point that some describe it as a social justice concern (Narey, 2017; Siegel, 2012).

Yet, acknowledging the value in the diverse ways that learners make meaning is not the only reason to embrace a broad view of literacy. When I look around my university classroom today, it is clear that the construct of literacy I teach must extend beyond “mere literacy.” These future teachers have already spent time that morning on their cell phones, texting and interacting through various social media, posting to and scrolling through Instagram or Snapchat feed, listening to a favorite podcast or watching a recent video from someone they follow on social media. They create and share playlists, talk with friends about movies they have seen or an upcoming assignment, read newsfeed, and choose what outfit and hairstyle to wear in presenting themselves to the world each day. All are “doing” literacy; even though these are very different from the school-based literacies they expect to teach. These experiences, and thousands like them, are had by children and adults throughout the world. I am convinced that we need a better understanding of how humans interact with and make sense of each other and the world around them, and increased acknowledgement that the sense making and creating capacities of people reach far beyond “mere literacy”.

Surveying the Literacy Landscape in Teacher Education

However, teaching only one type of literacy can be challenging enough. It is bewildering to consider all the ways and modes through which people in the past, present, and future engage in literate acts. Teaching print-based literacy, along with critical literacy, multiliteracies, digital literacy, and other literacies is time consuming, and I feel the pull to focus mostly on print-based materials because that is the focus of schools and literacy curricula. Pre-K-12 educators also feel this pull because print is the focus of standards and high-stakes tests. Educators at all levels believe that literacy is important because it is a gateway to power for both individuals and societies. The teacher-created drawing in chapter two of a student pulled from ignorance and poverty to lucrative employment, respect and healthy self-esteem by literacy (see Fig. 2.1) illustrates a commonly articulated view of literacy as the pathway to economic, social, and personal success. Other literacies, if they are taught at all, receive minimal attention in schools and teacher education courses because the primary focus is print. There is rarely time to address others.

When introduced to different literacies, including multiliteracies and multimodal literacies, my preservice teachers are receptive to the notion that making meaning in the world involves more than reading and writing printed text, but differentiating between literacies is confusing (Jacobs, 2013), remembering all of them is daunting, and there is always too much content to cover in too little time. By the end of the semester, many students have not internalized the various literacies, and I wonder how much will be retained when most of what they will be expected to do in their methods classes and field experiences will focus exclusively on print-based literacy anyway. What is an educator who understands the critical importance of 21st century literacy skills to do? In this chapter I explore the gap between print-based literacy and the literacies promoted for the 21st century and viewed by educators as important. Next, I describe the literacies frequently discussed among educators, explore how each literacy uniquely contributes to achieving literacy goals, and elaborate that literacy goals are not fully met by approaches based exclusively on print.

Over several years of attending conferences, reading scholarly work on literacy, and teaching preservice teachers, I have seen many literacies elaborated and discussed among scholars. However, these discussions rarely move beyond the boundaries of professional meetings and the pages of scholarly journals. Movement of non-print-based literacies into teacher education has been slow and sporadic. For example, the textbooks I consider for my children's literature courses have only recently begun to include an entire chapter or other significant portion to the role of illustrations and visual images in making meaning of text (See Serafini, 2014 as an exception). Similarly, when I observe or visit pre-K—12 classrooms, literacy is print-based with non-print modes mostly used as add-ons or special projects such as writing a poem inspired by a painting. My experience is that teacher education has a similarly narrow literacy perspective. A plethora of literacies have been described over the past decades, far more than can be included in this chapter. While some of these literacies have gained the attention of educators in pre-K-12 schools and teacher education, there has been little change in how literacy is conceptualized and taught in the 21st century.

The Literacy Landscape Trending with Literacy Educators

My overview of the literacy landscape focuses on the literacies that have been most talked about among literacy educators during the 21st century. I spent weeks making lists and revising them as I considered which literacies, out of the many that have been proposed in the 21st century, to include in this chapter. My selections started with the literacies that have been most influential to me and my practice but quickly expanded to include literacy perspectives that have not been central to my work, as well as some that were new to me. The 21st century landscape includes far more literacies than can be included here. Technological advances, as well as societal changes, will continue to inspire new literacies that cannot be imagined today. I wanted to ground my claims in the literacies that are best known and have the widest appeal across literacy educators; the *What's Hot in Literacy Report* compiled by the International Literacy Association (formerly International Reading Association) seemed the perfect choice.

The International Literacy Association (ILA) conducts a survey of literacy educators to determine trends in the field, and the annual *What's Hot* report describes these survey findings. I reviewed each report from 2000, the first year of the 21st century, to 2018 and listed topics with the word "literacy" and the year(s) in which they were included. Next, I created Table 3.1 with the help of a doctoral student. Determining which topics to include from the *What's Hot* report and how to present them was not straightforward because the survey and report have evolved over the past decades. The first survey was conducted by Jack Cassidy and Judith Wenrich in 1997 and consisted of interviewing 22 literacy leaders about which topics in literacy were "hot" (Cassidy & Wenrich, 1997). These survey topics were originally derived from literacy publications and presentations but have been regularly revised by survey

Table 3.1 What's Hot list

Type of Literacy	Year(s) on the What's Hot List
Middle School Reading/Literacy	2000
Adolescent Literacy	2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016
Preschool Literacy Instruction	2000, 2001, 2002, 2003, 2004, 2005, 2006, +2010, +2014
Literacy Coaches/Reading Coaches	2005, 2006, 2007, 2008, 2009, 2010, 2011
Political/Policy Influences on Literacy	2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015
New Literacies/Digital Literacies/Media Literacies	^2010, ^2011, ^2012, ^2013, *2014, **2015, ***2016, ****2017, ****2018
Core Learning/Literacy Standards	2011
Disciplinary/Content Area Literacy	2011, 2012, 2013, 2014, 2015, 2016, #2017, #2018
STEM Literacy	2015, 2016
Teacher Evaluation for Literacy	2016
Literacy in Resource-Limited Settings	2017
Multimodal Literacy	2017
Critical Literacy	2018
Mother Tongue Literacy	2018
Administrators as Literacy Leaders	2018
Early Literacy	2017, 2018

+Listed as preschool literacy instruction/experiences
ˆListed as new literacies/digital literacies in these years
*Modified in this year to be digital literacies alone
**Modified in 2015 to combine digital literacies/new literacies
***Media literacies were added in this year (digital literacies/new literacies/media literacy)
****Became digital literacy alone in 2017 and remained such in 2018
#Listed as disciplinary literacy alone in 2017 and 2018
Thank you to Jessica Evankovich for assistance in creating this table

participants from the prior year and selected experts in the field. According to Cassidy and Ortlieb (2013), survey topics are generated by respondents from previous years and if a topic is suggested by 20% of those respondents, it is likely to be added to the survey. It is important to note that the *What's Hot* report describes trending topics among literacy professionals and not necessarily what these professionals consider to be most important to literacy teaching and learning. Furthermore, just because a topic is included in the survey does not mean that participants will rate it as "hot". My analysis did not consider to what extent each topic was considered "hot", only whether or not the topic was included in the list. Consequently, the *What's Hot* report is an imperfect tool to gauge the most common literacies, nonetheless, it is a good indicator of what teachers and teacher educators are being exposed to and may be thinking about. Several of the topics focus on literacy for distinct populations, settings, content areas, or administration and policy. I include these topics in the table, but my narrative analysis and elaboration focuses only on literacies listed in the report that describe new perspectives on what meaning-making encompasses (see the shaded rows in Table 3.1). Findings from the 2020 report are not included because the survey questions were revised that year to emphasize teacher needs rather than trending topics (International Literacy Association, 2020).

I note that some of the terms were changed, combined, or separated from a related literacy throughout the 18-year period I reviewed. I do not have any information about why these name changes, combinations, and separations took place, but they seem indicative of the confusion and conflation that the explosion of literacies inspires. After all, what is the difference between new literacies and digital literacy or multiliteracies and multimodality? Simple definitions of these terms, as well as the way they are often referenced together, would indicate that they are essentially the same, but there are important differences.

My discussion begins with print-based literacy, a topic not included as "hot" because it is the literacy status quo upon which many of the other literacies are based on or designed to enhance. I have added it to demonstrate how a "mere literacies" approach leaves open gaps in addressing 21st century needs. Print-based literacy is outlined first and followed by: critical literacy; new literacies, digital literacies, and media literacy; content area literacy and disciplinary literacy; and multimodal literacy. These literacies are often highlighted in the scholarly literature and may be included in teacher professional development activities. While there is some overlap among these literacies, each is different (Alvermann, 2017).

Print-Based Literacy

In this volume we define print-based literacy as encoding and decoding verbal language. It is the dominant literacy in formal education contexts around the world, so that educators, policy makers, and the general public often consider literacy to mean reading and writing. The fact that ILA only recently changed its name from the International Reading Association to the International Literacy Association is indicative that the status quo among educators has been that literacy is reading printed text. Yet, print-based literacy alone does not meet all of literacy's purposes for the 21st century.

Print-based literacy remains an essential component for improved employment, increased social and political engagement, and individual human development. One reason for the ongoing importance of print is its frequent combination with other modes, such as advertisements including both images and text, but print-based literacy is not enough on its own to fully meet literacy's goals as described in the previous chapters. For example, a child or adult reading an advertisement with an exclusive focus on encoding and decoding printed text will not question the ad's purpose, the social, political, or economic motivations of the creators, or the accuracy of the ad's claims. Consequently, the child or adult may not accurately "read" the advertisement and be misled in what the ad really means. Print-based literacy, like all forms of literacy, is a tool that can be used to oppress just as easily as to equalize and elevate. Furthermore, print-based literacy may have minimal importance in students' out-of-school lives or among diverse regional and cultural groups.

Similarly, print-based literacy is inadequate to address the creation or interpretation of texts that include modes other than print such as video, social media, music, zines and virtually every format that has been created or advanced during the 21st century.

Scholars emphasize that throughout human history, print has never been the only literacy that matters for achieving economic success, personal fulfillment, and political engagement. Likewise, teachers recognize that thriving in the 21st century requires more than encoding and decoding verbal language. Few teacher educators would argue that print-based literacy is the only approach that holds value in students' lives, despite the dominance of print in school curricula. The inclusion of literacies other than print in the *What's Hot* report, as well as renaming the International Reading Association to the International Literacy Association and the integration of technology standards throughout pre-K-12 and teacher education indicate that educators recognize that expanded conceptions of literacy are needed to address areas for which print is not wholly adequate. In my view, literacies that have been proposed for the 21st century have been developed specifically to fill gaps left by an exclusively print-based approach. When twelve-year-olds watch or post videos to online platforms, is knowing how to encode and decode print enough for them to critically evaluate the video content they view or to make safe and wise decisions about the content they post? When fifteen-year-olds view advertisements on billboards and bus stops, is knowing how to encode and decode the printed text enough for them to discern the advertiser's purpose and how the images and text are designed to persuade them to want, to act, to believe, or to purchase? It is not. If print-based literacy were all that children and adults needed to make meaning of the world, there would be no gaps between what a "mere literacies" approach provides and what children and adults need to thrive in the 21st century. Yet these gaps persist. The myriad literacies proposed across the past several decades are attempts to fill them.

Critical Literacy

A significant gap left by a "mere literacy" approach is taking into account the positioning of texts. Critical literacy addresses the need to consider the uses, purposes, and motivations behind literacy texts and tools. Mills (2016) writes that critical literacy "begins with a concern about social inequalities, social structures, power and human agency" (p. 41). It emphasizes understanding how power is wielded through literacy and awakening to oppressive practices so that they can be challenged (Lankshear & McLaren, 1993). Paulo Freire, credited as one founder of critical literacy approaches, underscored teaching adults to "read the word and the world" in understanding the nature of their oppression and working to end it (Lee, 2011; Rogers & O'Daniels, 2015). A critical approach to literacy begins with self-examination that leads to change (McLaughlin & Devoogd, 2004). It questions social, political, and economic motivations and interrogates texts on their sources of authority and how these influences are manifest in the lives of individuals. Hoggart, a British intellectual who is credited with developing the concept of critical literacy as a foil to what he saw as capitalism's diminishing of literacy to support a consumption-oriented society, emphasized sociocultural influences on literacy and literacy practices. For Hoggart, critical literacy embodied the connection between literacy events and the social, political, and cultural (Roy, 2016). Critical literacy is often associated with social justice (Kalantzis & Cope, 2012; Lee, 2011). Readers use a "critical edge" as they seek to understand the origins, purposes, and biases in texts, so their deliberation can inspire change in unjust practices and systems (McLaughlin & Devoogd, 2004). To achieve its purpose, critical literacy urges readers to consider text origin, access, and power in the use of texts for political, social, and economic purposes.

Critical literacy acknowledges that neither print-based literacy nor any literacy is, has been, or will ever be value-neutral. All creators have a purpose and an agenda that their text is designed to support whether that agenda is consciously understood by them or not. Consequently, constructs such as social justice are not straightforward as one considers what justice is, who benefits, and at what cost to individuals and societies? Similarly, what is "truth" and whose "truth" is supported when examining a news story or watching a recording of a public event? How does what preceded the event or what was excluded from the recording influence perception and meaning? The term yellow journalism was coined in the twentieth century to describe the sensationalized and even fabricated news stories that characterized the competition for readers between rival newspapers in New York City (Franklin, Hamer, Hanna, Kinsey, & Richardson, 2005). This phenomenon continues in the political and social life of the 21st century with the spectacle of fake news (Krause, Wirz, Scheufele, & Xenos, 2019).

The need to critically evaluate the purpose of a text and the truthfulness of its claims is not new. Mills (2016) links the origins of critical literacy with The Frankfurt School in the early twentieth century and their work in Marxist theory. Hoggart expanded this foundation by enacting critical literacy through community engagement in which he labored with working class adults in Britain to challenge the materialistic culture stemming from capitalism (Roy, 2016). Critical literacy contributes the essential component of examining texts for transparency that is lacking from a mere literacy approach. As we move through the 21st century, critical literacy makes important contributions toward preparing individuals for savvy political and social engagement and for developing the ability to think independently and analyze sources of persuasion. Individuals who are critically literate are better able to qualify for jobs that require high-level thinking skills and understand how various texts are designed to persuade them. Perhaps more importantly, critical literacy can help learners avoid being manipulated and deceived by the creators of the literacy texts that bombard them from every angle. Many of these texts are digital and media products, so while critical literacy addresses power, the need to understand the nature and communicative constructs of these 21st century technologies remains.

New Literacies, Digital Literacies, and Media Literacy

Digital literacies, and media literacy address the essential role that digital communication and media play in the daily lives of people around the world. New literacies are often associated with digital technology but can refer to using any literacy tool or mode in new ways and for new purposes. These three terms are often conflated so that it is difficult to know where the boundaries of each end or intersect. It was not until 2010 that new literacies/digital literacies appeared in the *What's Hot* survey as the first item representing an expanded definition of literacy. New literacies and digital literacy were presented together for the first five years, perhaps indicating that many educators considered these terms to be interchangeable. Media literacy was added in 2016, and then in 2017, both new literacies and media literacy were dropped so that the item was simply digital literacy through 2018. This pattern of conflating literacy types is indicative of the confusion surrounding these terms and the evolution of terms to fit rapidly changing societal needs. It is no wonder that teachers and teacher educators experience confusion in trying to teach new literacies, digital literacies, and media literacies. What does each term mean? Are all three terms still relevant and how should they be taught, if at all, in teacher education and pre-K-12 schools? Each term is described next.

New Literacies

New literacies is a deceptively simple term for a complex array of ideas. Lankshear and Knobel (2011) explain that the "new" in literacies can have different meanings. First, "new" can mean a new literacy paradigm, or model, not necessarily new tools for creating literacy texts. This new literacy model emerges because literacy is socioculturally constructed, so it becomes new as society and culture change and evolve. According to Rowsell and Walsh (2011), new literacies indicate that literacy is always plural and constantly in flux. Literacies are "new" because they demonstrate new ways of thinking, new perspectives, and new and emerging requirements for literacy in contemporary societies, not because they have been recently developed. "New" in this sense refers to thinking about literacy differently because it influences social, political, intellectual and cultural life and is in turn influenced by society, politics, and culture. However, technology can figure prominently into new literacies because society and culture are grounded in a digital world (Lankshear & Knobel, 2011). Technology influences culture and culture influences technology. New literacies also include some overlap with critical literacy because sociocultural approaches to literacy must consider power relationships: what people do, how they think about literacy and what they value (Kendrick, 2015; Mills, 2016). Yet, new literacies are not technology dependent, they include all types of literacies, old, new, and those yet to be developed. New literacies advocates posit that all literacies have the potential for constant change, reconfiguration and combination to fit the evolving demands of individuals and societies.

Digital Literacy

Technology is a major driver of societal change and digital technologies may have the greatest influence on daily literacy practices in the 21st century. From the proliferation of digital devices such as cell phones and computers that facilitate literacy acts, to the virtual shrinking of the world formed by increased access to people and ideas far removed from individual cultures and geographies, to the ways that interacting with electronic devices change the human brain and attention span (Firth et al., 2019), digital literacy influences every facet of life in the 21st century. The International Literacy Association defines digital literacy as, "Teaching children how to compose and communicate using digital technologies as well as how to comprehend and evaluate information in digital forms" (2018). This topic is ranked number one in "hot topics" in literacy in the 2018 *What's Hot* report and number thirteen in level of importance. Respondents cautioned that while digital literacy is a hot topic in their countries, the importance of digital literacy can be overstated, particularly in work with very young children who may need more instruction in "foundational" literacy skills. Digital literacy can be closely aligned with critical literacy when it includes critically evaluating digital content and its influence on individuals and cultures, and it might be considered a subset of media literacy by sharing the same aims and purposes as other media formats.

Media Literacy

The National Association for Media Literacy Education defines media literacy as "the ability to access, analyze, evaluate, create, and act using all forms of communication" (National Association for Media Literacy Education, n.d.). Media literacy builds on both traditional views of literacy as encoding and decoding texts as well as critical literacy's emphasis on power and the non-neutrality of all literacy texts. While media literacy is most readily recognized today as relating to television and internet-based platforms, media throughout the ages, including newspapers, radio programing, and the earliest films have played a key role in shaping individual and public views to serve the interests and aims of the powerful. Consequently, media literacy is closely aligned with critical literacy through its focus on power and social justice and with digital literacy through its emphasis on evaluating, creating, and using electronic media. Media literacy acknowledges the roles that digital media and other media such as radio and print play in communication and meaning-making in modern life but is oriented toward professional, public interchanges more than in private or in person. A conversation between two friends might not qualify as a media literacy event but an exchange on an online discussion board would.

These three literacies: digital literacies, media literacy and new literacies have some commonalities that apply to meeting the goals of literacy in the 21st century. Digital technologies have altered not only the tools we use to communicate but the nature of that communication. Professional, civic, and personal communication have been altered such that technology influences how we reserve a restaurant table, keep in touch with distant relatives, or in many parts of the world, how we vote for elected officials. It influences our expectations for accessing information as demonstrated by claims that television has altered attention spans and made “Google it” into a verb describing how to look for answers to questions. Likewise, media is evolving with diverse digital, electronic, and mixed formats that change what is considered a text by expanding the forms, formats and modes through which texts are created and consumed. New literacies are descriptive of all these changes both in the forms that literacy takes and the ways they are used, but they do not illuminate many of the personal and private human interactions that are part of daily living.

Multimodal Literacy and Multiliteracies

Multimodal literacy did not appear in the *What’s Hot* report until 2017 and was removed by 2018; however, the origins of this literacy go back to the mid-1990’s when the New London Group introduced the concept of multiliteracies, a different but related approach. I include multimodal literacy with multiliteracies because these terms are often used synonymously (Bazegette & Buckingham, 2013). yet, there are key differences between them (Jacobs, 2013). Multimodal literacy emphasizes the myriad of ways people communicate with one another, including reading and writing to encode and decode oral language as well as visual modes, aural modes, movement modes, etc. Jewitt (2011) describes multimodality as an approach founded on the premise that language is only one of the “full range of communicational forms people use – image, gesture, gaze, posture, and so on –and the relationships between them” (p. 14). Kress (2011) elaborates that multimodality, while sometimes used as if it were a theory, is instead inquiry, representing the many different ways humans can create and exchange thoughts and meanings.

