A QUESTION OF LITERACY: ENGAGING AND MOTIVATING THE 21ST CENTURY READER

Rise Up
FOUNDATION

Kids who are strong readers do better in school, and are better prepared to live successful lives. The statistics are unequivocal. Our prisons are filled with young people who are functionally illiterate. The question at the forefront of the work that I do is centered on how to compete with the multiple distractions kids have; how do we engage young people, in meaningful ways, which motivate them to read? It is my hope that through the process of delving deeper into the psyche of today's digitally advanced adolescent, we can better understand how to deliver content that will trigger their imagination and convince them to sit long enough to read a book, cover to cover.
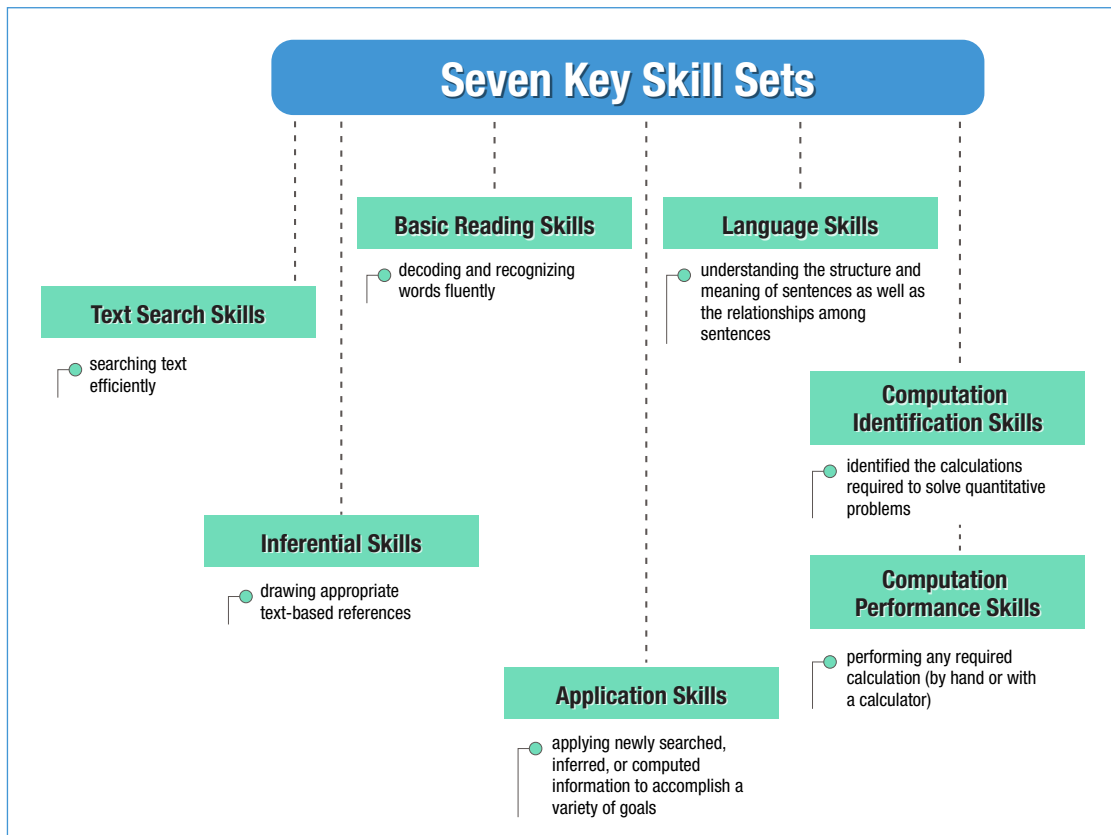
— Wendy Alane Adams, CEO and Founder of the Rise Up Foundation

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Until fairly recently, discussions about literacy were single-mindedly focused on assessments of functional literacy, or basic reading skills. However, in consideration of current literacy demands, the National Center for Educational Statistics (2003) currently defines literacy as both task-based (conceptual), and skills-based (operational) - "Task-based literacy is the ability to use printed and written information to function in society, to achieve one's goals, and to develop one's knowledge and potential. Skills-based literacy is defined as successful use of printed material based on two classes of skills: 1) word-level reading skills, and 2) higher level literacy skills." The NCES identifies seven key skill sets that frame what they believe to be the critical competencies needed for comprehensive and high level literacy attainment. It is noteworthy that these competencies include skills needed to search and understand computed information. This change has reflected a movement from functional performance to behavioral capacity.