In contrast, multiliteracies is a pedagogical approach (Alvermann, 2017; The New London Group, 1996) that shares multimodality’s foundational principle that many modes (i.e. photographs, songs, dance, text messages, etc.) constitute literacy acts. However, multiliteracies incorporate principles of critical literacy by focusing on the relationship between literacy and power, including social, political, and economic capabilities (Kress, 2000). Multiliteracies takes the approach to learning about and making sense of the world that is embodied in multimodality and applies it to how and what we teach as literacy. The New London Group (1996) emphasized that literacy has historically privileged reading and writing and has consequently favored those people and societies who are masters of these systems. Multiliteracies builds on this claim by challenging the privileging of language over other modes so that literacy that is taught includes the full range of human expression and communication.

While multimodal literacy is sometimes presented as describing new modes of literacy that are unique to the 21st century, it is better understood as an elaboration of the many ways, means, and modes of expression and communication that humans have used throughout history, past and present. Consequently, multimodality restores some of what literacy has been throughout time with texts such as illuminated manuscripts, plays, and operas (Siegel, 2012), each one a type of literacy text that is not exclusively print-based but also not an invention of the digital revolution. If one understands literacy texts to take diverse forms including images, movements and gestures, sounds, and stimuli that engage all the senses, then it follows that literate people require varied skills and attributes to make sense of the range of possible literacy acts. These assorted proficiencies demand far more than "mere literacy" and these demands sometimes cross, or are defined, by disciplinary boundaries.

Content Area Literacy and Disciplinary Literacy

Literacy that is tailored toward subject areas has become increasingly important in the 21st century. Content area literacy and disciplinary literacy were co-listed in the *What's Hot* report until 2017 when content area literacy was dropped, and disciplinary literacy remained. These terms are often used interchangeably, so it is not surprising that they can be confusing to teachers, teacher educators, and their students, and they were at first confusing to me. Similarly, STEM was included in 2015 and 2016, and while it was not co-listed with content area literacy or disciplinary literacy, it shares some important traits. Nonetheless, content area literacy and disciplinary literacy differ; each is described next.

Content Area Literacy

Educators have long talked about the transition children undergo from learning to read (ages 5–8 in the US) to reading to learn. Reading to learn is the application of reading skills to learning in different content areas, or content-area literacy. Content-area literacy are the generic strategies readers use to comprehend and write print-based texts (Hynd-Shanahan, 2013; Shanahan & Shanahan, 2012). These strategies such as summarizing, making graphic organizers, or using context clues, work in all subject areas and teaching content area literacy is considered the literacy educator's top responsibility according to the respondents of the 2020 *What's Hot* report (ILA). While content area literacy strategies apply across all subject areas, each discipline has its own unique ways of creating and communicating knowledge that do not necessarily apply across different fields of study. These discipline-specific strategies are unique, but they are needed to truly understand the nature of learning and knowing within a field.

Disciplinary Literacy

I recently asked a group of preservice middle school teachers about disciplinary literacy in their content areas and was surprised by the sea of blank stares I received. Most of these students had not thought about their disciplines in terms of literacy. To them, literacy focused on language arts and not the skills, processes, or approaches to problem solving intrinsic to their fields. I should not have been surprised. Literacy to most preservice teachers remains reading and writing printed text, but the content-area strategies used across subject areas are sometimes too general to meet the needs of diverse disciplines. Disciplinary literacy differs from content-area literacy (Hynd-Shanahan, 2013; Shanahan & Shanahan, 2012) because it is understanding the cognitive, social, and environmental practices and processes of a discipline. It includes habits of mind and practice that are pervasive among experts in the disciplinary field (Fang & Coatoam, 2013). Disciplinary literacy approaches students as apprentices to the content area (Hillman, 2014). Both literacy teachers and content-area teachers may be ill prepared to teach disciplinary literacy because literacy teachers lack deep understanding of the content area. Similarly, content area teachers may not be well prepared to address the creation and sharing of knowledge in their field (Hynd-Shananhan, 2013) and generally have no desire to teach literacy (Gillis, 2014).

The term, disciplinary literacy, describes an old concept—the ability to think and approach problems from the perspective of members of the discipline. In some areas, disciplinary literacy is founded on print-based materials, while in others, such as the engineering or architecture, being able to understand and communicate through models, figures, graphs and charts may be just as important. Disciplines such as graphic design or studio arts require different skillsets appropriate to the demands of their discipline. While encoding and decoding speech is the emphasis in early childhood and elementary school, disciplinary literacy may be the focus in middle and high school where educators expect that basic print-based reading, writing, and comprehension skills have already been mastered (Fang & Coatoam, 2013). Some categories of literacy, such as visual literacy and digital literacy, may be considered types of disciplinary literacies themselves. Similarly, I view STEM (Science, Technology, Engineering and Mathematics) and STEAM (Science, Technology, Engineering, Arts, and Mathematics) as sharing characteristics of disciplinary literacy but with a cross disciplinary focus in which people approach problems using the tools and habits of mind characteristic of multiple disciplines.

Both content area literacy and disciplinary literacy are important for individuals to thrive in the 21st century. Possessing strategies that can improve comprehension across subject areas benefits children and adults who need to be life-long learners who can navigate the rapid social, economic, political, environmental, and technological changes of the future. Likewise, disciplinary literacy facilitates individuals developing the habits of mind to think and problem-solve in ways that are essential to advancing key disciplines and finding solutions to both simple and complex difficulties which will continue to shape the 21st century.

Choosing Among Literacies: What Should Teacher Educators Teach?

With so many different literacies to consider, how can a teacher educator decide which to teach? Trying to select only the literacies that are important is not constructive. I described seven literacies in the previous section, and these literacies represent only a sampling of those that have been identified and proposed for the 21st century. Cultural literacy, information literacy, and others incorporate important skills, frameworks, and perspectives for 21st century learners. And each literacy type contributes to how people communicate and make sense of the world around them. Is there any individual or group of people in the world for whom digital literacy, media literacy, disciplinary literacy, multimodal literacy, critical literacy and other literacies do not matter? The 21st century answer to this question is a firm no. People and societies throughout the world are more connected than ever before. Workers are often employed by companies based in a country other than their own or that supply goods and services to other parts of the world. The economies of nations with opposing political and cultural systems such as the United States and China have an impact upon one another, and small nations with even smaller economies are also part of an international web that connects us. Modern technology influences what and how information and disinformation travels across borders, oceans, and backyards. Literacy, in all its diverse forms, functions, and contexts, matters for all.

Similarly, choosing only those literacies that are emphasized in basic education is not a satisfactory approach. Schools, like most institutions, are slow to adapt and are subject to popular and political whims that can lead to years passing before research-based practices and approaches make their way into the classroom, if they make it there at all. The *What's Hot* survey demonstrates that decades can elapse between a literacy type being proposed by scholars and that literacy being considered in the survey. Furthermore, many 21st century literacies are applied mostly in print-based contexts or approaches, such as when instruction in critical literacy focuses only on written texts (paper or digital) despite the many contemporary literacy artifacts in non-print-based modes such as video or television. Other literacy approaches, such as multimodal literacy, offer an expanded definition of what counts as literacy but are treated as add-ons to supplement or complement print-based literacy through activities such as illustrating a story or making a poster or digital slides to supplement a verbal presentation. The result is that while different literacy formats have inspired small changes in how literacy is taught, they have done so without shifting the primary focus from print to a more expansive view. Consequently, teachers and teacher educators, despite the proliferation of literacies since 2000, are left with an explosion of literacy options but little clear direction on how, or if, to change what they teach.

The Dilemma of What to Teach Continues

In this chapter I have explored my question of which literacies to teach, a question that emerges from my personal experience but that might be shared by other teacher educators. This exploration involved describing some of the many literacies that have been proposed since the start of the 21st century and included in the International Literacy Association's *What's Hot* survey. I assert that each of these literacies represents important components and skills for 21st century literacy that are either not included or underdeveloped through a "mere literacies" approach based only on print. Furthermore, many literacies are confused and conflated, compounding the teacher educator's dilemma of what to teach. I maintain that despite these confusions, each literacy represents an important aspect of making meaning in the 21st century, leaving the dilemma of what to teach unresolved. If each literacy advocated for the 21st century is important, but it is impossible to address them all well, what is a teacher educator to do? In the next chapter Marilyn elaborates on why the dilemma exists and proposes a different approach.

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Chapter 4
Deconstructing the Literacy Dilemma: Predicating a Search for Clarity and Cohesiveness

Marilyn J. Narey

Abstract Although recent views of literacy have expanded to acknowledge a wide range of literacies, the field has yet to articulate how to integrate these into a cohesive construct of literacy for 21st century education. In this chapter, I look at factors that fuel the teacher educator's literacy dilemma: beliefs about teaching and literacy; influences of policies on curriculum and practice; lack of cohesiveness and clarity in the field; and insufficient preparation for the transdisciplinary basis of 21st century literacy instruction. Then, positing that the first step is to focus in on the lack of clarity and cohesiveness, I draw attention to the role of the senses and human perception within the transformative process of literacy. Noting the alignment of this construct of literacy as sense-making with classic and 21st century literacy theories, I look more closely at what transdisciplinary scholars are investigating within 21st century literacy constructs, including concepts of materiality and embodiment, semiotics, signs and codes. Arguing that making meaning, or making *sense*, is the functional essence of literacy across the seemingly fragmented characterizations that have emerged in the field, I sketch out an initial case for our evolving construct of literacy as sense-making.

Keywords Literacy teaching · Education policy · Teacher beliefs · Future skills · Transliteracy · Materiality · Embodiment · Semiotics · Signs · Codes · Multimodal analysis · Sense-making · Transformative processes · Transactional theory · Multiliteracies theory · Sensory perception · Transdiciplinary · 21st century learning

Sketches Inquiring into the Teacher Educators' Dilemma

As teacher educators seek to resolve the tensions between the dynamic 21st century literacy scholarship vs. the established twentieth century literacy education practices that remain dominant in pre-K-12 schooling, the dilemma becomes apparent: *what should be the frame for literacy in 21st century education?* Points made in the opening chapters are relevant to this question and I restate these here:

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- Scholars, institutions, and organizations across the globe assert that definitions of literacy are fluid, not fixed (Keefe & Copeland, 2011; Mackey, 2004).
- Long-standing print-based views of literacy are no longer adequate for 21st century demands (Mills, 2009, 2016).
- The proliferation of literacies (e.g., digital literacy, critical literacy, multiliteracies, multimodal literacy) suggests that more wide-ranging views of literacy are beginning to be recognized in the broader educational discourse, particularly as the world attempts to respond to advances in technology and increasing globalization.
- It seems that despite the acknowledgment that print-based literacy alone is insufficient for our current and future lives, there seems to be little substantive difference in how literacy is enacted in education policy and practice. Rather, we find that in the real world of our schools and university teacher education programs, our 21st century literacy teaching looks strikingly similar to the print-focused pedagogy that was prevalent in the recent twentieth century.

These points give early shape to our dilemma as teacher educators. There is no clear definition of literacy and the world of the 21st century requires a dynamic characterization of the term, yet schools and policies keep us focused on developing literacy capacities that were established in the twentieth century. When faced with the question, *what should be the frame for literacy in 21st century education?* teacher educators are torn between preparing teachers for the world of the 21st century or the domain of the schools in which they will teach.

Early Concerns: "Particular Anxiety About How to Proceed"

Awareness of this incongruity emerged early as educational stakeholders anticipated the future. In the years leading up to our new millennium, international rhetoric pressed for a 21st century learning agenda and, thus, inspired scholars and researchers to consider what that actually meant in an increasingly digital and global world. Significant among those exploring this complex issue were the New London Group (1996) whose classic work, "A Pedagogy of Multiliteracies: Designing Social Futures," was briefly discussed throughout our opening chapters of this volume. In a rapidly changing world faced with the important question of how educators could address the diversity of contexts and multiplicity of textual forms, the New London Group (1996) observed, "although numerous theories and practices have been developed as possible responses, at the moment there seems to be particular anxiety about how to proceed" (p. 61). Almost thirty years after the New London Group made this statement, it seems that education is still unsure of how to proceed. Literacy practices promoted in teacher education remain predominantly focused upon teaching decoding of print-based texts from an autonomous model of literacy (Street, 2006) or what New London Group (1996) terms "mere literacy" (p. 64), despite the compelling rationales for a "literacies" approach that encourage rethinking of our literacy practices.

Like many teacher educators who come to this intersection of literacy and literacies, Kelli Jo and I are caught up in that anxiety of the inevitable dilemma: what do we teach? The many colliding constructs of literacy and literacies within the educational milieu of theory, research, and policy have left us with feeble resolutions for practice; resolutions that fail to reconcile the many perspectives of literacy and literacies. As with any dilemma, it is helpful to analyze the problem. Before we can enact change, we must see the need for change, and generate ideas for change (Narey, 2017). So, I begin this chapter by sketching out some of the factors that fuel the literacy dilemma for teacher educators (identifying the need for change) and then, I introduce a direction of inquiry for possible resolution of the dilemma (generating ideas for change) by examining works of classic and 21st century scholars and our evolving construct of 21st century literacy as sense-making that may be a path to enacting change.

Factors that Fuel the Literacy Dilemma for Teacher Educators

Building upon my previous writings on teaching and teacher education, particularly educators' "theories in use" (see, for example, Narey 2009, 2017), I observe that a teacher educator's curriculum and practice generally emerges from a combination of four contributing and sometimes conflicting factors:

- individual and institutional beliefs about the subject to be taught, their purpose in teaching it, and the purpose of teaching in general,
- influences of past and current policies from within and external to their institutions with which they are affiliated, and the relationship of these policies to theory and research,
- the clarity and cohesiveness of the discourse surrounding the current knowledge and advances in the field,
- the teacher educators' individual experiences with and preparation for teaching the current knowledge and advances in the field.

Examining these factors leads to greater understanding of the dilemma facing teacher educators in regard to literacy instruction. This new understanding can then offer potential directions for resolving the dilemma.

Beliefs About Teaching Literacy and Teaching

The first factor that influences a teacher educator's curriculum and practice is a combination of individual and institutional beliefs about a subject, the purpose in teaching it, and the purpose of teaching in general. At the heart of the literacy teacher education dilemma is this belief of purpose, that is, the “why” of literacy as discussed in the introduction to this volume coupled with perspectives on the “why” of our role as teacher educators that is grounded more broadly in the philosophies of teaching that we embrace. I briefly examine each of these aspects.

Beliefs About Teaching Literacy

In regard to the “why” of the subject to be taught (in this case, literacy), as I have underscored previously, teacher educators’ views on teaching literacy are influenced by prevailing beliefs about literacy that extol its value advancing individual human development, socio-political engagement, and economic well-being for all people. Further, I also have pointed out that these beliefs about literacy have been articulated almost exclusively in pedagogy focused on print-based texts that feature a singular sign system. As I have already revealed, there have been, and continue to be, problems with continuing this pedagogic direction into the 21st century. Siefkes (2015) sums up the argument, underscoring,

> language is neither the sole, nor even the dominant sign system. Other sign systems such as gesture, images, graphics, typography have been in use for centuries, yet they were marginalised by philosophic reflection and scientific research due to the influence of linguocentrism, the tendency of Western cultures to privilege language and downplay other sign systems and sign types. (p. 113)

If our teacher education curricula are not giving attention to other sign systems, then we need to ask if it is merely because of years of enacting a common narrow view rather than because print-based literacy is more important. I believe that the current hierarchical positioning of the varied sign systems should not unduly influence future directions of our work. Rather, teacher education must look forward to determine a literacy definition and curriculum that meets the demands of the 21st century.

Beliefs About Teaching

In regard to philosophic stances on the purpose of teaching in general, I reach back into the turn of the previous century to a similar time of rapid change, to share the words of W. E. B. Du Bois (1903), who argues, “The function of the university is not simply to teach breadwinning, or to furnish teachers for the public schools, or to be a centre of polite society; it is, above all, to be the organ of that fine adjustment between real life and the growing knowledge of life, an adjustment which forms the secret of civilization” (p. 84). As a teacher educator in the rapidly changing 21st century, the belief that education is a means to connect “real life with the growing knowledge of life” is not clearly apparent in the pedagogy enacted in most of the institutions I have observed. Just as in Dubois’ time, a number of university faculty and school administrators frame preservice and inservice teacher education as "training" a workforce and thus have placed the emphasis on passing down a set body of knowledge for the pre-K-12 practitioners to replicate in their classrooms. Thus, in many cases, the resulting curriculum of teacher education has remained inextricably linked to an unchanging knowledge base, that seems decontextualized from the literacies needed for our 21st century teachers to connect real life and the growing knowledge of life. In order to move forward, it may be necessary for teacher educators to critically examine their beliefs about the purpose of teacher education.

Influence of Policies on Curriculum and Practice

Past and current policies can reinforce personal beliefs and/or influence educators' practices. Some policies are external, emanating from political (e.g., national or state governments) or professional (e.g., Council for the Accreditation of Teacher Preparation (CAEP) governing bodies. Other policies are internal to the teacher educators' institutions (e.g., college or department) but can additionally reflect policies relative to those Pre-12 institutions to which their teacher education programs are affiliated.

As teacher educators consider how policies embody theory and practice, they might anticipate a fairly straightforward relationship, yet in reality, the extent to which policies promote the latest theory and research varies. Further, the theory and research upon which the policies are based are often subject to narrow or agenda-driven selection by these governing bodies. Describing how this practice has been prevalent in reading policy, Pearson (2004) contends, "Policy makers like to shroud mandates and initiatives in the rhetoric of science, and sometimes that practice results in strained, if not indefensible, extrapolations from research" (p. 229). "Research is often used in a selective, uneven, and opportunistic manner by policy makers" (Pearson, 2004, p. 240).

An Example: The Influence of the Report of the National Reading Panel

A highly reported example of this is the National Reading Panel (NRP) Report (2000) which drove policy and practice in the United States for years, despite concerns about the research featured in the report as expressed in the Minority View written by the lone educator on the panel, Joanne Yatvin (2000). The NRP report was used to support the research agenda of the National Institute of Child Health and Human Development and the Reading First initiative of the federal "No Child Left Behind" Act of 2001. Yet, in her Minority View, Yatvin (2000) writes that the NRP report is

> unbalanced and, to some extent, irrelevant. But because of these deficiencies, bad things will happen. Summaries of, and sound bites about, the Panel's findings will be used to make policy decisions at the national, state, and local levels. Topics that were never investigated will be misconstrued as failed practices. Unanswered questions will be assumed to have been answered negatively. Unfortunately, most policymakers and ordinary citizens will not read the full reviews. They will not see the Panel's explanations about why so few topics were investigated or its judgments that the results of research on some of the topics are inconclusive. They will not hear the Panel's calls for more and more fine-tuned research. Ironically, the report that Congress intended to be a boon to the teaching of reading will turn out to be a further detriment. (p. 3)

In an opinion article in *Education Week*, Yatvin (2003) describes how her Minority View concerns had been brought to fruition, noting that

> promoters of phonics have twisted [NRP report] findings in an effort to reconfigure all school reading instruction and all teacher preparation in reading to conform with their own ideas of how reading should be taught. In the process of applying for federal funds through Reading First, states that have designed successful models of teacher training and school districts that have developed effective reading programs have been told that their plans are not sufficiently "scientific," or "systematic," and that they will have to change them. University professors of reading have been criticized for not having evidence of "knowledge of research-based methods" in their vitae. In short, any program or any educator that does not fit with today's fashionable orthodoxy is considered unfit for the teaching of reading. (https://www.edweek.org/ew/articles/2003/04/30/33yatvin.h22.html)

In the *Education Week* article, Yatvin utilizes an enlightening True-False format to detail how the NRP report has been misinterpreted and misused. As a teacher educator, who has observed the widespread teaching of the so-called "five pillars" or "essentials" of reading instruction (phonemic awareness. phonics, fluency, vocabulary, comprehension), I find Yatvin's discussion of these so-called five "essentials" particularly noteworthy:

> Nowhere in its report does the panel assert that the strategies found effective are the "essentials" of reading instruction. That determination was made elsewhere, embodied in the No Child Left Behind Act, and then included in the guidelines for Reading First. Ultimately, references to the "five essentials of reading" appeared in state applications, media commentaries, and promotional literature for various commercial programs. (Yatvin, 2003, https://www.edweek.org/ew/articles/2003/04/30/33yatvin.h22.html)

Other scholars (see for example, Krashen, 2001; Shaker and Heilman, 2010) also have drawn attention to the misrepresentations, misconceptions, influence, and concerns surrounding the National Reading Panel Report. Adding to this concern about the "selective, uneven, and opportunistic" (Pearson, 2004, p. 240) use of research in policy, it is important to note the influence of such policies on beliefs about literacy. In her article, "Beyond Smoke and Mirrors: A Critique of the National Reading Panel Report on Phonics," Elaine Garan (2001) notes how members of the broader education community were found to react to theory and research on the basis of its agreement with their own personal philosophical beliefs, rather than base their critique on an objective analysis of the merits of the theories or research in question. Garan finds that teachers, having been taught in preservice and inservice education that phonics was essential and/or having experienced this stance on phonics in their own education, have integrated this notion into their belief systems and therefore, did not question the faulty research base of the NPR report, even when it was brought to their attention.

Policies Contribute to Teacher Educator's Dilemma

The example of the National Reading Panel's report underscores how policies influence literacy curriculum and practice. In nations where high stakes accountability measures ("the test") drive curriculum, where minimal time seems left for anything beyond what is "testable" within the narrowly-focused verbocentric literacy framework, teacher educators often are torn in deciding whether to shape their university programs to the pressures of the accountability or to the current research in the field. As this section illustrates, policies greatly contribute to the teacher educator's dilemma: *how do we frame 21st century literacy instruction?*

Lack of Cohesiveness and Clarity in the Field

Although the field, in general, has embraced, or at least acknowledged that literacy goes beyond the ability to encode (i.e., produce) and decode (i.e., interpret) verbal language (print literacy), teacher education has yet to develop a unifying approach to literacy instruction. As Kelli Jo outlined in the previous chapter, 21st century demands for the development of learners' capacities to critically and effectively engage with a range of textual forms in various media through multiple modalities have led to the emergence of a cacophony of literacies. While we can attempt to define and sort through the growing list to get a sense of direction across the 21st century literacy landscape, the general lack of cohesiveness and clarity continues to pose a dilemma for teacher educators.

Complicating the situation is the seeming lack of coherence relative to the prevailing construct and cohesion across these many literacies. While the notion of literacy has expanded, "newer" forms of literacy seem to be positioned on the periphery as supplemental to, or even in support of a verbally-based conceptualization of literacy. Even the term, "multiliteracies," which was originally coined to draw attention to multiple forms of literacy, or "digital literacy" which was a response to the rapidly changing technology landscape, might now be inferred as representing something different, or separate from literacy. Adding to the confusion, the emergence of further "literacies" such as financial, historical, marketing, information, statistical, for example, set up a quandary as to pedagogical direction and subject area responsibility. Here foci for instruction may be related not so much to the idea of communicative meaning-making but rather, directed to knowledge and skills within the narrow frame of these specific content areas. Thus, as explored in the previous chapter, it should not be surprising that 21st century literacy poses a dilemma for many teacher educators.

Insufficient Preparation and Experience

Furthermore, I generally observe that educators' experience with and preparation for teaching the varied literacies is spotty: the extent to which literacy teaching goes beyond a print-based focus is largely dependent upon teacher education programs and efforts of individual educators themselves. One major aspect of the problem is that the teacher educators, and subsequently, the practitioners whom they teach, lack sufficient background in theory, research, and practice beyond traditional print literacy (Kosnik, Menna, Dharamshi, & Miyata, 2017). While a number of teacher educators recognize the value of and attempt to support expanded views of literacy, in general, their education and experiences are frequently limited to expertise in the twentieth century notions literacy that are focused upon decoding and encoding symbols representing sound relationship to spoken language (print) (Narey, 2017; Whitty, 2014). Literacy researchers note that advances toward broader characterizations have yet to play out in the reality of schools (Siegel, 2012). This observation supports my own experiences, so I continue to deliberate, why not in schools?

Some see the problem as insufficient preparation and experience in subject areas beyond the narrow focus of print-based instruction. For instance, Siegel (2012) comments upon her own lack of experience with visual modes, noting how other language arts teachers with visual arts experiences appear to more readily and effectively enact a broader literacy construct in their instruction. She brings urgency to the problem by framing schools' verboocentrism as a social justice concern and argues that it is critical that "teachers and students become skilled readers of multimodal designs in all their variety" (Siegel, 2012, p. 676). In a similar vein, Chandler's (2017) research into the extent to which teachers are prepared to teach multimodal authoring underscores the lack of specialized knowledge from other disciplines that is required for multimodal work. His studies of teachers in Australia reveal that the move towards a broader literacy definition "within mandated curricula, may assume a level of capability of teachers that is simply not justified" (p. 14). He calls for schools, school systems, and teachers themselves to address this deficiency. The capacity to see the need for, develop, and enact a broad definition of literacy requires preparation and experience beyond a narrow "expertise" in print-based textual forms.

It seems, however, that teacher educators (and practitioners) who seek to expand their understandings of literacy beyond their schooled expertise with print typically must learn about other theoretical perspectives and practices on their own. The process requires educators' motivation, thoughtful applications to practice, and ongoing reflections (see for example Kerry-Moran, 2017) as they attempt to break through disciplinary borders to locate and synthesize the wide range of resources that can inform their literacy instruction. Yet, even highly motivated teacher educators can find this challenging. Within the milieu of current educational policies that emphasize traditional print literacy, educators' needs to meet program requirements amid other professional responsibilities often leave little time for these studies in fields beyond their own. Thus, it is understandable that teacher educators' and practitioners' understandings of literacy beyond print frequently lack depth and substance that a transdisciplinary understanding would promote.

How Do We Respond to These Influences?

My contention is that these four significant and overlapping strands of influence have contributed to keeping teacher education bound to a twentieth century verbocentric curriculum and autonomous model of pedagogy (Street, 2006) despite the range of texts and the increasing 21st century demands for developing literacy across these texts. Having put forth this overview identifying the need for change, the next step will be to generate ideas for change. Contemplating the four influential factors, it would seem that as teacher educators, we can do little about beliefs, policies, or preparation until we deal with the lack of clarity and cohesiveness in the field. Therefore, I focus my next sketch on seeking a cohesive frame for 21st century literacy.

Seeking a Cohesive Frame for 21st Century Literacy

In our daily lives, we engage in a variety of acts that call upon a range of literacies. We decipher legal contracts and nutrition labels; we ponder maps and puzzle over instructions for assembling bookcases; we develop playlists for weddings and for workouts. Some of us contemplate the varied effects of light when studying Renaissance paintings while others apply similar considerations when planning perfect selfie shots. We discern weather patterns and stock market trends; revise lines of poems and lines of computer code; and analyze golf swings and dance moves. We distinguish the acidity in wine and a missing ingredient in a sauce; we create spaces for calm and for excitement; experiment with dressing up and dressing down; replicate fashion trends and invent our own. We read the room and the trail. We detect the basis for infants' cries and teenagers' silences. Each encounter is an opportunity to engage with people, systems, and objects to understand, to make sense of and in our worlds.

Thus, it is clear, that, as humans, we produce and interpret signs and critically analyze and assess a broad range of textual forms, as we aspire to become literate across this multiplicity of texts. Yet, often, our notions of literacy are confined to making meaning only of texts that feature signs representing spoken language. These "traditional texts" (i.e., books, scrolls) include alphabetic writing systems with characters arranged in letter-sound relationship based groupings (e.g., English, German); logographic writing systems in which pictographs (i.e., visual representations of physical objects) and ideographs (i.e., signs that represent ideas) are used (e.g., Chinese). However, when addressing the power and potential of 21st century literacy, we must acknowledge that this print-based frame for literacy with its focus on learning singular sign systems, represent only a fraction of how humans make sense of their worlds. As Kelli Jo underscored in Chapter Three, the reason that scholars and researchers have put forth so many literacies is because the twentieth century emphasis on print along with the manner in which it was taught was insufficient in meeting the needs of the 21st century learners. While adopting and enacting effective instruction in these many literacies would go far in preparing learners for our new era, the significant amount of knowledge and skills required for integrating these into a burgeoning teacher education curriculum poses a dilemma for teacher educators.

I believe that the teacher educator's literacy dilemma can be resolved, not by insisting we become experts in multiple disciplines, but rather, by shaking up the prevailing hierarchy wherein print literacy currently reigns. Pondering the four factors that influence teacher educators' practices that I highlighted in the previous section, I make a case for considering a construct of literacy that can bring the multiple textual forms and diverse sign systems that are embedded in our past and that may be imagined in our future into a focused direction that can guide our literacy instruction today. This does not mean that teacher educators should eliminate print-focused literacy curricula from their programs or refrain from passing on rich traditions of print-based literature. Nor does it mean that teacher educators must try to fit the study of each of the growing list of literacies into their courses. Rather, what is needed is for teacher educators to problematize the framing of literacy in their teacher education programs and seek to develop a clear and cohesive frame for instruction wherein the teaching of print, or "mere literacy" (New London Group, 1996, p. 64) is no longer privileged to the exclusion of other valuable and viable foci for literacy instruction. The identification of a clear and cohesive anti-hierarchical frame can serve to facilitate alignment with teacher education policies and a rethinking of what may be important preparation for teacher education. To this end, I propose that a sense-making construct of literacy can serve as a clear, cohesive frame for 21st century education.

Sense-Making: A Construct for a Dynamic, Global World

Although the concept of sense-making is grounded in classic writings of John Dewey (1934) and other early thinkers (see for instance, James, 1983/1890; Simmel, 1997/1907), there has been a notable surge of interest in sense-making across a wide expanse of the 21st century discourse. Both classic and new perspectives on sense-making underscore desired features of a 21st century construct of literacy: one that frames literacy as a transformative and dynamic creative process that can advance individual human development, socio-political engagement, and economic well-being in an increasingly global, digital, diverse, and rapidly-changing world. Throughout the remainder of this chapter, I will sketch out these perspectives.

The Concept of Sense-Making Across the 21st Century Discourse

As I have asserted here and in previous work, the construct of literacy as sense-making employs the term "sense" in two ways: (1) sense, as the creative process of making meaning and (2) sense "as related to modalities (sight, hearing)" (Narey, 2017, p. 329). These two implications may be evidenced across a wide review of the 21st century literature and while I explore these dual concepts in depth throughout this chapter, I offer a brief overview here. First, I note that sense-making is a creative process that is frequently identified as a critical dynamic and transformational skill for the 21st century. Secondly, I draw attention to sensory studies and the emerging recognition of the role that the senses play in literacy development.

Sense-Making as the Creative Process of Meaning Making

Over the past decade, sense-making has emerged as an important topic across the broad 21st century discourse. Noting that sense-making is central to organizational leadership studies, Ancona (2012) defines the term as "coming up with plausible understandings and meanings; testing them with others and via action; and then refining our understandings or abandoning them in favor of new ones that better explain a shifting reality" (p. 5). Weick (1995) underscores the individual and collaborative creativity involved as he explains sense-making as a process inseparably "grounded in both individual and social activity" (p. 6) that is "less about discovery than it is about invention" (p. 13). From the design field, Kolko (2010) defines "sense-making as an action-oriented process that people automatically go through in order to integrate experiences into their understanding of the world around them" (p. 18).

Particularly relevant to the widespread belief that literacy is a means to economic opportunity, sense-making is listed first of the ten skills identified by the Institute for the Future (IFTF). Report authors, Davies, Fidler, and Gorbis (2011) identify sense-making as critical for the future workforce and define sense-making as "ability to determine the deeper meaning or significance of what is being expressed" (p. 8). In the IFTF updated report, *Future Work Skills 2020*, Fidler (2016) explains:

> As smart machines are used for more routine manufacturing and service jobs, there will be an increasing demand for the kinds of skills that machines do not perform well. These are higher-level cognitive skills that cannot be engineered into mechanical systems. We call these "sense-making skills" or skills that help us to create unique insights that are critical to decision-making. (p. 21)

Among the other skills listed in the IFTF report (Davies et al, 2011), I draw attention to several skills that also substantively support the conceptualization of literacy as the creative act of sense-making. These include:

- Novel and Adaptive Thinking: "proficiency at thinking and coming up with solutions and responses beyond that which is rote or rule-based" (p. 9)

- Computational Thinking: “ability to translate vast amounts of data into abstract concepts and to understand data-based reasoning” (p. 10)
- New Media Literacy: “ability to critically assess and develop content that uses new media forms, and to leverage these media for persuasive communication” (p. 10)
- Transdisciplinarity: “literacy in and ability to understand concepts across multiple disciplines” (p. 11).

These identified requirements for living in the 21st century call attention to the need for the development of individual and collaborative creativity, visualization and abstract thinking, communicational fluency across media, and transdisciplinary approaches to conceptualizations of experience. Further review of the 21st century literature reveals the role that sensory perceptions play in the development and enhancement of these skills and reinforce the dual connotations implied by sense-making.

Making Sense Through, and of, Our Sensory Perceptions

Viewing literacy as sense-making underscores the role that human senses play in meaning making. Canadian communication theorist, Marshall McLuhan (1964), points out that humans decipher information with their senses. In the diverse and growing field of sensory studies, scholars (see for instance, Classen, 1993, 2005; Low, 2012; Sutton, 2005) explore the role of olfactory (odor, smell), thermal (heat, cool), kinesthetic (movement), and other senses for perception. These sensory studies underscore not only research into individual senses, but, more critically, promote the analysis of multisensory or intersensory processes (Sutton, 2005).

Danesi (2012) explains that while people are generally born with similar sensory capacities, their social settings influence the level of the sense or senses employed to record or transmit a message. He notes, for instance, that in oral cultures the auditory sense is critical and in print cultures the visual sense is important. Therefore, we can view sensory perception as an individual means of making meaning that can be shaped by social context as individuals strive to communicate with each other.

Scholars working specifically in the area of 21st century literacy also note the recent broadening of sensory scholarship in the field. Mills (2016) explains, “The sensory literacies approach is a revitalized way of thinking about the multisensoriality of literacy and communication practices, including their technologies of mediation and production” (p. 137). Mills (2016) underscores that when humans communicate, the “body is central to the practical enactment of the interaction. Therefore, the body should be explicitly foregrounded in any theory about the process of meaning making” (p. 139).

Studies of the senses and sensory perception provide greater insights into meaning making. Further, our understanding of sensory perception will enhance our capacity to develop the identified skills required for sense-making in the 21st century: individual and collaborative creativity, visualization and abstract thinking, communicational fluency across media, and transdisciplinary approaches to conceptualizations of experience.

A Reciprocal Relationship

In regard to this rising focus on sense-making in the 21st century discourse, it is important to understand that although scholars across the literature may emphasize one strand or the other: “sense” as related to meaning making or “sense” as related to modalities, these are not separate concepts. Rather, there is a reciprocal relationship between the two in that we make sense through and of our sensory perceptions. To advance literacy in the 21st century, we will need to address both.

Examining the Theoretical Basis for Literacy as Sense-Making

Although literacy as sense-making may be supported by numerous theoretical frameworks, I focus upon two that I believe most clearly demonstrate literacy as the creative process required for constructs of literacy in the 21st century and that allow us to think about literacy in a way that will address the many concerns regarding print-based perspectives. First, I discuss Louise Rosenblatt’s (1969) classic Transactional Theory of Reading and then follow with the more recent New London Group’s (1996) Theory of Multiliteracies. My overviews of these theories reveal a shared perspective that meaning does not reside in the text, but rather, results from a dynamic and transformative ongoing creative process of construction and reconstruction. Further, both theories project a notion of text as fluid, rather than fixed and describe meaning to be subject to the individual and social contexts.

Rosenblatt’s Transactional Theory of Reading

Renowned literacy theorist, Louise Rosenblatt (1993) explains that her work in anthropology and aesthetics along with her study of semiotics (the study of signs) and the writings of Charles Sanders Peirce, William James, and John Dewey led her to go beyond the conventional literacy stances of the times. Rejecting the autonomous model (Street, 2006) of literacy, Rosenblatt’s (1938) early reader response theory challenges the perspective that some “correct” meaning is embedded in the text. From this theoretical perspective, Rosenblatt argues

> The reader brings to the work personality traits, memories of past events, present needs and preoccupations, a particular mood of the moment, and a particular physical condition. These and many other elements in a never-to-be duplicated combination determine his response to the peculiar contribution of the text. (Rosenblatt, 1938, pp. 30–31)

Later, Rosenblatt (1969) elaborates upon this early theoretical work with her, expanded transactional theory of reading, noting:

> Hence the "meaning" of any element in the system of signs in the text is conditioned not only by its verbal context, but also by the context provided by the reader's past experience and present expectations and purpose. Out of this emerges the new experience generated by the encounter with the text. Thus, the coming together of a particular text and a particular reader creates the possibility of a unique process, a unique work. (Rosenblatt, 1969, pp. 42–43)

In this later theory, Rosenblatt (1969;1985;1993) deliberately uses the term "transaction" instead of "interaction," explaining that "interaction" connotes that there is either a dominance of reader or text: a dualism that she rebuffs. Rosenblatt (1969) credits the origin of the term "transaction" to John Dewey and Arthur F. Bentley who attempted to find a word to "counteract the nineteenth-century phrasing of phenomena as an interaction between different factors, as of two separate, self-contained, and already defined entities acting on one another" (p. 43). Rosenblatt (1969) points out, "Dewey rejected the simple stimulus-response notion in which the organism passively receives the stimulus, and pointed out that to some extent the organism selects out the stimulus to which it will respond" (p. 44).

Pearson (2009) explains that Rosenblatt's expanded theory views meaning as "a new entity that resides above the reader-text interaction. Meaning is therefore, neither subject nor object nor the interaction of the two. Instead it is transaction, something new and different" (Pearson, 2009, p. 20). Pearson notes that Smagorinsky's (2001) cultural model of reading further articulates Rosenblatt's (1982) explanation of transactional theory to assert "readers quite literally compose new texts in response to texts they read; their recompositions are based upon the evocations (links to prior texts and experiences) that occur during the act of reading within a context that also shapes the type and manner of interpretations they make" (Pearson, 2009, p. 21).

New London Group's Theory of Multiliteracies

The New London Group's (1996) Theory of Multiliteracies is a theory of discourse that "sees semiotic activity as a creative application and combination of conventions (resources-Available Designs)" (p. 74), wherein the emerging meaning is constantly being re-presented and re-conceptualized in an iterative process of choosing to engage in the *Designing* of the *Available Design* which then becomes the *Redesigned* (as well as a new *Available Design*). Group members Cope and Kalantzis (2013) offer a brief explanation of these components:

> Available Designs (found representational forms); the Designing one does (the work you do when you make meaning, how you appropriate and revoice and transform Available

> Designs); and The Redesigned (how, through the act of Designing, the world and the person are transformed). (Cope & Kalantzis, 2013, p. 116)

I have elaborated upon this explanation of meaning-making, or sense-making in alignment with my own theoretical model of creativity (see Narey, 2017):

> Available Designs are the texts we encounter (seeing need for change). In Designing, we actively select and make meaning of the text (formulating ideas for change). The Redesigned is the text we produce in the act of designing that transforms the Available Design as well as the designer (enacting change). The Redesigned then becomes an Available Design for others to encounter, or for us to "re"-encounter. (Narey, 2017, p. 320)

Like Rosenblatt's (1978) transactional theory, the text is fluid, not fixed, and there is dynamic tension among the elements that is influenced by individual and social contexts.

> The concept of Design emphasizes the relationships between received modes of meaning (Available Designs), the transformation of these modes of meaning in their hybrid and intertextual use (Designing), and their subsequent to-be-received status (The Redesigned). The metalanguage of meaning-making applies to all aspects of this process: how people are positioned by the elements of available modes of meaning (Available Designs), yet how the authors of meanings in some important senses bear the responsibility of being consciously in control of their transformation of meanings (Designing), and how the effects of meaning, the sedimentation of meaning, become a part of the social process (The Redesigned). (New London Group, 1996, p. 81)

The New London Group (1996) offers popular music as an example of the hybridity implied in the process:

> Different cultural forms and traditions are constantly being recombined and restructured—where the musical forms of Africa meet audio electronics and the commercial music industry. And new relations are constantly being created between linguistic meanings and audio meanings (pop versus rap) and between linguistic/audio and visual meanings (live performance versus video clips). (p. 82)

As underscored in the previous chapters, literacy instruction for 21st century education must account for multiliteracies, digital literacy, multimodal literacy, critical literacy, and a seemingly endless list of other literacies to prepare diverse learners for their futures in a complex, ever-changing world. Drawing upon the two highlighted theoretical perspectives (Transactional Theory of Reading and Theory of Multiliteracies), my evolving construct of literacy as sense-making begins to reconcile the multiple 21st century concerns of a changing environment; the diversity of individuals, contexts, cultures; and the ethics/values at play.

Crossing Disciplinary Boundaries to Frame a Construct of 21st Century Literacy

Determining a clear and cohesive path for 21st century literacy requires a shift in thinking about literacy. As I continue to argue, teacher education must move from the hierarchical privileging of print-based sign systems towards a greater emphasis on teaching how to make meaning across the diverse range of texts in our real world 21st century and beyond. To do this, we must be willing to see beyond (and to fearlessly cross) the boundaries of our fields as many scholars, researchers, and theorists have done and continue to do. Working within and across such varied fields of linguistics, semiotics, psychology, history, science, mathematics, sociology, arts, philosophy, and anthropology, these scholars view knowledge as transdisciplinary; that is, "that which is at once between the disciplines, across the different disciplines, and beyond all discipline. Its goal is the understanding of the present world, of which one of the imperatives is the unity of knowledge" (Nicolescu, 2010, p. 22).

Just as Louise Rosenblatt (1993) brought semiotics, anthropology, and aesthetics to her theoretical stance, numerous literacy scholars have embraced a transdisciplinary perspective. For example, in their article, "The Literacies of Things," published in the *Journal of Early Childhood Literacy*, literacy scholars, Thiel and Jones (2017) draw upon physicist Karen Barad's (2007) transdisciplinary investigations into quantum physics, matter, and meaning wherein Barad states, "questions of space, time, and matter are intimately connected, indeed entangled with questions of justice" (p. 236). In their literacy article, Theil and Jones describe transforming an informal learning center space in a working-class neighborhood, explaining their efforts to "explore the object as a material-discursive apparatus in the production of literacies, particularly literacies of race and class" (p. 315). They note that transdisciplinary work like Barad's, "offers a way to reconfigure literacies as active and lively, animated through human and non-human intra-actions rather than static constructs" (Thiel & Jones, 2017, p. 333).

Important Concepts Highlighted in 21st Century Literacy Studies

To provide background for the evolving notion of literacy as sense-making, I sketch out summaries of several important concepts highlighted in 21st century literacy studies. These are the field of semiotics, and the nature of signs and codes and theories of materiality and embodiment. Each of these summaries underscore the understanding that 21st century literacy studies are by nature transdisciplinary in that they deal with concepts for meaning-making that are not bound to any one body of knowledge, but rather emerge from scholars' and researchers' work across disciplinary boundaries. The summaries provide a useful overview of aspects of meaning making critical to 21st century literacy.

Semiotics: Signs and Codes

Thomas A. Sebeok (2001), respected professor of semiotics and communication theory, writes,

> Each species produces and understands certain kinds of specific signs for which it has been programmed by its biology. These can range from simple bodily signals to advanced symbolic structures such as words. Signs allow each species to (1) signal its existence,
>
> (2) communicate messages within the species, and (3) model incoming information from the external world. Semiotics is the science that studies these functions. (p. 3)

Deriving from Greek *semesion*, meaning sign, "semiotic is the study of signs or an epistemology about the existence or the actuality of sign in societal life" (Yakin & Totu, 2014, p. 4). In his classic work, *Semiotics: The Basics, s*emiotician Daniel Chandler (2007) describes our human species as "*homo significans*" or "meaning-makers" who create and interpret meaning through signs, explaining, "Signs take the form of words, images, sounds, odours, flavours, acts or objects" (p. 13). Chandler goes on to point out, "such things have no intrinsic meaning and become signs only when we invest them with meaning" (p. 13). His perspective follows the Peircean model of the sign as laid out by Charles Sanders Peirce, an American scientist, philosopher, and logician whose theories along with those of Swiss linguist Ferdinand de Saussure pioneered the field of semiotics in the twentieth century.

Along with the incorporation of anthropology and sociology into literacy research, the field of semiotics inspired the radical social semiotic turn of the 1980s and 1990s. The new field challenged the status quo of literacy research, scholarship, and practice that previously had focused only on print-based texts. Further, the rise of semiotics established the need for 21st century definitions of literacy in a world where digital advances were rapidly encroaching and there was greater recognition of the need to meet the demands of a diverse and global society (Rowsell & Walsh, 2011). As Danesi (2012) observes,

> with the growth of media, popular culture, and mass communications departments throughout North America, semiotics has made its resurgence, not as a program area of study, but as a major subject area, since it provides a key for deciphering the layers of meanings in media products. (p. 189)

However, he notes that in the United States, often these rely on the objectives of individual instructors whereas in Estonia and Finland, semiotics programs are more established. Dansei reports that in North America, this interest in semiotics is particularly apparent in the marketing and legal professions and notes that edusemiotics is an emerging branch of study in fields focused upon instruction and learning.

Signs

In order to understand how semiotics is critical to notions of being literate, it is useful to look at examples of various signs in our world. Signs may be viewed categorically as icons, indexes, or symbols. An iconic sign generally looks, sounds, feels, tastes, or smells like the thing it represents. For instance, a photographed, drawn, or painted representation of a subject is an icon. Sound effects, onomatopoeia, and imitative gestures are also icons (Chandler, 2007). Indexical signs link to the subject represented in a less direct way, but the inference to the existence of the subject is observed physically or causally. Examples of indexical signs are smoke (an index of fire), a knock (and index of a visitor at the door), a directional signpost (an index of a particular place), or a smile (an index of a person's happiness). Finally, a symbolic sign has no logical connection to what it represents, so the relationship must be agreed upon and learned. A heart is often noted to be a symbol of love and a skull with crossbones a symbol for poison. While logographic characters are in part considered as having originated as icons (Luk and Bialystok (2005), letters of the alphabet are symbols, as are punctuation marks and numerals.

Specific colors may be used to symbolically represent ideas or concepts, for instance, as Cumming (2007) suggests, in Jan van Eyck's (1434) painting, *The Arnolfini Marriage*, the bride's green dress is a symbol of fertility. Alternately, in some cultures, brides traditionally wear white, and in others, red. For funeral ceremonies, mourning in some cultures is symbolized in wearing black, in others, white, and still others, red. Flags are symbols that can represent nations, but also can represent concepts such as patriotism for that nation. Actions involving a flag can also be regarded as symbolic. These symbolic actions are also subject to interpretation within a culture. For instance, using a flag as wearing apparel is noted as a sign of disrespect (see for instance, US code, Title 4, Section 8d, https://www.law.cornell.edu/uscode/text/4/8), while some citizens adorn themselves with a flag as a sign of their patriotism. Similarly, the symbolic action of displaying a flag, flying a flag upside down, or burning a flag can convey highly emotional and clearly opposite messages to different groups of people.

In regard to any sign or text, it is important to emphasize how arbitrary these are; how much the meaning relies upon the culture or context and/or the participant. For instance, if we just look at the signs used in written language, we see that meaning does not exist in the sign but is dependent upon culture. As a simple example, in English, which uses the Latin alphabet, the sign "P" is a symbol for the English speech sound [pe], whereas in Russian, which uses the Cyrillic alphabet, "P" represents the speech sound that is similar to the English pronunciation of the R sign, [er].

It is also important to note what the participant brings to the production or interpretation of the sign. Regardless of its alphabetic designation, the sign "P" is not a sign for an individual who does not have the sense of sight and it is not associated with a speech sound for a person who is absent the sense of hearing. Rather, these individuals more efficiently utilize other signs for making meaning (e.g., braille; sign-language). Further, some commonly taught literacy strategies (phonics; phonemic awareness) become subject to scrutiny when considering these populations, and some researchers are investigating assessments of learners' literacy achievement based upon phonological aspects (see for example, Mayberry, Del Giudice, & Lieberman, 2011; Narr, 2008). As I continue to demonstrate, the understanding that meaning is dependent upon context and individual, rather that the sign or the text, is critical to our development of constructs of 21st century literacy. Broadening the understanding of signs and questioning our instruction in terms of learners and contexts can inform the teacher educator's construct of literacy for 21st century education.

Codes

A 21st century view of literacy opens the notion of text to "objects, actions, or events that can be created and interpreted" (Narey, 2017, p. 3). Literacy, therefore, is grounded in the phenomena of contextual experience. Celebrated linguist and literary theorist, Roman Jakobson (1960) argued that signs only make sense within the framework of a code. "Codes help to simplify phenomena in order to make it easier to communicate experiences" (p. Chandler, 2002, p. 157). In our current digital world, the term "code" is typically associated with computer programming, yet as anthropologist Edmund Leach (1976) notes, codes exist in all aspects of our lives from our clothing to our living spaces. Leach posits

> All the various non-verbal dimensions of culture, such as styles in cooking, village lay-out, architecture, furniture, food, cooking, music, physical gesture, postural attitudes and so on are organised in patterned sets so as to incorporate coded information in a manner analogous to the sounds and words and sentences of a natural language … It is just as meaningful to talk about the grammatical rules which govern the wearing of clothes as it is to talk about the grammatical rules which govern speech utterances. (Leach, 1976, p. 10)

One must have access to the code, must learn to understand that particular system of signs in order to make meaning. Semiotician Daniel Chandler (2002) notes, "We learn to read the world in terms of the codes and conventions which are dominant within the specific socio-cultural contexts and roles within which we are socialized" (p. 155).

Materiality and Embodiment

The terms, *materiality* and *embodiment*, have become prevalent in numerous articles published in professional journals over the last decades. Basically, these terms highlight the role of objects and of the human body in meaning making. For instance, a child's favorite stuffed animal, a doily crocheted by a beloved aunt, a popular song from our college days, or a spoonful of soup can evoke emotion and, therefore, as objects, carry individual human stories in their materiality: stories that we read, reinterpret, and recreate through these objects over time and context. Further, our human senses are the conduit to persons, places, and things and, thus, are the basis for making meaning: we read and write textures, scents, tastes, spaces. As Sadoski (2018) contends, regarding embodiment and literacy, "there are no abstract mental codes, structures, or processes that are divorced from sensory experience" (p. 66).

For example, a musty smell encountered in an antique shop provokes memories of playing in a grandmother's attic or a classroom space can dredge of feelings of discomfort for an adult recalling unhappy experiences with school.

Embodiment is evident beyond the association of sensory experience with memory. For instance, examples of embodiment in inquiry include renowned physicist Albert Einstein's thought experiments wherein his visualization of himself as photons traveling at the speed of light led him to develop his theory of relativity (Henriksen, Good, & Mishra, 2015) as well scientist, Temple Grandin's work with animal behavior and livestock management wherein her personal experiences with autism facilitated her visualization of alternatives to animal handling (Jacobson, 2012). A child who jumps out of his seat and rotates his body in a clockwise motion in response to a teacher's explanation of the earth's rotation also is example of embodiment in inquiry.

Explaining the emergence of embodied cognition as "putting the body back inside the mind," Johnson (1987) writes

> The embodiment of human meaning and understanding manifests itself over and over, in ways intimately connected to forms of imaginative structuring of experience…(This) does not involve romantic flights of fancy unfettered by, and transcending, our bodies; rather, they are forms of imagination that grow out of bodily experience, as it contributes to our understanding and guides our reasoning. (p. xiv).

Recent literacy studies have drawn on varied theoretical offshoots of materiality and embodiment. New materiality and embodiment theories reinforce the notion of multiplicity of texts and link to those multimodal and critical approaches that current print literacy instruction fails to address. For instance, drawing upon the work of physicist Karen Barad (2003, 2007) and early childhood literacy researchers such as Dyson (2003), Pahl and Rowsell (2011, 2014), and Wohlwend (2013), Jaye Johnson Theil (2015) explains, "New materialism is the philosophy and theory that all things in the world, including humans, are matter and that phenomenon and knowledge occur through continuous and varied material exchanges of both living and nonliving entities" (p. 114). From this perspective, she posits, humans and objects have the capacity to transform each other to co-construct experiences, and subsequently, literacies through these sustained, interdependent relationships, or what physicist, Karen Barad (2007) terms, intra-activity. Literacies are revealed in the texts created by the intra-actions among persons, places, and things. In other words, the person is not just a person, and a thing is not just a thing. Rather both are transformed through the phenomenon of the intra-action, through the process of the experience.

Pahl and Rowsell (2011) underscore that literacy is "artifactual" (p. 133) explaining that literacy takes material form through family artifacts or objects. These literacy education researchers emphasize the sensory qualities of materials, noting, "Artifacts are sensory… Artifacts smell, they can be felt, heard, listened to and looked at. Objects carry emotional resonance and they infuse stories. Paying attention to meaning through artifacts involves recognizing embodied understandings as responses" (Pahl & Rowsell, 2010, p. 10).

Following Bourdieu's (1991) notion of *habitus,* which may be described as the linking of the body to the social and cultural fields in which the body-as-text evolves, the embodied cognition movement gained popularity in the 1990s. Embodiment arose "largely as a rejection of theories based on abstract, amodal structures that could not account for growing behavioral and neuropsychological evidence" (Sadoski, 2018, p. 333). "Linguistic anthropology has long recognized the critical importance of the body-as-text" (Samuelson & Wohlwend, 2015, p. 566) and has become an important direction for 21st century literacy studies. As Thelen, Schöner, Christian, and Smith (2001) explains,

> To say that cognition is embodied means that it arises from bodily interactions with the world. From this point of view, cognition depends on the kinds of experiences that come from having a body with particular perceptual and motor capacities that are inseparably linked and that together form the matrix within which memory, emotion, language, and all other aspects of life are meshed. (p. 1)

Materiality and embodiment feature importantly in our construct of 21st century literacy.

Moving Forward to Sense-Making as a New Frame for Literacy

Calls for 21st century literacy are grounded in the need to prepare learners to deal with the challenges of technological, environmental, social, political, and cultural change. Therefore, to become literate is to achieve the capacity to make sense of our encounters within this diverse, complex, and rapidly changing world. Such a construct of literacy as sense-making is a creative process that can only be achieved by developing learners' knowledge of, and critical engagement with, the multiple sign systems that exist and are yet to be invented. Literacy as sense-making draws attention to the need to develop learners' creativity, aesthetic, and sensory-perceptual development.

As put forth in previous chapters in this volume, the widespread construct of "literacy as reading" that is focused only upon one facet (decoding) of a visual sign system representing sound-based verbal language (print texts) is not sufficient for 21st century demands. Nor, as I also have pointed out, has this narrow focus been adequate for learners throughout history. Yet, the characterization of literacy as reading/writing, as visual decoding/encoding of a singular sign system, dominates instruction in schools across the globe. This has led to a somewhat dichotomous view of this dominant portrayal in opposition to what I label "add-on" literacies (digital literacy, critical literacy, multimodal literacy) and results in the hierarchical positioning of these add-ons at the periphery of instruction.

While I continue to underscore that the intent of this volume is not to disregard the importance of reading/writing (print), I assert that viable constructs of 21st century literacy must abandon the notion of hierarchical positioning of any singular sign system. Further, I argue that as teacher educators, we must seek to discover instruction that will support learners' literacy development across sign systems. Our notions of literacy must promote and support the previously identified skills required for sense-making in the 21st century: individual and collaborative creativity, visualization and abstract thinking, communicational fluency across media, and transdisciplinary approaches to conceptualizations of experience.

In the next chapter, I discuss a classic unit of analysis, the literacy event and explain how I have developed a new version. My new model of the literacy event offers a means of understanding literacy in a manner that no longer privileges print, but rather, affords it equal status across the multiple variables of a new 21st century formulation of literacy. It proposes a construct of literacy that can encourage promotion and support of skills required for sense-making in the 21st century.

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Chapter 5
Framing Literacy as Sense-Making: A *Re-Designed* Model of the Literacy Event

Marilyn J. Narey

Abstract The literacy event is a classic unit of analysis that continues to be developed as notions of literacy shift to 21st century perspectives. In this chapter, I focus on the literacy event as a useful *Available Design* for analysis of literacy as sense-making. Following a brief discussion relative to the historical background and the analytical value of the literacy event construct, I explain how terminology shapes point of view and I detail my choices for terms used in a revised definition. Next, I sketch out my new model for the literacy event by delineating four major dimensions of my adaptation of this analytical tool. Supported by my theoretical and conceptual discussion in the previous chapter, I share my original graphics and narrative detailing these four dimensions. Importantly, my *Redesigned* model offers a means of understanding literacy in a manner that no longer privileges print, but rather, affords it equal status across the multiple variables of a new 21st century formulation of literacy. Further, my *Redesigned* model of the literacy event can function as a lens through which teacher educators might view literacy for 21st century education and serve as a basis (*Available Design*) for further design and instruction.

Keywords 21st century literacy · Sense-making · Literacy event · Transactional theory · Multiliteracies theory · Semiotic shift · Literacy models

A clear understanding that emerges at this point in my questioning is that *my effort to problematize literacy* actually ***is*** *literacy as sense-making*. As I introduced at the beginning of this volume, my sketches are acts of inquiry: creative endeavors wherein the New London Group's (1996) three textual states of *Available Designs*, *Designing*, and the *Redesigned* are constantly in play. Recalling that creativity is when we see the need for change, formulate ideas for change, and enact change (Narey, 2008, 2018), it follows that literacy as sense-making is an embodiment of this creative process (Narey, 2017).

> Available Designs are the texts we encounter (seeing need for change). In Designing, we actively select and make meaning of the text (formulating ideas for change). The Redesigned is the text we produce in the act of designing that transforms the Available Design as well as the designer (enacting change). The Redesigned then becomes an Available Design for others to encounter, or for us to "re"-encounter. (Narey, 2017, p. 320)

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Essentially, any inquiry viewed through the lens of this creative process serves to demonstrate literacy as sense-making. The numerous advances in the field that are discussed throughout these chapters are examples of problematizing literacy through literacy as sense-making. Literacy scholars have seen the need for change in the Available Designs that they have encountered across the literacy landscape. That is, they came across designs that warranted their transactions, and subsequently, these scholars have gone through the process of Designing in order to develop Redesigned literacy constructs for 21st century education. At times, the Available Designs have been the broad positional frames for literacy, while in other instances, attention has had a more specific focus. For example, regarding the broad view for literacy, we have discussed the autonomous construct of literacy that is

> assumed to be a set of neutral, decontextualized skills that can be applied in any situation. Literacy is something that one either has or does not have; people are either literate or illiterate, and those who are illiterate are deficient. (Perry, 2012, p. 53)

A number of scholars (see Street, 1984, 2006) saw this autonomous construct paradigm as an Available Design that needed to be changed. Through the creative process of Designing, or generating ideas for change, they produced Redesigned frames for literacy, changing from the prevailing autonomous view to perspectives that emphasized literacy as social practice. Perry (2012) explains, this newer perspective "conceptualizes literacy as a set of practices (as opposed to skills) that are grounded in specific contexts" (p. 53) and that are subject to influences of culture and power. As I noted in the previous chapter, Louise Rosenblatt's (1978) Transactional Theory of Reading became one of the Redesigned frames that challenged the autonomous views of literacy that were so prevalent at the time. This recursive process of Available Design, Designing, and the Redesigned, may be traced throughout the development of theoretical ideas. Rosenblatt notes that her work drew upon the work of John Dewey, William James, Lev Vygotsy, and Charles Sanders Peirce (Karolides, 1999), thus, in essence, these theorists' thinking provided the Available Designs for her own Designing.

Scholars also have focused upon more specific aspects of literacy such as the need for change in assessment to account for multimodal features of literacy (e.g., Towndrow, Nelson, & Yusuf, 2013) or the need to recognize artifacts as integral components of family literacy (Pahl & Rowsell, 2011). While these changes related to specific aspects (Available Designs) of literacy they also influenced the broad paradigm for literacy and further underscored the need for change in our general characterizations (which are also Available Designs).

In this chapter, I look at an Available Design known in the field as the *literacy event*. I explore the notion of the literacy event as a specific aspect that needs to be changed, noting that this change will also help us to change our literacy constructs in a manner that no longer privileges print, but rather, affords it equal status across the multiple variables of a new 21st century formulation of literacy. Following my brief overview of how the literacy event has evolved (changed) as others have encountered it, I then describe my own Designing of the literacy event as sense-making. My intent is two-fold. First, my Redesigned model demonstrates the process of inquiry into the

Available Design of the literacy event, that is, it is a practical example of my own act of literacy as sense-making. Secondly, my Redesigned model of the literacy event functions as a lens through which teacher educators might view literacy for 21st century education. As a Redesigned model for analysis, it can serve as a basis (*Available Design*) for further design of the literacy event and, therefore, literacy instruction.

The Literacy Event as a (Potential) Text (Available Design) for Designing a 21st Century Unit of Analysis

Analysis is the "process of breaking a concept down into more simple parts, so that its logical structure is displayed" (Blackburn, 1996, p. 14). The *literacy event* is recognized as a highly valued unit of analysis for researchers' inquiries into constructs of literacy (Barton, 1994; Maybin & Tusting, 2011); that is, an inquiry through direct observations of *what literacy is* and *what literacy does* in a particular context. As Street (2003) notes, the term is derived from the related form of analysis, the speech event, and was first used by Anderson, Teale, and Estrada (1980) to describe occasions when individuals attempt to make meaning of graphic signs. The renowned American linguistic anthropologist, Shirley Brice Heath (1982a) further defined the literacy event as "any occasion in which a piece of writing is integral to the nature of participants' interactions and their interpretive processes" (p. 93). Heath's design of the literacy event was a response to autonomous perspectives of literacy wherein literacy was viewed as finding the correct meaning embedded in a text (Perry, 2012). Bloome, Carter, Christian, Otto, and Shuart-Faris (2005) push for the sociocultural stance of the analysis, explaining that in literacy events "people create meaning through how they act and react to each other" (p. 4) in relation to texts. More recently, Heydon and O'Neill (2016), note a literacy event is now viewed to be "any occasion in which there is semiosis or, the production of meaning through the use or creation of signs" (p. 3).

Sketching the Literacy Event: An Ongoing Process of Designing

My ongoing inquiry into literacy has included studying the literacy event in a variety of structural forms. Most recently, my analysis of a literacy event focused upon a toddler and his father reading a popular picture book (see Narey, 2019). In that work, I incorporated notions of embodiment and multimodality into my Redesigned literacy event. These two features for analysis particularly center upon the sensory aspects of several selected texts that were integral to the participants' transactions:

- the physical textual form of the story (book, film, app)

- the episodic text enacted by the participants (interpreting/performing/experiencing the story)
- the varied texts of the participants' responses to the story (Narey, 2019, p. 136).

In that inquiry, I teased out both the sociocultural frames (Bloome et al., 2005; Heath, 1982a, 1982b) as well as the broadened semiotic stance (Heydon & O'Neill, 2016) that scholars have been signaling for a 21st century view of the literacy event.

In the process of writing this book, my Redesigned literacy event (Narey, 2019) became an Available Design for my ongoing Designing. Thus, contemplating the current disconnect between notions of literacy advanced by scholars versus what is found in actual practice, I wondered if the literacy event could address the teacher educator's dilemma of bringing clarity and cohesiveness to the field. Could the literacy event, already recognized as a valued unit of analysis (Barton, 1994; Maybin & Tusting, 2011), be extended to coalesce the numerous 21st century constructs of literacy? What general dimensions would need to be included and what particular features might be discerned within these dimensions? How might such an analytical tool work to dismantle the verbocentric hierarchy, the inordinate focus on print that the New London Group (1996) challenged in their critique of "mere literacy" (p. 64)? How could the use of this new "literacy events as sense-making" analysis serve to inform 21st century teacher education practice?

Revised Definitions: Terms Shape Perspectives

As I noted at the beginning of this section, recent scholars have revised Heath's (1982a) classic definition of the literacy event to further emphasize the social aspects of the construct (Bloome et al., 2005), or to indicate the semiotic shift away from print-focused notions of literacy (Heydon & O'Neill, 2016). Recognizing that the terms we use to describe literacy shape perspectives of what literacy is and what literacy does, I have revised key terminology from Heath's (1982a) definition of the literacy event to better align with 21st century perspectives. Specifically, I have focused upon Heath's (1982a) use of the terms: "participants", "a piece of writing" and "interaction".

From "Participants" to "Designers"

In regard to the first term, Heath's (1982a) use of "participants" (p. 93) does not communicate the degree of active engagement anticipated by the creativity-focused and transformative views that underlie the conceptualization of literacy as sense-making. As identified in the previous chapter, these include Rosenblatt's (1978) transactional theory and the New London Group's (1996) Theory of Multiliteracies. These theories advance the notion that literacy in the 21st century requires the creative capacities to balance “modes, media, frames, and sites of display” with purpose and content (Bezemer & Kress, 2008, p. 174) as well as qualities indicative of transformation of relations and individuals. A key concept introduced by the New London Group (1996) is that individuals “are both inheritors of patterns and conventions of meaning and at the same time active designers of meaning” (p. 65). Further, they imply that literacy is a sense-making inquiry that acknowledges interactions and individuals’ interpretive processes but importantly goes beyond these to probe the complexities involved in the process of transformation.

> Through their co-engagement in Designing, people transform their relations with each other, and so transform themselves. These are not independent processes. Configurations of subjects, social relations, and knowledges are worked upon and transformed (becoming The Redesigned) in the process of Designing. Existing and new configurations are always provisional, though they may achieve a high degree of permanence. Transformation is always a new use of old materials, a re-articulation and recombination of the given resources of Available Designs. (New London Group, 1996, p. 76)

Changing the term from “participants” to “Designer(s)” presses for the recognition of the creative, transformative capacities necessary for literacy. Designing connotes active and transformational construction of meaning during the literacy event. This includes reading, listening, and viewing (New London Group, 1996), as well as other modes of experience. For example, just as a filmmaker is a Designer of a movie, or a violinist is a Designer of a musical performance, the viewer of the film or listener of the performance is also a Designer of meaning.

From “Piece of Writing” to “Potential Text”

Regarding Heath’s (1982a) reference to a “piece of writing” (p. 92), constructs of literacy in the 21st century require that we acknowledge the importance of other modes for meaning. The New London Group (1996) has emphasized that these modes include visual (images, page layouts, screen formats); aural (music, sound effects); gestural (body language, sensuality); spatial (the meanings of environmental spaces, architectural spaces); and multimodal which brings all other modes into dynamic relationship. Beyond these, as discussed in the previous chapter, scholars working with semiotics, sensory studies, materiality and embodiment, and related areas, also note the importance of other modes such as olfactory (scents, odors) or tactile (textural surfaces, thermal distinctions).

From a 21st century literacy standpoint, it is clear that a text is more than a piece of writing. Thus, I contend that if we are to shake loose from the hierarchical view of literacy wherein print is privileged, it is useful to examine the notion of a literacy event through the lens of a broader and more generalized characterization of literacy: one that moves away from a limited focus on a written text, to one which encompasses all modes or textual forms. To this end, I revisit my own definition of a text that builds upon Kress and van Leeuwen’s (1996) explanation that a text may be a sign or “complexes of signs” (p. 40).

> Texts are objects, actions, or events that can be created and interpreted. This definition broadens the construct to include dance, photographs, or web pages as textual forms. Further, within this definition, a classroom or teaching episode may also be viewed as a "text". (Narey, 2017, p. 3)

Finally, keeping in mind Rosenblatt's (1969, 1978) transactional theory and the New London Group's framework for meaning making, my intent is to use terminology that moves beyond Heath's (1982a) focus on the "piece of writing as integral to participants' interactions" (p. 93). In contrast with Heath's literacy event, Rosenblatt's (1969, 1978) perspective, detailed in the previous chapter, positions the individual and the text equally in dynamic transaction, and thus, the text is always a *potential* text.

From "Interaction" to "Transaction"

In line with Rosenblatt's (1969) argument for transaction as opposed to interaction, New London Group's (1996) framework of Available Design, Designing, and Redesigned, illustrates the complex, dynamic, and creative process of the text and the designer in ongoing sense-making. Thus, my use of the term *text (Available Design)* reflects the meaning that emerges from the transaction between the Designer(s) and the text (Available Design) within the individual and socio-cultural contexts of the literacy event.

Therefore, I sketch out my Redesigned definition: *a literacy event is any occasion of sense-making through a transaction between the Designer(s) and the potential text (Available Design) within their individual and general contexts.* My new definition of the literacy event opens a range of potential foci for analysis that offer insight into what literacy is and what literacy does, and thus suggests a clear and cohesive direction for literacy instruction in 21st century teacher education.

The Re-Designed Model of the Literacy Event: Four Dimensions

Drawing upon this new definition, I offer graphic and narrative sketches that explain four distinct, but interconnected dimensions of my *Redesigned* model for the literacy event. I support this new model with the scholarly literature and with my original visual diagrams to facilitate understanding. In my model, I focus on the analysis of the four dimensions of the literacy event as sense-making: the Phenomenon of the (Potential) Text, the Purpose for the Designing (Transaction), the Process of the Designing (Transaction), and the Situation. Using these four interconnected dimensions, I offer a means of understanding literacy in a manner that no longer privileges print, but rather, affords it equal status across the multiple variables of a new 21st century formulation of literacy.

Dimension I: The Phenomenon of the (Potential) Text

The first dimension that I identify in my re-designed model of the literacy event is the phenomenon of the (potential) text. Recalling my previous discussion that a text may be a sign or "complexes of signs" (Kress & van Leeuwen, 1996, p. 40), it is important to keep in mind Chandler's (2007) Peircean-based explanation that words, sounds, images, objects, flavors, scents, and anything else can be a sign only "as long as someone interprets it as 'signifying' something – referring to or *standing for* something other than itself" (p. 13). Further, supporting this notion of literacy as a creative sense-making process, Rosenblatt (1969) in her classic Transactional Theory of Reading, emphasizes the dynamic and experiential nature of the meaning-making event, noting that meaning emerges from signs in the context of

> past experience, present expectations and purpose. Out of this emerges the new experience generated by the encounter with the text. Thus, the coming together of a particular text and a particular reader creates the possibility of a unique process, a unique work. (Rosenblatt, 1969, p. 43)

Taking Rosenblatt's perspective in developing my Redesigned model of a literacy event, I argue, a designer (producer or interpreter) does not act on the text, nor does the text act on the designer. Rather, as Rosenblatt (1969) theorizes, it "is not a linear relation, but a situation, an event at a particular time and place in which each element conditions the other" (p. 43). A text only becomes a text "by virtue of its relationship with a reader who thus interprets it" (p. 44) in "an event occurring at a particular time in a particular environment at a particular moment" (p. 46).

> Unfortunately, important though the text is, a story or a poem does not come into being simply because the text contains a narrative or the lines indicate rhythm and rhyme. Nor, is it a matter simply of the reader's ability to give lexical meaning to the words. (Rosenblatt, 1982, p. 34)

Rosenblatt's ideas have been echoed by other literacy scholars such as Nystrand, Greene, and Wiemelt (1993) who agree that meaning is not found in the text, but instead,

> texts are said merely to have a potential for meaning, which is realized only in use, for example, when a text is read (even by the writer). This meaning is dynamic, which is to say, it evolves over the course of reading … it is not exactly the same from reader to reader; and it manifests the cultural and ideational assumptions readers bring to the text. This is not to say that readers completely determine the meaning of the text; instead, whatever meaning is achieved is a unique configuration. (pp. 298–299)

In Fig. 5.1, I illustrate this dynamic and experiential process resulting in the phenomenon of the text.

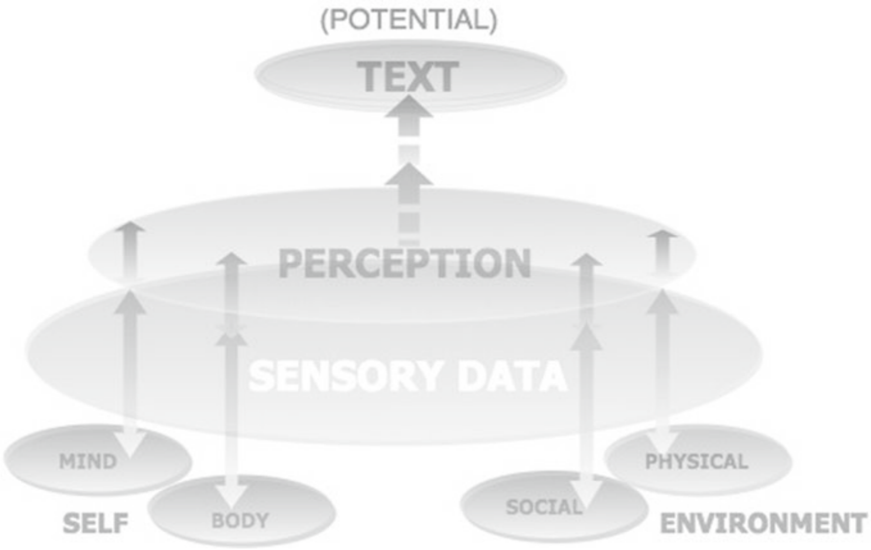

Fig. 5.1 Model of dimension I: The phenomenon of the (potential) text (Original construct and visual graphic created by M. J. Narey)

A Dynamic, Experiential Process

It is important to note that the dashed line of the uppermost arrow in Fig. 5.1 indicates that a potential text emerges from sensory data, but sensory data does not necessarily result in a text. As humans, we are bombarded with sensory data. In Fig. 5.1, I show that sources for these data may be situated within the self, either in the mind or in the body, or they may be situated in the physical or social environment. These sensory data are subject to what Webster (2012) terms, "sensory adaptation" that is, input from the senses is filtered by the psychological process that influence if, and how the data are initially perceived. Webster (2012) explains,

> The sensory systems we use to monitor the world around us are not static and instead are continuously recalibrating to adjust for changes in the environment (e.g., in the lighting or temperature) or to compensate for changes in the observer (e.g., with aging or disease). For example, the aromas that lure you into a room (or warn you away!) fade quickly from awareness once you enter, while your perception of color can change dramatically depending on the colors seen previously. (p. 1)

Advancing Barsalou's (1999) theory that knowledge is based in "perceptual symbol systems" gleaned from sensorimotor experience, Sadoski (2018) expounds:

> Perceptual symbols are bottom-up sensorimotor input based on our selective attention to multimodal experiences in the physical world. Perceptual symbols form the elementary basis of knowledge and combine into simulations that are the embodied basis of concepts. Perceptual symbols can vary in complexity so that, for example, our selective attention can distinguish a cup with a handle from a cup without a handle in the visual and haptic modalities. (p. 338)

It is important to point out that perceptions do not exist in isolation but rather, may manifest concurrently, layering, or in sequence, and further, may emerge in varied order or at different levels of intensity.

Psychological theories of selective attention may be traced back to William James (1983/1890) who explains how humans selectively filter and transform sensory input to direct their awareness to what emerges as relevant stimuli while ignoring what the individual perceives as irrelevant. Rosenblatt credits William James's (1983/1890) notions of "selective attention" as an insight that supported her transactional theory of reading "as a dynamic, fluid process in time" (Karolides, 1999, p. 164). Rosenblatt explains:

> It helped to explain the back-and-forth, spiraling influence of the reader and the text on the emerging meaning: the creation of tentative meanings, their influence on the possibilities to be considered for the following signs, the modification as new signs enter the focus of attention. Some-times, as signs emerge that can't be fitted into what we have constructed, we have to look back and revise. (Karolides, 1999, p. 164)

Similarly, drawing upon John Dewey's (1896) writings, Rosenblatt (1969) points out, "the living organism…selects from the environment the stimuli to which it will respond, and seeks to organize them according to already-acquired principles, assumptions, and expectations" (p. 42). In regard to selective attention and the composing of experience, Dewey (1934) observes, "things are experienced but not in such a way that they are composed into *an* experience. There is distraction and dispersion; what we observe and what we think, what we desire and what we get, are at odds with each other" (p. 35).

It is this selective process of composing sensory perceptions that is the sense-making, or the transaction (Rosenblatt, 1969, 1978), that results in the phenomenon of the text. As I proceed to describe the remaining three components of my re-designed literacy event, it is important to keep in mind that the text is not an object with which the designer (producer or interpreter) interacts. Rather, the text can only become actualized when text and designer *transact* in the particular context of a specific literacy event wherein all the contextual influences surrounding the designer(s) and the text(s) are brought to bear. It is the selective creative process of composing, of Designing (Cope & Kalantzis, 2013; New London Group, 1996) that is the phenomenon of the text.

Dimension II: The Purpose for the Designing (Transaction)

Relative to, and in conjunction with, the phenomenon of the (potential) text, the purpose for the designing (transaction) also is subject to analysis. The purpose(s) for designing the (potential) text has an impact on meaning. Roman Jakobson's (1960) model for a speech event is often cited in varied analyses of such functions of language. Jakobson's model demonstrates six functions of a speech message between an addressor and addressee. These are: referential, emotive, conative, phatic, metalingual, and poetic. Referential indicates the imparting of information (e.g., *It is snowing.*). The emotive deals with the direct expression of the addresser's emotional attitude towards the phenomenon (e.g., *I hate when it snows!*). Jakobson describes the connotative message as an "imperative" (p. 355) where the function is to control behavior (e.g., *Don't take the car out in the snow.*). The phatic function of language is to initiate or maintain a social interaction (e.g., *How about that snow?*). The metalingual function of language deals with the nature of the message, focusing on the code/genre of the language (e.g., *This is a weather report*). Finally, Jakobson's sixth function, poetic, attends to the textual features or creative use of the language of the message (e.g., *The snow falls like soft feathers.*)

Jacobson (1971) also pointed out that language is not limited to verbal systems and he argued that the study of signs must take in "semiotic structures, as for instance, architecture, dress, or cuisine … [as] a certain kind of message" (p. 703), noting, for instance that a garment is not only utilitarian but also exhibits semiotic properties (i.e., what you wear sends a message and many people carefully select clothing for job interviews or first dates). Thus, even by Jakobson's account, his notions of purpose do not just apply to speech, or a "piece of writing" as Heath (1982a) purported but to all signs and textual forms utilized in the process of sense-making.

As I consider the notion of purpose in the deconstruction of the literacy event from a 21st century perspective, I acknowledge Jakobson's (1960) speech-focused model as well as draw attention to his suggestion that the study of signs must include a broad range of semiotic structures (Jakobson, 1971). Thus, in sketching out a model for a 21st century literacy event, I have developed categories for understanding these functions of, or purposes for, language in a broader construct. I include this as Dimension II: Purpose for Designing (Transaction). Labeling these with the headings Data, Affect, Influence, Relationship, Code Type, and Code Aesthetic, I identify six purposes for the designing (transaction) of the varied texts pulsing through the literacy event and offer a brief explanation of the purpose designated in each category:

- Data—the purpose is the observation, collection, recording, and/or presentation of information
- Affect—the purpose is the identification, portrayal, and/or response to emotions
- Influence—the purpose is the identification of the desired action, the subject to perform the desired action, and the potential strategies to be employed to get the subject to perform the desired action
- Relationship—the purpose is the initiation, development, and/or sustaining of a social interaction
- Code Type—the purpose is to identify, use, distinguish salient characteristics of, and evaluate suitability (i.e., efficiency, effectiveness) of a particular sign system
- Code Aesthetic—the purpose is to develop/master/perfect use of the sign system itself.

Figure 5.2 illustrates these functions of literacy as potential purposes for which a Designer engages in the transaction with the text as it emerges as an Available Design subject to change in the course of meaning making.

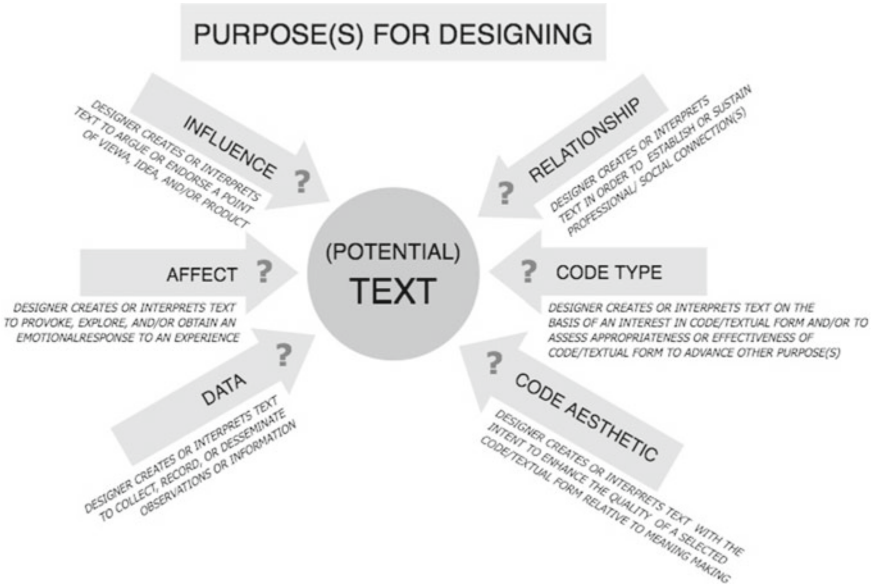
PURPOSE(S) FOR DESIGNING
INFLUENCE
?
DESIGNER CREATES OR INTERPRETS TEXT TO ARGUE OR ENDORSE A POINT OF VIEWA, IDEA, AND/OR PRODUCT
RELATIONSHIP
?
DESIGNER CREATES OR INTERPRETS TEXT IN ORDER TO ESTABLISH OR SUSTAIN PROFESSIONAL/ SOCIAL CONNECTION(S)
AFFECT
?
DESIGNER CREATES OR INTERPRETS TEXT TO PROVOKE, EXPLORE, AND/OR OBTAIN AN EMOTIONALRESPONSE TO AN EXPERIENCE
(POTENTIAL)
TEXT
CODE TYPE
?
DESIGNER CREATES OR INTERPRETS TEXT ON THE BASIS OF AN INTEREST IN CODE/TEXTUAL FORM AND/OR TO ASSESS APPROPRIATENESS OR EFFECTIVENESS OF CODE/TEXTUAL FORM TO ADVANCE OTHER PURPOSE(S)
DATA
?
DESIGNER CREATES OR INTERPRETS TEXT TO COLLECT, RECORD, OR DESSEMINATE OBSERVATIONS OR INFORMATION
CODE AESTHETIC
?
DESIGNER CREATES OR INTERPRETS TEXT WITH THE INTENT TO ENHANCE THE QUALITY OF A SELECTED CODE/TEXTUAL FORM RELATIVE TO MEANING MAKING

Fig. 5.2 Model of dimension II: Purpose(s) for designing (Original construct and visual graphic created by M. J. Narey)

Multiple Purposes on Continuum

Language has multiple functions. We transact with texts for a range of purposes within and across the six categories that I have delineated. Regarding these categories, it is important to underscore: (1) there may be more than one purpose or frame for the sense-making action and (2) the action may be located on a continuum indicating varying levels of engagement.

Relative to this first point (multiple purposes), consider the example of a literacy event involving a father reading a picture book to his young son. Both father and son are Designers in this literacy event, but for this example, we will just look at the purposes of the father. The father's primary purpose may be *relationship*: the father wants to sustain the close relationship with his young child that reading a book together will afford. In support of this primary purpose, the *code type* also has a role: the father determines that reading a book will encourage a more intimate experience than watching a video. In alignment with these purposes, *affect* is also at play: broadly, the father seeks to share his caring for his son through the literacy event, and specifically, is seeking to entertain his son with a story that may provoke various emotions (e.g., amusement, curiosity, sadness, joy). Proxemics (the space between them), the prosodic features of the father's voice in the story telling, and gestures also support affect. Throughout the literacy event, the father directs his son to observe the various details in the images as the story unfolds; thus, *data* is another category that applies. The literacy event may also provide a means for the father to *influence* his son, perhaps in a general sense by modeling reading books as a pleasurable experience, or as source of information, or by using the story or characters to promote a type of behavior (i.e., courage, persistence).

As an example of a more complex and extended literacy event, we might consider a service-learning project wherein college students want to advertise their campus midday meal fundraiser to raise money to fight hunger in the local community. The students' primary purpose is to influence members of their campus community to purchase tickets for this event. However, in the process of designing, the students' other purposes may include intentions that support or enhance the primary aim(s) or that coincide with the initial purpose. For instance, in the case of the students wanting to sell tickets, some additional purposes for the transactions in creating texts to advertise the fundraiser might logically include:

- data (collect and disseminate information about local hunger; disseminate information about the event);
- affect (an appeal to emotion, to elicit concern for children and adults experiencing hunger);
- code type (determining among various media [posters, campus email blasts; in-person appeals to campus organizations] based upon effectiveness of capacity to influence ticket sales); and
- code aesthetic (ensuring highest quality of selected code type as in eye-catching, well-designed poster, or eloquently prepared and delivered appeals to in-person or web-based audiences via speeches or media presentations).

These examples show that the Designer(s) in the literacy event may have more than one purpose and that this can influence the transaction. This does not mean that all functions of the literacy event are intentional. Rather, as Rosenblatt (1969) suggests, some functions may emerge during the transaction.

> Our primary purpose may be to gain information, but at the same time we may be aware of the rhythm or the qualitative responses aroused in us by the text, its sound in the inner ear, its appeals to memories involving the senses and the emotions. In fact, it seems not unlikely that such responses are operating even when they are not in the focus of attention. (p. 41)

In regard to my second point (i.e., actionable purpose(s) exist(s) on a continuum), it is important to understand that the literacy event may be simple or complex. For instance, the category, data, designates a transaction between a designer and a text that involves the actions of observation, collection, recording, and/or presentation of information. Simpler transactions for data such as consulting a bus schedule, jotting down a shopping list, or humming a few bars of a tune may exist on one end of a continuum whereas more complex transactions such as listening to a lecture about game theory, or creating a scientific illustration by observing and recording the visual data of a seed pod would veer toward the opposite end.

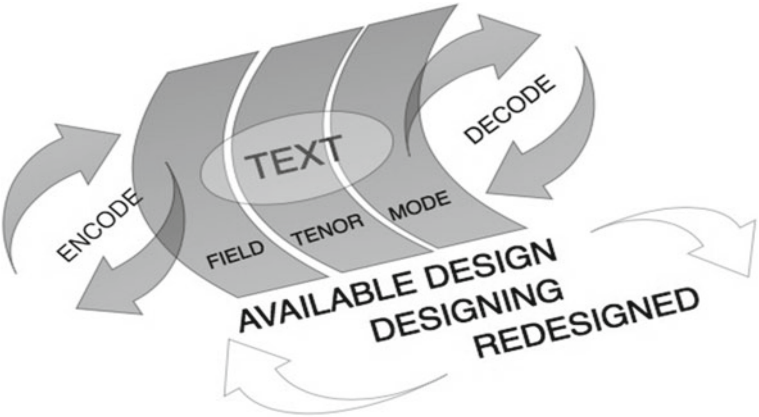

Fig. 5.3 Dimension III: The process of the designing (transaction) (Original construct and visual graphic created by M. J. Narey)

Dimension III: The Process of the Designing (Transaction)

Dimension III of the literacy event deals with the Designer(s)' engagement with the text(s) resulting from the phenomenon experienced. It is focused on the transaction and is influenced by the knowledge, skills, experiences, beliefs, as well as the critical reflection, and transformation at play throughout the literacy event. In the visual model of this dimension (see Fig. 5.3), I indicate with curved lighter arrows that the potential text emerges dynamically and contemporaneously in delineations introduced in a Pedagogy of Multiliteracies (New London Group, 1996): *Available Designs, Designing, and the Redesigned*, and modeled at the beginning of this chapter.

Next, drawing upon Halliday's (1973) systemic functional linguistics (SFL) approach to language, I illustrate aspects across the potential text that contribute to meaning making, specifically: *field, tenor*, and *mode.* While I acknowledge Lemke's (1998) contention that sign systems are complex and unique and, thus, tools developed for use of SFL in language discourse analysis cannot be directly applied across other modes, I contend that these aspects can serve here to inform our understanding. Thus, I have labeled the three aspects on the illustration in Fig. 5.3 and describe them here:

- Field: relates to what is happening during the literacy event, to whom, where and when, why it is happening, etc. For example, a mother sings a lullaby to a child in a nightly ritual; a restructuring committee examines community population and planning data to determine which students are assigned to specific schools; or a hunter carefully scans the brush to track a deer in the woods. The mother, the committee, and the hunter are Designers transacting with the specified texts within specific contexts and for particular purposes during these varied literacy events.

- Tenor: deals with the relationships within the literacy event in regard to issues such as formality, power, and affect. For example, the guest to an elegant wedding who dresses more formally than when invited to a picnic; or when a business head speaks to an employee the implication of power is greater than when either is speaking to their peers, are subjects for the analysis of the tenor of these literacy events.
- Mode: refers to the choices made regarding the language or code throughout the literacy event, including selections made as to purpose or functional quality to determine what is achieved throughout the literacy event. For example, when a teacher wishes to evaluate a student's knowledge of how to serve a tennis ball, the mode selected would be the demonstration of the actual movement rather than a response to a written quiz. Or, when a person is trying to sell her house, she might consider what various scents might communicate to potential buyers as they enter, and she may opt for placing a loaf of bread or cinnamon cookies in the oven as opposed to spraying a cheap air freshener.

Finally, the darker curved arrows circling on either side of the potential text indicate that Designers are both encoding (producing), and/or decoding (interpreting) the text(s) throughout transaction (New London Group, 1996; Rosenblatt, 1980). Referring back to the previous section to my example of the father reading a picture book to his young son, I point out here that the picture book (which was produced by the illustrator/author Designer) is an Available Design consisting of words and images on a series of paper surfaces that may be touched, and the pages may be turned back and forth as the father and/or his son choose. As one of the Designers in this literacy event, the father interprets the printed words and images while he concurrently produces a performance that includes oral speech and physical gesture with accompanying prosodic (expressiveness), kinesics (body movement), haptics (touch) and chronemics (time) variances, as well as the proxemics (space between the father and the son). The father is simultaneously decoding and encoding. The son is also decoding and encoding the father's storytelling in conjunction with the actual picture book as well as in response to the physical space and time of the literacy event. For instance, the son may attend to the small details of an image pointed out by the father or may hide under his bed pillow in response to his father's expressive portraying of a scary character's voice. The son might ask questions during the event, add his own characterizations of various characters in the picture book through words or actions, or even be distracted by something in the environment that works to pause or end the transaction with the text (e.g., a younger sibling enters the room or the father's cell phone rings).

Thus, for the father and the son who are the present Designers in this literacy event, the (potential) text emerges from a transaction that involves the picture book and the father's performance as well as the son's interpretive responses within the contextual influences afforded by the field, tenor, and mode. Throughout the literacy event, the Designers are simultaneously encoding (producing), and/or decoding (interpreting) the text(s) that was produced by the Designer(s) who created the picture book. The creator(s) of the physical picture book (i.e., author, illustrator, editor, etc.) in turn, had also been engaged in a transaction with multiple texts of that literacy event as the picture book was developed and their presence remains in the father-son literacy event. Thus, each Redesigned text and the meaning made will be unique as a result of the varied elements of the literacy event including what each Designer brings to the transaction at the particular place and time.

Dimension IV: The Situation

I explained Dimension I: The Phenomenon of the (Potential) Text by demonstrating how a text potentially emerges from perceptions that the Designer selects from the sensory data each person filters from internal and external contexts. In this next and final Dimension IV: The Situation (see Fig. 5.4) I look more closely at the notion of context relative to meaning making in the literacy event. First, I note, the (Potential) Text and the Designer(s) are situated in contexts. Equally as important, contexts are situated in the (Potential) Text and within the Designers. Secondly, a literacy event under analysis is itself an immediate observable context that is situated in the broader sociocultural contexts and subject to the multiple contextual influences internal and external to the (Potential) Text and Designers. The (Potential) Text-Designer-Context transaction in a literacy event “is not a linear relation, but a situation, an event at a particular time and place in which each element conditions the other” (Rosenblatt, 1969, p. 43). While the (potential) text, the Designer(s) or the contexts may be a focus for analysis, it is critical to underscore Rosenblatt’s (1969) assertion that in the transaction each element “conditions the other” (p. 43).

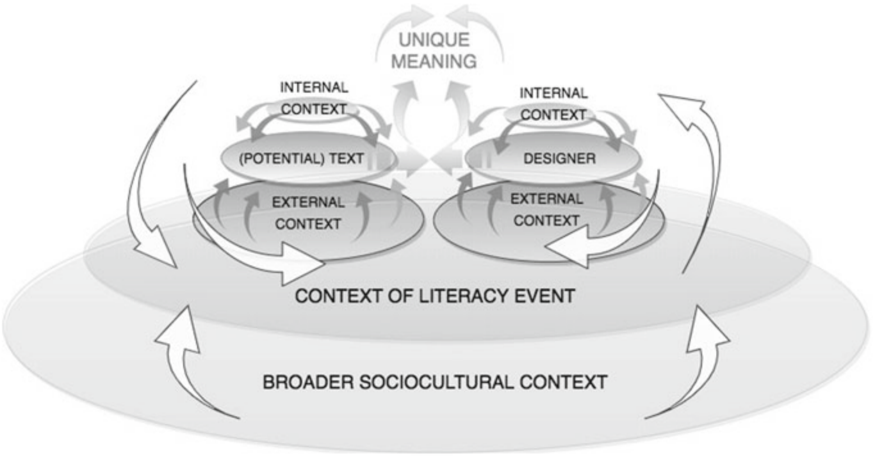

Fig. 5.4 Model of dimension IV: The situation (the particular time and place wherein each element conditions the other) (Original construct and visual graphic created by M. J. Narey)

As Rosenblatt (1978) explains, the Designer's process "does not occur in a vacuum but is deeply conditioned by the social context" (p. 135). The uniqueness of the meaning emerges even with the seemingly iterative process of producing or interpreting what appears to be the same Available Design. Two individuals may read the same passage, or view the same painting, and while they may derive relatively *similar* meanings, rarely will both find the *exact* same meaning. Further, the fact that an individual can glean different meanings from the same Available Design (e.g., story, painting) at different times or in different contexts (New London Group, 1996; Rosenblatt, 1969, 1980) is due in part to how each element conditions the other in a particular time and place. Many of us can recall our discussions about a play or a news report wherein we discovered that our friends had derived meanings that were different than our own. Or perhaps, a poem or novel we read in college took on another meaning when we read it 10 years later. Even the meaning of an email from a colleague may change from when it was read after a stressful face-to-face interaction to when it is read again when the situation has calmed.

My illustration reveals the complexity of the process as elements "condition" (Rosenblatt, 1969, p. 43) each other in the literacy event: in this graphic (Fig. 5.4), I show that the literacy event is set in a broader sociocultural context that "conditions" the literacy event and its various elements. As Shirley Brice Heath (1982b) noted in her classic research, sociocultural norms surround the literacy event itself. Geographic area, time period, culture, politics, economy, and other aspects of society influence the literacy event. For instance, consider a literacy event where your parent or grandparent (the Designer) watched an episode of a television situation comedy show in its original time period of the 1960s vs. the literacy event of that same person watching a re-run of the episode today. You will discover that the changing social or cultural values and mores surrounding the content and production of the television episode as well as the experiences that the Designer would bring to each event would have an influence on the transaction.

In the graphic, the Designer and the (Potential) Text are situated in the context of the literacy event, so all of the elements identified in Dimensions I (e.g., perceptions from sensory data), II (e.g., purpose(s), and III (e.g., field, tenor, mode) apply. As indicated by the arrows above and below, internal and external contexts act on the Designer and on the (Potential) Text. The internal context includes all that the Designer brings to the literacy event, including: "personality traits, memories of past events, present needs and preoccupations, a particular mood of the moment, and a particular physical condition" (Rosenblatt, 1938, p. 31) as well as motivation, power, ideology, status, ecological-cultural positioning stemming from sociocultural questions of race, class, ethnicity, etc. (Lackovic, 2018). The (Potential) Text also has been acted upon by its own similar internal context (i.e., such as traits relative to physical form or temporal and referential position).

The external contexts for the Designer and the (Potential) Text are those influences that extend beyond the space and time of the literacy event (e.g., relationships, environmental issues, traditions, laws). As noted in the graphic, these internal and external contexts contribute to the transaction, and ultimately, the unique meaning that is derived at the particular time and place of the literacy event in the broader sociocultural context.

Moving Forward with the Redesigned Unit of Analysis

This Redesigned model of the literacy event provides a means to shift our notions of literacy to accommodate 21st century perspectives and becomes a useful *Available Design* for analysis of literacy as sense-making. The four major elements of my *Redesigned* model promote an understanding of literacy in a manner that no longer privileges print, but rather, affords it equal status across the multiple variables of a new 21st century formulation of literacy. As will be illustrated in the final chapters, this *Redesigned* model of the literacy event can function as a lens through which teacher educators might view literacy for 21st century education and serve as a basis (*Available Design*) for further design and instruction.

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Chapter 6
What Does a Re-Designed Model of the Literacy Event Mean for Instruction?

Marilyn J. Narey

Abstract Building upon the ideas detailed in the previous chapters, I now focus upon what this new sense-making model of the literacy event implies for instruction. First, I draw attention to the role of aesthetics relative to sense-making. Then, building upon the theoretical and conceptual ideas advanced in previous chapters, I describe how an emphasis on the development of sensory perception and aesthetic knowledge within the creative process of sense-making may serve as a promising direction for designing literacy instruction that makes sense for 21st century education.

Keywords Literacy teaching · Teacher education · 21st century literacy · 21st century education · Aesthetic development · Creative capacities · Sensory development · Perception · Experience and learning · Transactional theory · Multiliteracies theory · Sense-making · Literacy curriculum · Literacy instruction

Throughout this volume, we have put forth a series of sketches through which we explored varied concerns regarding the teacher educator's dilemma of literacy instruction in 21st century education. Recalling the idea of sketches as inquiry (as introduced through the story of the boa constrictor digesting the elephant at the start of this book), our sketches provide records of practitioner-based, scholarly thinking about what literacy is and why literacy is as we problematized the construct for 21st century education. The four dimensions of my Redesigned model of the literacy event, detailed in the previous chapter, demonstrate my deeper inquiry into the problem. The model is a result of my questioning how it might look if the "boa constrictor" of literacy instruction could possibly digest the "elephant-sized" quantity of literacies promoted by 21st century literacy scholars. Yet, while my Redesigned model of the literacy event offers a concrete illustration of how a sense-making perspective could bring cohesiveness and clarity to the construct of literacy for 21st century education, further thinking was needed in regard to what this would mean for instruction. Despite these new constructs for literacy and for the literacy event, the question

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remained: what should teacher educators teach? In this chapter, I move forward into this next step of the inquiry to tease out a focus for instruction.

The Role of Aesthetics in Becoming Literate

My Redesigned model of the literacy event demonstrates how a potential text emerges from sensory perception and delineates the various purposes for designing. It illuminates the elements of the creative process and the influences of situational contexts in meaning making. My illustrations and explanations of the four dimensions of the model represent a view of literacy that addresses the diversity of contexts and multiplicity of textual forms called for by 21st century scholars (e.g., New London Group, 1996) by laying out a perspective that does not privilege print, but rather, affords it equal status across the multiple variables of a new 21st century formulation of literacy. Importantly, for our intent for this book, my model offers a construct of literacy that encourages promotion and support of skills required for the 21st century: individual and collaborative creativity, visualization and abstract thinking, communicational fluency across media, and transdisciplinary approaches to conceptualizations of experience (see for instance, as previously cited in chapter four of this volume Davies, Fidler, & Gorbis, 2011; Fidler, 2016). Finally, my model positions literacy in a manner that facilitates teacher educators' capacities to meet the many concerns brought forth by literacy scholars that resulted in an ever-growing list of literacies (e.g., critical literacy, multiliteracies, media literacy).

Yet, while this (the Redesigned) model for a literacy event helps to clarify the dimensions and elements of literacy, I still have not defined a focus for instruction: *what do we teach?* How do we bring these new understandings of literacy as sense-making to a clear and focused direction for literacy? In the following sections, I sketch out my proposal that instruction that focuses on developing learners' sensory perception and aesthetic knowledge within a creative process of sense-making is a promising course for addressing literacy for 21st century education.

Sensory Perception and the Concept of Aesthetics

My Redesigned model of the literacy event draws attention to the senses and sensory perception within the process of making meaning. Low (2012) writes, the "fundamental premise of studying the senses involves theorizing how senses form modes of knowing" (p. 274). Citing Dewey's (1934) deliberations on experience as an aesthetic transaction between an individual and the world, Low (2012) describes Dewey's classic works as the "inception of a sociology of the senses" (p. 273).

Also noting the sense-making implications of Dewey's (1934) work to her field of communication studies, Aimée Knight (2013) drills down on the notion of aesthetics.

She differentiates Dewey's view of aesthetics as one that is clearly different from the formal branch of philosophy that deals "with theories of beauty and fine art" (Knight, 2013, p. 146). Underscoring that she bases her understanding of aesthetics on the Greek notion of "*aisthetikos* —'relating to perception by the senses'" (p. 146), Knight asserts that notions of aesthetics continue to change and although historically aesthetics came to be associated with narrowly conceived assessments of beauty and art, she, like Dewey, views aesthetics as "the study of how people make and experience meaning through their sensory perception" (Knight, 2013, p. 154).

Similarly, Theo van Leeuwen (2015) focuses on the idea of aesthetics in terms of meaning and form, positing, "Forms create meanings and meanings need forms to come into being. Discourses that focus on form (e.g., musicological discourses) need to take a step towards meaning and discourses that focus on meaning a step towards form" (pp. 437–438). Building upon these perspectives, I suggest that aesthetics is about developing those aspects of form that allow and advance meaning making; the level of quality of the inquiry that brings about transformation for meaning.

Focus on Form and Elemental Features Relative to Function

Aesthetics involves critical assessment of physical form in regard to meaning making. In other words, it may be useful to revisit Louis Sullivan's (1896) well-known line, "form ever follows function," (p. 408) and in the interest of applying aesthetic knowledge to more effectively make sense, we must consider our varied textual forms in the context of the function or purpose they are to serve. For instance, in regard to the selection of form, a Designer who is producing meaning might ask, which is more appropriate for my purpose of advertising my business, a printed brochure or a webpage? Or a Designer who is seeking to get information (interpret meaning) about what time a movie is playing might consider whether to make a phone call to the theater, or to consult the Internet.

Additionally, as the elemental features of these structural forms can advance or impede meaning making, aesthetic knowledge enhances the quality of the meaning produced or derived. Aesthetic quality requires Designers who produce or interpret a selected physical textual form to be literate in elements of that form. For example, fluency in technical aspects of lighting or the communicative affordances of camera angles in film, will contribute to meanings produced or interpreted. Aesthetic quality is also relative to performance-based, episodic aspects of transaction with textual form. For instance, knowledge and skills in prosodic features (e.g., intonation, stress, and rhythm in vocal language) and/or kinesthetic aspects (e.g., body movements, gestures, or facial expressions) enacted by a storyteller will influence meanings produced and interpreted. It is important to point out here that aesthetic quality is not contained *within* these physical and episodic textual forms, but rather *across* the transaction. In other words, the aesthetic "is not located in an object of perception, but in how the aesthetic is experienced" (Knight, 2013, p. 153).

Experience and Critical Reflection as Key to Aesthetics

Experience is key to aesthetics. As literacy theorist, Rosenblatt (1960) explains,

> the quality of our literary experience depends not only on the text, on what the author offers, but also on the relevance of past experiences and present interests that the reader brings to it… Without sufficient relevant experience, he can evoke nothing from the page. At best, he may be able to make the appropriate sounds and parrot the words, but there will not be organization of meaning. (p. 305)

Pertinent to teacher education, Rosenblatt (1960) emphasizes the teacher's role in attending to the learner's experience and critical reflection:

> To lead the student to have literary experiences of higher and higher quality requires constant concern for what at any point he brings to his reading, what by background, temperament, and training he is ready to participate in. Literary sensitivity and literary maturity cannot be divorced from the individual's rhythm of growth and breadth of experience. (p. 307)

Literacy is a complex transaction. Yet, the faulty concept of literacy as a "one-way process, with the passive reader being stimulated to respond emotionally" (Rosenblatt, 1960, p. 308) is still prevalent in literacy instruction. As teacher educators in the 21st century, we must overcome this and, instead, promote instruction based upon a construct of literacy as "engage[ment] in an intellectually and emotionally active process, first, of literary recreation and second, of critical reflection on that experience" (p. 308). Our instruction must center on developing students' capacities in recreation (i.e., to "re"-create or create anew) and critical reflection upon the comprehensive literary experience.

Rosenblatt's conceptions of these active processes of recreation and critical reflection are amplified in the New London Group's (1996) similar notions of re-presentation and recontextualization. Per their discussion, the quality of the meaning making relies upon the Designer's creating and critical reflection upon multiple aspects of the experience:

> The process of shaping emergent meaning involves re-presentation and recontextualization. This is never simply a repetition of Available Designs. Every moment of meaning involves the transformation of the available resources of meaning. Reading, seeing, and listening are all instances of Designing. (New London Group, 1996, p. 75)

The New London Group's assertion further echoes Rosenblatt's (1969, 1978, 1983) later works wherein she offers us further clarity into the valuable role of aesthetics within transactional theory. In these works, her positioning of aesthetics as inquiry comport with the contentions of 21st century critical literacy scholars (see for instance, Freire & Macedo, 1987; Janks, 2000; Knoblauch & Brannon, 1993; Lankshear & McLaren, 1993) as well as the real-world on-going work of investigation, analysis, testing, reflection, and revision by artists and scientists and all who seek meaning through critical inquiry. To this end, Rosenblatt emphasizes the sustained questioning, the creative process of meaning making, and the impact of the aesthetic knowledge of the designer. In order to more clearly understand her intent, I highlight Rosenblatt's (1969) explanation of this, noting particularly where she explains that while the tentative interpretation of a text emerges from what the Designer brings to the transaction, to be literate in the fullest sense, it is essential that the Designer engage in ongoing critical reflection. The literate person, having made an initial interpretation

> then tests it by further study of the text or by comparison with others' interpretations of it… [and, wherein] may discover that he ignored some elements or that he projected on it responses irrelevant to the text. Out of this may come a reinterpretation of the text, that is, the structuring of a new kind of experience in relation to it. This simply is a further development of the transactional process that begins with the first effort to derive even the simplest level of meaning from the text. (Rosenblatt, 1969, p. 44)

Experience and critical reflection are the key to aesthetics, to the quality of the literacy event. Relying on initial perception, mere literacy, is not sufficient. As Ken Goodman (2005) has pointed out, "What we can perceive and our ability to make sense of it depends on what we bring to the task and our ability to apply schemas to the perceptions" (p. 15). Perception is not literacy. Rather, literacy develops from the designer's creative capacities to make sense of what is perceived. Further, the designer must be aware that meanings are shaped by the various contexts surrounding the Designer(s) and the (Potential) Text(s) in a literacy event and engage a critical stance. Rosenblatt (1969) admonishes,

> Without the effort at testing his perception, the observer would not have realized that what he saw was largely a projection from past experience. Yet only through such criticism of his own perception could he build up the equipment with which to achieve a more adequate perception. In both instances, what was perceived involved both the perceiver's contribution and the environmental stimulus. (p. 44)

Sense or Non-sense in Education?

Looking at literacy in 21st century education, Ken Goodman (2005) critiques the ongoing trends in literacy instruction policies, emphasizing, "much of what is being imposed by laws on research and practice in the early part of the 21st century will be seen in the future…as the pedagogy of the absurd" (p. 22). In previous discussions regarding sense-making (Narey, 2017), I have drawn attention to Ken Goodman's (1996) contention: "people have started in the wrong place, with letters, letter-sound relationships and words. We must begin instead by looking at reading in the real world, at how readers and writers try to make sense with each other" (pp. 2–3). To be/become literate, readers and writers of the wide array of 21st century literacies must be cautious of starting in the wrong place (Narey, 2017). Too often, 21st century literacy is equated with instruction in digital tool-use, while important skills like aesthetic development is virtually ignored.

Active inquiry into the selection of forms or understandings of how aesthetics advance or impede meaning making is rarely taught in schools (Eisner, 2005; Siegel, 2012). Learners may be permitted, or even encouraged to add visual, aural, or moving elements to print-based productions, but there is little instruction in how to effectively use these elements (Narey, 2017). Yet, it is critical that educators realize that 21st century literacy is not just about the inclusion of varied forms (e.g., digital, images, audio), but rather, it is the *selection of* and the *aesthetic knowledge and quality brought to,* these textual forms across the transaction (Narey, 2017). The "mere literacy" label that the New London Group (1996) applied to most school instruction in print-based literacy, actually may be viewed as a designation that can extend to instruction in all textual forms. The presence of an image, a sound effect, an animation, does not necessarily demonstrate literacy in 21st century education even in terms of so-called digital literacy. In fact, the proliferation of digital media in the 21st century has drawn attention to the dearth of aesthetic knowledge exhibited across productions and has led new media scholars to argue for a view of aesthetics as meaning making of lived experiences by active engagement of and through human senses. Jones and Arning (2006) posit, "aesthetic practices locate how bodies are interacting with technologies at the present moment and provide a site for questioning those locations" (p. 2). Kress (2005) argues for the need for "necessary aesthetic and ethical navigational aids" (p. 21) as preparation for such inquiries. Yet, educational policies have been directed elsewhere, leading scholars like Elliot Eisner (2005) to claim that the aesthetic has become "casualty in American education" (p. 102) as educators work under the questionable premise that knowledge is discovered, rather than constructed. If we understand knowledge as constructed, made from our inquiry, Eisner (2005) argues "its aesthetic dimensions would be appreciated" (p. 102) across the wide array of subjects from math to reading and writing to science.

Much of literacy instruction is focused upon advancing meaning making, and thus, would seem to require, at minimum, aesthetic knowledge of print-based texts. Sadoski (2018) posits that although comprehension is a primary focus of print literacy, there is "little evidence that widely researched and applied comprehension programs and strategies of the last nearly 50 years have had substantial, lasting effects…Our diverse array of approaches seems to have left us adrift, more bewildered than enlightened" (p. 332). When educators do focus upon making meaning, the instruction tends to veer towards teaching from an autonomous view, that is, from the perspective that comprehension means getting to the meaning that the author supposedly intended, which often means the interpretation that the teacher has adopted, what the textbook publisher has indicated, or what some "expert" has indicated as the "correct" meaning, to be learned. Typically, individuals and contexts are ignored. Supported by literacy scholars who argue for a more sociocultural understanding, and building on Goodman's (1996) assertion, I propose that what is needed is literacy instruction that looks at meaning making in the real world: at how Designers try to "make sense with each other" (p. 3).

A New Focus for Literacy Instruction

The four dimensions of my model of the Redesigned literacy event provide an understanding of meaning making in the real world of diverse individuals, contexts, and multiple textual forms. Examining the four dimensions detailed in the model, it may be noted that meanings emerge from our sensory perceptions and materialize through our inquiries and our creative capacities in transaction with the potential text. In this chapter, I have explained the import of aesthetic knowledge to the meanings that result from these transactions. Thus, if we are to design instruction to develop literacy in 21st century education, if we are to design our teaching to support and promote "making sense with each other" (Goodman, 1996, p. 3) in the real world of the 21st century, this understanding of transaction suggests that our instructional focus must be on developing learners' sense-making abilities. Such instruction means the support and promotion of learners'

- sensory capacities (awareness of and attentiveness to the senses and critical analysis of sensory perceptions) (Narey, 2017)
- creative capacities (understanding and practice of a process of inquiry into the textual phenomenon as seeing the need for change, generating ideas for change, and enacting change) (Narey, 2009, 2017, 2018)
- aesthetic knowledge (attentiveness to and application of understandings of how structures and elemental aspects of forms advance or impede meaning making within specific purposes, in other words, the *quality* of the experience) (Narey, 2017).

This new approach shifts instruction from the hierarchical positioning of print-based texts to a more encompassing field for meaning making. Further, this sense-making view of literacy resolves the teacher educators' dilemma by its inherent accommodation of the myriad of literacies that literacy scholars have claimed necessary for 21st century education. Rather than allocating large percentages of instructional time to teaching learners to decipher a singular code type or locate a preconceived meaning in a text, this sense-making focus naturally develops capacities for critical literacy, multimodal literacy, media literacy, digital literacy, content and disciplinary literacy, and addresses the aspects that New Literacies and Multiliteracies theories found missing in the "mere literacy" (New London Group, 1996) instruction that prevails in schools.

Now, having teased out a viable focus for instruction, one further question remains: how does this look in the real world of a teacher educator's classroom? The final chapter will offer a glimpse of how this instructional focus on developing sensory capacities, creative capacities, and aesthetic knowledge looks in practice and will provide insights into how teacher educators might begin to approach literacy as sense-making for 21st century education.

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Chapter 7
Literacy as Sense-Making: Presenting an Available Design for 21st Century Teacher Education

Marilyn J. Narey and **Kelli Jo Kerry-Moran**

Abstract In this final chapter, the understandings that emerged from inquiries into the nature and purpose of literacy; the deconstruction of the teacher educator's dilemma; the novel perspectives sketched out in the Redesigned literacy event; and the teasing out of a focus for instruction coalesce as we make our summary argument for promoting a construct of literacy as sense-making. Applying the theoretical and conceptual ideas advanced in previous chapters, we reiterate that an emphasis on the development of sensory perception and aesthetic knowledge within the creative process of sense-making is a promising direction for designing literacy instruction that makes sense for 21st century education. To this end, we share an authentic example of a project from Kelli Jo's teacher education classroom to which we apply this instructional focus for a literacy as sense-making approach and highlight key insights from our critical reflection on the assignment. Finally, we conclude with a summary of our argument, proposing that the series of sketches presented in this volume may serve as Available Designs for other teacher educators who seek a clear and cohesive direction for the instruction of literacy for 21st century education.

Keywords Literacy teaching · Teacher education · 21st century literacy · 21st century education · Aesthetic development · Creative capacities · Sensory development · Perception · Experience and learning · Transactional theory · Multiliteracies theory · Sense-making · Literacy curriculum

This volume is written two decades into a new millennium that has brought tremendous change into human lives and relationships. Individuals throughout the world seek ways to improve their circumstances, contribute to their communities, and achieve personal fulfillment by engaging and communicating with others in a variety of modes and contexts. Many digital environments have become spaces in which learning, teaching, and knowing are acknowledged as sensory and multimodal. Further, the new millennium has ushered in a renewed interest in indigenous ways of making meaning, many of which are not based on verbocentric traditions (Merriam,

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Caffarella, & Baumgartner, 2007). Educational approaches that are based in sensory exploration and multiple ways of making meaning in addition to print have broadened. The 21st century is primed for an approach to literacy that encompasses the varied ways people make meaning of the world. Thus, teacher educators are challenged to find a viable focus for their instruction amid the plethora of possible paths put forth by the many scholars who are advancing 21st century goals.

To this end, we (Marilyn and Kelli Jo) revisited the factors fueling the teacher educators' dilemma (i.e., beliefs; policies; lack of clarity and cohesiveness; and insufficient preparation and experience). We determined that the Redesigned model of the literacy event along with the new focus for instruction, serve to bring a clearer and more cohesive frame for literacy in 21st century education. While our construct of literacy as sense-making, may not affect the various policies that direct literacy teaching, we hope that as teacher educators read this volume and ponder our Available Designs, that they are inspired to critically reflect upon their individual and collective beliefs about literacy and teaching. Further, as teacher educators discover that literacy as sense-making is a clear and cohesive frame for moving forward, we anticipate that they will seek out resources that will expand their capacities to prepare teachers for their 21st century learners.

Applying a Sense-Making Approach in the Real World: Making Sense of a Literature Portfolio Assignment

In order to provide an example of how a literacy as sense-making approach might look in practice, we share highlights of Kelli Jo's deliberations as she implemented a required literature portfolio assignment in a children's and young adult literature course for preservice teachers. The original purpose of the assignment was to teach preservice teachers to effectively use children's and young adult literature in their future classrooms. This purpose remained as she modified the assignment but most of its components and the way students were prepared to complete the assignment changed. As has been discussed in this volume, literacy as sense-making is focused on making meaning in the real world of the 21st century. This includes developing the sensory capacities, creative capacities, and aesthetic capacities that facilitate meaning making across contexts and textual forms.

Importantly, a sense-making frame does not mean that teacher educators must be proficient in and teach the myriad of literacies that 21st century scholars have deemed so critical to literacy in 21st century education, nor does it necessitate the creation of additional courses or assignments. Rather, as she models here, teacher educators can pause and attempt to make meaning of their own instruction. Per the theoretical grounding (i.e., New London Group, 1996; Rosenblatt, 1969, 1978, 1983) of our work in this volume, we note here that Kelli Jo's course and the featured assignment are also texts, or Available Designs with which she engaged in a process of meaning-making or Designing. The result of her transaction was an updated version of the course and the assignment, that is, the Redesigned. In order to underscore teaching as text(s) and the teacher's subsequent meaning making of that text as a creative process, we employ Narey's (2017) alignment of her conceptual analysis of theories creativity with the New London Group's (1996) designations of making meaning to describe Kelli Jo's inquiry. Specifically, we explain the Available Design, Designing, and the Redesigned as seeing the need for change, generating ideas for change, and enacting change (Narey, 2017).

The Available Design: Seeing a Need for Change

The original literature portfolio assignment mandated for Kelli Jo's course required the students to read a variety of books across the major genres studied in school settings and to write a report for each book. Students read a minimum of 21 books and maintained a log documenting the bibliographic information, summary, genre, type (picture or chapter book), target age or grade level, personal response and literary analysis for each book. Students also selected one book at each age level (9–14 years) and described an appropriate research-based extension activity that could be completed with it as well as selected three books for which they described appropriate adaptations for students with special needs and/or English Language Learners.

The literature portfolio assignment was intended to teach the preservice teachers how to select appropriate literature for a particular age-range (9–14 years), to identify the characteristics of genres, to develop appropriate extensions and adaptations for all learners, and to understand the importance of reading widely and deeply. The perspective through which the course had been designed was print-based literacy and thus, it was observed that other instructors for the course predictably focused on written texts (picture or chapter books). However, literacy for 21st century education demands meaning making across multiple textual forms and contexts.

The literature portfolio assignment goals were linked to the course objectives and, per typical university curricular policy, these were not under Kelli Jo's authority to change. Yet, she could work to frame the course more broadly than its original narrow focus. She could expand her students' perspectives of what textual forms the literature selections might take to better address some important 21st century concerns. Thus, she attempted to sketch out the course, and the assignment, from a literacy as sense-making view that would include encoding and decoding print as only one of the many ways that literacy is enacted in the 21st century.

Designing: Generating Ideas for Change

The literacy portfolio was the major assessment for the course, so it was essential that it align with the course objectives and with instruction. Kelli Jo's assessment of needed changes focused initially on building a foundation for sense-making by expanding the textual forms that would be emphasized and the students' personal connections to these forms. The textual forms (films, audiobooks, graphic novels, etc.) and personal connections to these forms provide an experiential base that Dewey, Rosenblatt, and other scholars emphasize as intrinsic to the meaning-making process that was described earlier. After establishing this foundation, Kelli Jo turned her attention to the preservice teachers' sensory development, creative capacities, and aesthetic knowledge. She needed to design instruction and experiences that would help her students develop these capacities and hopefully, push them to begin to critically reflect upon their beliefs about literacy and teaching.

Building a Foundation: Expanded Textual Forms and Attention to Experience

Preparing to comprehend and engage with 21st century texts first requires acknowledging the many forms these texts may take. The assignment had to expand what counts as literature. The original version of the assignment required students to assemble a literature portfolio consisting of books alone, which sent the explicit message that "literature" is embodied only in books and enacted by encoding and decoding print—magazines, websites, film, and other modes and media that are important in 21st century learning and literacy were absent.

Secondly, Kelli Jo was aware that many of her students would not view themselves as "readers". One of the disadvantages of a print-based literacy approach is that some individuals fail to realize that they have deep personal connections with literature texts that do not fit a narrow print-based perspective (e.g. a beloved movie or song). Furthermore, students may not recognize how the views and experiences they bring to a text influence what the text means to them.

Contextually, her class was composed of preservice teachers who shared a common age range for their future students but not a common content area. She would be teaching prospective science, mathematics, social studies, and language arts teachers and, with the exception of the future language arts teachers, knew many of her students would struggle to see print-based children's and young adult literature as relevant to their professional or personal development. All teachers of literature courses want their students to develop personal connections with texts and a love of literature; however, the literacy portfolio did little to facilitate these outcomes. The assignment was based on the premise that if students read a lot of books, they will develop personal connections with books and like books. Kelli Jo's view was that every student would come to the course having experienced personal connections with some 21st century literacy texts but many of these connections would not be with books. She wanted to focus on making personal connections with literature in all its forms so that her students would better recognize the connections they already had with literature and could use those connections as a starting place for developing new ones.

Developing Sensory Capacities, Creative Capacities, and Aesthetic Knowledge

Recognizing personal connections across 21st century literacy texts requires an emphasis on the diverse range of texts that incorporate images, sounds, textures, movement and other elements. Focusing exclusively on printed books did not help learners to develop the sensory capacities needed to effectively perceive, interpret, and evaluate how the senses are integral parts of literacy events. People of all ages and in every circumstance depend on diverse literature forms to make-meaning of the world; however, providing a more expansive view of what children's and young adult literature includes is not enough to teach literacy as sense-making.

Kelli Jo knew from prior experience that teaching students about films, images, audiobooks or any variety of textual formats that are common in the 21st century would be insufficient. As highlighted at the start of this chapter, this instruction must be partnered with helping preservice teachers to develop sensory capacities to perceive the text, to encourage creative capacities that prompted inquiry, and to develop aesthetic knowledge of these forms as they worked to higher levels of capacity for making meaning. In other words, she needed to teach both an expanded perspective that acknowledged the diverse array of literacy texts and an expanded skill set for working with these texts.

The first area that needed changing was acknowledging and including sensory development. All texts are perceived through the senses, but the role of sensory perception is rarely discussed in teacher education except as it applies to the development of young children. Preservice teachers need to hear how the way an audiobook narrator reads a passage of text imparts meaning and see how the use of color in a graphic novel influences their interpretation of the characters' emotional states. These types of discoveries build understandings of how the whole person, body, mind and spirit are interconnected in perceiving, comprehending and interacting with the world and others. People are sensory beings and while print-based literacy focuses mostly on cognition and language, the human body does not segregate sensory perception from cognition. Incorporating sensory awareness and development into the course was a needed change.

Building creative capacities was a second way in which the assignment could be redesigned. The original literacy portfolio assignment itself was poorly designed to expand and engage students in creative thought and production. By limiting the response format to a modified book report, students' responses tended to be formulaic. Their entries were mostly listings of information that was largely bibliographic, easily accessible through online searches, and conformed to standard interpretations of the text. There was no real engagement with these texts as inquiries, or sense-making. While the components of the portfolio that required developing appropriate extensions, adaptations for students with special needs, crafting a personal response and conducting a literary analysis had the potential to develop some of these creative capacities, in practice students mostly completed these assignments by referencing online resources and lesson plans with no attempt to adapt or redesign them. Furthermore, students often self-selected children's and young adult literature with which they were already familiar, that they could effortlessly access and that did not challenge or expand their thinking. Consequently, the potential to develop preservice teachers' creative capacities within the structure of the original assignment were not realized.

A final area needing change was teaching aesthetic awareness for literacy learning and teaching. Aesthetic knowledge is a significant challenge because literacy texts come in so many forms that it is not possible to address them all in a single course, and it is difficult to know to what extent to address each form. Findings from a study of primary school teachers in Australia who had volunteered to teach a multimodal composition unit suggest that even teachers who are interested and highly motivated may be poorly prepared to teach these 21st century skills (Chandler, 2017). Preparing preservice teachers to support their future students in reaching literacy goals of increased economic opportunity, civic engagement and personal development requires not only recognizing the forms and formats of 21st century literacy texts but also being able to "read", critique, and even to some extent create in those forms. In contrast, the course curriculum and assignments were focused entirely on print. This focus limited preservice teachers in learning elements and principles of diverse modes such as film, visual images, and vocal expression that are needed to comprehend and evaluate many of the texts they and their students will encounter. The course and the assignment needed to help preservice teachers understand how 21st century literacy texts work–how images and sounds and movement are used to communicate ideas and feelings and how "readers" perceive the elements of each form and make meaning of them.

The Redesigned Literacy Portfolio Assignment: Enacting Change

Framing literacy as sense-making using multiple textual forms rather than trying to teach the myriad of literacies scholars have deemed critical to 21st century learning supports a teacher educator's ability to design coursework and instruction. In this section, Kelli Jo describes changes made to the assignment as well as modifications to instruction that were directly related to her students' preservice preparation and achievement.

The required components of the Redesigned portfolio assignment included: a literature lineage, books in a variety of genres, a graphic novel and the development of a text set based on a theme from the novel, a film review, a read aloud, and a review of an audiobook. It is important to note that the literature portfolio did not and could not include all modes as the number of modal texts is unlimited. Its focus was multimodal as assignments emphasized the interaction between modes such as color and sound in film. It also should be noted that this Redesigned portfolio assignment was necessarily enacted within a Redesigned course structure as Kelli Jo attempted to expand upon the print-oriented goals to meet 21st century needs throughout her instruction.

Expanding Preservice Teachers' Views of Literacy and Literature

During the initial classes, Kelli Jo focused on what literacy is and how children and adolescents experience, make meaning, and communicate in the world. Preservice teachers reflected on their own meaning-making activities and discussed the dominant role of digital technology, social media, music, fashion, as well as print-based texts in their daily experiences. Kelli Jo initially thought her students would need convincing that literacy texts consist of other formats, modes, skills and perspectives beyond printed books because they have attended schools that mostly emphasize print-based literacy. She carefully reviewed several children's and young adult literature textbooks that have been published over the past decade and noted that they increasingly include content about visual images, films, plays, audiobooks, and websites and treat these modes as literature; however, these non-print-based modes still receive little emphasis in most texts (see Serafini, 2014 as an exception). She enriched her presentation materials with examples of various literacies that have been promoted in the 21st century (see Chapter 3) because she expected her students to resist the idea that children's and young adult literature is more than books; however, she found that she was wrong. To her surprise, these preservice teachers, most of whom were traditional college age students, embraced literacy texts to include various media and modes. She suspected that their ready acceptance of non-print-based formats was because they communicate in and through many modes other than paper-based texts—a more expansive definition of literacy and of children's and young adult literature fits their life experience. These two concepts, that literacy is our way of making sense of the world and that literature includes many modes in addition to print, were the foundation upon which the components of the children's and young adult literature portfolio were based.

Encouraging the Exploration of Personal Connections with Literature

The first assignment for the portfolio was a literature lineage, an assignment that was adapted from a colleague to focus on all the types of literature that influenced their adolescent development. Students were to include the texts that were important in shaping their identity from ages 12–14, those "texts" that helped them to make meaning of the world they encountered as an adolescent and their developing sense of self and their place in it. Kelli Jo reminded them that their adolescent "literature" could include plays, films, music, dance, visual art, television shows, films, comics, magazines, books, etc. The assignment was designed for students to reflect on the literature that had influenced them as an adolescent. During this process, Kelli Jo hoped they would recognize the role literature played in their conception of self and others and recall connections to literature that they might have forgotten or not realized because their view of literature had been limited to printed books. Similarly, the assignment helped her to get to know the interests of her students. She made note of texts that were important to each person and used this information to make selections for texts such as films that would be studied later in the course.

Their literature lineage presentations highlighted several common themes and texts across the class including books that are frequently used in school curricula and films and television shows that were popular in their adolescence. These common themes demonstrated that literature had been important to them. It had moved and shaped them, and many noted a book or book series with which they had made a personal connection that created a turning point in their relationship with literature in general and often reading in particular. A few students noted that literature had been an escape for them from an awkward and sometimes socially painful adolescence. These literature lineage presentations aroused memories of the connections to literature they had once made and recognition of the role these texts had played in their adolescent development.

Focus on Sensory Capacities, Creative Capacities, and Aesthetic Knowledge

The addition of film, graphic novels, read alouds and audiobooks to the literature portfolio was to help preservice teachers develop aesthetic awareness and content knowledge in these modal forms and to become aware of the role of the senses in literacy. Kelli Jo also wanted her students to develop their creative capacities in adapting and designing learning experiences for their future students. Her class explored each of the forms included in the literature portfolio in class by reading/viewing/listening to sample texts and evaluating these texts using elements and principles appropriate for each medium. The following description is focused on film, but similar processes were used with graphic novels, read alouds, books, and audiobooks. As Kelli Jo reflects:

> Film is an important mode of meaning making for 21st century learners and one that is highly sensory as it simultaneously engages several senses. I wanted my preservice teachers to comprehend film as a rich site for meaning making and to develop the aesthetic knowledge to be able to read and evaluate film critically. Many preservice teachers engage with films for pleasure far more often than they engage with books, but they rarely have been taught basic film terminology and the rudiments of film analysis.
>
> We viewed an award-winning short film on a topic that I knew would resonate with most of the class because of information gathered from the literature lineage and informal class discussions. I wanted my students to connect with the film in the way that Rosenblatt promotes through reader response (Rosenblatt, 1960) because their interaction with the film text had the potential to develop personal connections and enhanced meaning. Furthermore, this interaction with the text would take place through their senses. We watched the film once to enjoy it as an artform and allow it to influence us. After this first viewing, some of my students were visibly and emotionally moved by the film. However, in addition to emotional connection and response, 21st century literacy requires aesthetic knowledge of literacy texts.
>
> We watched the film a second time as an object of analysis to explore not what it communicated to us but how it communicated with us. I taught the students simple but common elements of film and how those elements work together to create a narrative that can influence, even manipulate, our impressions. We looked at the use of color, sound, sequencing, framing, symbolism, as well as other attributes and discussed how the filmmakers' use of these elements shaped the story and our perceptions and interpretations. This examination included looking at sensory elements of the film separately, such as how the film is experienced with only images and movement but without sound, as well as how the sensory modalities interact with one another. This task was a sensory exercise that required the students to use their senses in a reciprocal way, taking in information about the film through their senses of sight and sound and using that information to make sense of the film through the prism of their personal and cultural experiences and ideas.
>
> After this in-class viewing, discussion, and analysis of the short film, each student selected a film to review for their portfolio. The film had to be appropriate for use in their content area and the review included both the film's genre and an analysis of the film's distinctive characteristics and qualities. Students developed a response activity to use with the film as well an adaptation or differentiation for students with special needs.

Kelli Jo notes that she designed the film assignment this way so that students would develop their creative capacities by considering how to use film to advance their future students' literacy skills and content knowledge. A similar process was used for read alouds and audiobooks.

Repeating the Cycle: Moving Again from Available Design to Designing

Kelli Jo continues to engage in the recursive process of Available Design, Designing, and the Redesigned (New London Group, 1996) as she attempts to make meaning, to make sense, of literacy in her 21st century teacher education classroom. Her ongoing engagement with the text of her classroom structure, illustrates the same stance advocated by Rosenblatt (1960), that a transactional theory of literacy requires us to “engage in an intellectually and emotionally active process, first, of literary re-creation and second, of critical reflection on that experience” (p. 308). Kelli Jo critically considers her experience:

> As I reflect upon the Redesigned literature portfolio assignment and my changes to the course structure, I believe that these were successful yet hold potential for improvement. While I remain pleased with the way that students accepted and acted upon an expanded view of what “counts” as a literacy text and their development of aesthetic knowledge in some multimodal formats, I am not satisfied with the degree to which they developed sensory capacities or creative capacities. These capacities are difficult to address and develop within the limited course structure and the widely diverse, and frequently limited, experiences the preservice teachers have had exploring sensory perceptions or engaging creatively with their worlds. I am still growing in my understanding of how to develop sensory and creative capacities in adolescents and adults. Similarly, there is a need to expand and improve the personal connections that students make with the texts in the literacy portfolio. While connections that had been made in the past were recalled in the literature lineage assignment, and many students made personal connections with the film, it was less apparent to me that deep and personal connections had been made with other literature texts that students selected for their portfolios. These reflections and insights give me a starting place for improving the course the next time I teach it.

The Redesigned Becomes an Available Design

We present Kelli Jo’s sketch as one example of how teacher educators might begin to teach preservice teachers from a sense-making perspective; however, her Redesigned assignment is not meant to stand as a model of best practice. Instead, her Redesigned literature portfolio assignment is an Available Design with which she and other teacher educators may transact, each in their own everchanging contexts and each with their unique set of experiences. More importantly, Kelli Jo’s example serves to draw attention to some insights that may be gained from the application of a sense-making perspective to an authentic teacher education classroom. Thus, we highlight several understandings that emerge from Kelli Jo’s sketching out of her inquiry that may inform other teacher educators who are seeking to address the dilemma of how to approach literacy in 21st century education.

Not an Add-on or a Replacement

The first understanding that we highlight addresses a common misperception surrounding literacy instruction in 21st century education. Specifically, we point out that applying a literacy as sense-making approach does not require teacher educators to add on separate units of instruction for each of the many literacies that 21st century scholars have advanced. Nor does it require teacher educators of throw out their entire current print-based curricula and replace it with something entirely new. Rather, making meaning of any text, including the text of the classroom or the curriculum, requires us to recall New London Group's (1996) contention that making "meaning involves re-presentation and recontextualization" (p. 75). Therefore, a literacy as sense-making approach encourages the teacher educator to re-present and recontextualize assignments.

This literature portfolio assignment is not remarkable in teacher education; similar instructional assignments and activities are enacted in teacher education classrooms around the world and, as noted, some of the basic components of the original assignment remained. For example, in the Redesigned course assignment, students still reviewed literature texts, but those reviews included texts other than print. What a sense-making approach does require is that teacher educators must recognize their current curricula as an Available Design for their inquiry: a text with which they need to transact, to look at the what and the why of literacy in critical reflection on the experiences.

"In-Depth Expertise" or "Expanded Aesthetic Knowledge" Across Media?

Our second point focuses upon a common worry by teacher educators that they do not have the expertise in visual, digital, or other modes and media. In regard to this concern, we note that although Kelli Jo expanded this literature portfolio assignment to include forms beyond print, Kelli Jo could not immediately gain in-depth expertise in each medium that contributed to the meaning making in these multimodal texts. However, she did make an effort to gain additional knowledge in the basic elements of the media used in each of these textual forms: not only in the practical technical aspects, but also importantly in elements that contributed to the aesthetic qualities of each.

As discussed in the previous chapter, aesthetics is about developing those aspects of form that allow and advance meaning making; the level of quality of the inquiry that brings about transformation for meaning. Building upon her personal background of theater, she inquired into some of the sensory features of the multimodal textual forms to discover potential aesthetic commonalities that might extend her own aesthetic knowledge and that of her students. For example, she began to apply her background knowledge of the visual, spatial, and aural elements in theater to similar features of the films, read alouds, audiobooks, and graphic novels that she included in the literacy portfolio assignment. Realizing there were connections, but also some gaps in her understanding, she sought to advance her aesthetic knowledge by consulting resources like Scott McCloud's (1993) *Understanding Comics*. Notably, for teacher educators who do not have expertise or experience in varied media, Kelli Jo did not seek to become an expert in every form, but she did realize that it is important to gain sufficient aesthetic knowledge of the media utilized in the textual forms included in the assignment.

Attending to Experience and Experiencing

As a third key point, we note that in her critical assessment of her Redesigned literature portfolio assignment, Kelli Jo expresses her concerns about her students' lack of connection to the texts that they included in their portfolios, noting that this is an area she will work to improve. Her concern draws attention to the importance of both experience and experiencing. As discussed previously, Rosenblatt (1960) argues if the Designer is to evoke meaning, *sufficient relevant past experience must be brought to the text* and the Designer must engage in critical *transactional process of experiencing the text*. This notion of experience and experiencing is what Kelli Jo meant when she was concerned about the lack of connection, and it is an important consideration.

The Importance of Transformation

Finally, we underscore that Kelli Jo's description of her process illustrates that teacher educators possess the capacity for enacting change despite the challenges of prevailing beliefs about literacy, policies, and limited experience in other textual forms. Her sketching out how broader perspectives of literacy could be incorporated into her teacher education classrooms demonstrate the ongoing professional transformation that occurs for teacher educators willing to problematize literacy in 21st century education. Teacher educators can treat their current instructional practices as available designs that can be designed and redesigned within a sense-making framework. As Kelli Jo suggests, we are always available designs in the process of designing and redesigning ourselves.

A New Direction for Literacy in 21st Century Education

As we have iterated throughout these chapters, literacy development is a global concern and the growing recognition of, and respect for, diverse textual forms and sociocultural contexts has inserted the notion of "literacies" into the ongoing literacy discourse. While we have underscored that current school-based reading and writing practices focused on decoding and encoding words are still necessary, we also have established that the field has realized that our 21st century global society requires the development of meaning making capacities that can be applied to diverse textual forms and across the multiple contexts of human interactions.

Yet, while the growing list of literacies advanced by 21st century scholars continues to demand the attention of teacher educators, the prevailing model for teacher education practice is one in which literacy is deemed to be the core skill of decoding print-based texts. This twentieth century autonomous model is occasionally supplemented with an uneven, vaguely articulated consideration of capacities recognized within the 21st century "literacies" perspective. Finding this current teacher education model of practice inadequate and observing only rare attempts to address "literacies" approaches to be specious enactments of the theories actually undergirding constructs of literacy and literacies, we have posited throughout these pages that teacher education must move beyond the limited model of practice that focuses upon literacy as decoding print-based text to embrace a model that makes sense for developing learners' capacities to meaningfully engage with the vast number of diverse texts that they may encounter in their worlds. Capacities to encode and decode as well as to critically transact with, within, and across diverse textual forms must not be positioned as add-ons to be taught (or not). If we are to meet our learners' 21st century needs and resolve the teacher educator's dilemma, we have argued that teacher educators must discover an alternative to a literacy construct that views print-based decoding skills as a basis for instruction.

Resolving the Teacher Educator's Dilemma

As we sketched out the factors that fueled the teacher educator's dilemma: beliefs; policies; lack of clarity and cohesiveness; and insufficient preparation and experience surrounding literacy in 21st century education, we determined that the lack of clarity and cohesiveness surrounding the construct of literacy was the most critical to address. The "literacies" promoted by 21st century scholars are directed toward important concerns, but many of these new constructs are frequently misunderstood or conflated (Kerry-Moran, Chapter 3, this volume). Therefore, if we were to provide a new direction for literacy instruction, it was important to derive a clearer definition of some of those most commonly noted "literacies" in the field and seek a means of conceptually unifying these under one construct.

Embracing a Sense-making Construct

Positing that "sense-making" is key to literacy, in general, and this notion is specifically critical to 21st century perspectives, we proposed that we place sense-making at the center of our construct. Narey's (Chapter 5, this volume) model of the literacy event demonstrated how a sense-making construct of literacy can work to dissolve the hierarchical positioning of print-based instruction. The model extends the view of literacy as the process of making sense, and underscores to the role of the senses (literally). In this capacity, it works to support our call for sensory perceptual development in the sense-making process of becoming literate across the vast multiplicity of signs and textual forms that currently exist or that have yet to come into being. Ultimately, Narey's Redesigned model of the literacy event serves to offer cohesiveness and clarity to the construct of literacy and, thus, facilitates the teacher educator's capacity to move beyond the prevailing twentieth century focus on print.

Dealing with Beliefs, Policies, and Insufficient Preparation and Experience

In regard to addressing the influence of beliefs on the teacher educator's dilemma, our series of sketches in this volume call upon teacher educators to interrogate their espoused constructs of literacy. Underscoring the power attributed to literacy in the educational discourse, we have called attention to how literacy has been used not only to empower but also to disempower, with the intent to inspire readers to critically reflect upon how their current constructs of literacy work to empower or disempower individuals or groups in 21st century education.

Policies are extensions of beliefs. If teacher educators problematize their beliefs about literacy, they can potentially change local or internal policies. While external policies often are beyond the teacher educator's prevue to formulate or modify, we have offered in this final chapter an example of how a sense-making construct of literacy can accommodate the multiple policies that frequently guide the parameters of our practice.

Finally, in regard to insufficient preparation and experience, it is generally recognized that both teacher educators and their students will bring varied levels of knowledge and experience to inform the literacy instruction. Recalling Rosenblatt's (1960) contention stated previously, our instruction must build upon and extend current knowledge and experience.

> To lead the student to have literary experiences of higher and higher quality requires constant concern for what at any point he brings to his reading, what by background, temperament, and training he is ready to participate in. Literary sensitivity and literary maturity cannot be divorced from the individual's rhythm of growth and breadth of experience. (Rosenblatt, 1960, p. 307)

Narey's (Chapter 5, this volume) model of the literacy event teases out those critical aspects of literacy necessary for meaning making. This along with the discussion of sensory capacities, creative capacities, and aesthetic knowledge, calls upon teacher educators to seek out resources that can expand their knowledge and broaden their experience as needed.

A Call to Engage in "Designing" the Future

Our experiences as teacher educators in the 21st century prompted us to problematize the Available Designs of literacy that we encountered in our practice. The sketches that we have presented across these chapters show the process of our Designing. This completed volume and the individual sketches within it may be considered the Redesigned. As such, these present a new direction for instruction based upon a construct of literacy as sense-making. A sense-making view draws attention to the need to be literate not only in regard to print-based texts, but also across the wide range of sign systems new to, rediscovered for, and yet to be imagined in our global, digital, and diverse 21st century society. Further, this literacy as sense-making view importantly brings a frame of critical analysis, assessment, reflection, and the anticipation of personal transformation to the literacy construct.

Significant to our initial intent in authoring this book, it stands not only as the Redesigned, but also a new Available Design, for us and the readers of this work to continue Designing a new direction for literacy. While no one knows with certainty what changes the latter part of the 21st century will bring, we can be sure that each person will need to make sense of them as they navigate, shape, and transform themselves and the world in which they will live.

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