Seven Key Skill Sets

Basic Reading Skills
- decoding and recognizing words fluently

Language Skills
- understanding the structure and meaning of sentences as well as the relationships among sentences

Text Search Skills
- searching text efficiently

Computation Identification Skills
- identified the calculations required to solve quantitative problems

Inferential Skills
- drawing appropriate text-based references

Computation Performance Skills
- performing any required calculation (by hand or with a calculator)

Application Skills
- applying newly searched, inferred, or computed information to accomplish a variety of goals

SOURCE: White, S., and McCloskey, M. (forthcoming). Framework for the 2003 National Assessment of Adult Literacy (NCES 2005-531). U.S. Department of Education. Washington, DC: National Center for Education Statistics.

Another important change in the NCES NAAL literacy scale methodology was how literacy was defined. Literacy was measured against domains, derived from three types of literacy.

Measuring the skills and knowledge needed to perform prose, document, and quantitative tasks offers greater understanding of more complex literacy attainment. Additionally, five levels of literacy correspond to measured ranges of scores received, from very poor skills attainment to command of higher-order information processing skills.

Literacy Tasks

NAAL measures literacy along three scales which are derived from the three types of literacy—prose, document, and quantitative. Each scale comprises the knowledge and skills needed to perform the corresponding task.

Prose literacy scale →

Prose tasks

Require the ability to search, comprehend, and use information from continuous texts such as news articles and instructional materials.

Examples of prose tasks include locating information from a newspaper article, comparing different points of views in editorials, and interpreting the theme of a poem.

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Document literacy scale →

Document tasks

Require the ability to search, comprehend, and use information from non-continuous texts such as job applications, maps, and food labels.

Examples of document tasks include using a schedule to select a train, filling out appropriate information on a form, and locating a street on a map.

- -

Quantitative literacy scale →

Quantitative tasks

Require the ability to identify and perform computations using numbers embedded in printed materials.

Examples of document tasks include balancing a checkbook, completing an order form, and calculating the interest on a loan.

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SOURCE: White, S., and McCloskey, M. (forthcoming). Framework for the 2003 National Assessment of Adult Literacy (NCES 2005-531). U.S. Department of Education. Washington, DC: National Center for Education Statistics.

Higher levels of literacy and reading achievement are correlated with reading for pleasure. In 2007, the National Endowment for the Arts (NEA) produced a report entitled, "To Read or Not to Read: a Question of National Consequence." This report presents a very comprehensive and compelling argument for why the issue of steady declines in reading requires our nation's attention. The NEA report offers the following conclusions:

> Self-reported data on individual behavioral patterns, combined with national test scores from the Department of Education and other sources, suggest three distinct trends: a historical decline in voluntary reading rates among teenagers and young adults; a gradual worsening of reading skills among older teens; and declining proficiency in adult readers. The Department of Education's extensive data on voluntary reading patterns and prose reading scores yield a fourth observation: frequency of reading for pleasure correlates strongly with better test scores in reading and writing. Frequent readers are thus more likely than infrequent or non-readers to demonstrate academic achievement in those subjects.[1]

From the diversity of data sources in this report, other themes emerge. Analyses of voluntary reading and reading ability, and the social characteristics of advanced and deficient readers, identify several discrepancies at a national level:

- *Less reading for pleasure in late adolescence than in younger age groups;*

- *Declines in reading test scores among 17-year-olds and high school seniors in contrast to younger age groups and lower grade levels;*

- *Among high school seniors, a wider rift in the reading scores of advanced and deficient readers;*

- *Greater academic, professional, and civic benefits associated with high levels of leisure reading and reading comprehension.[2]*
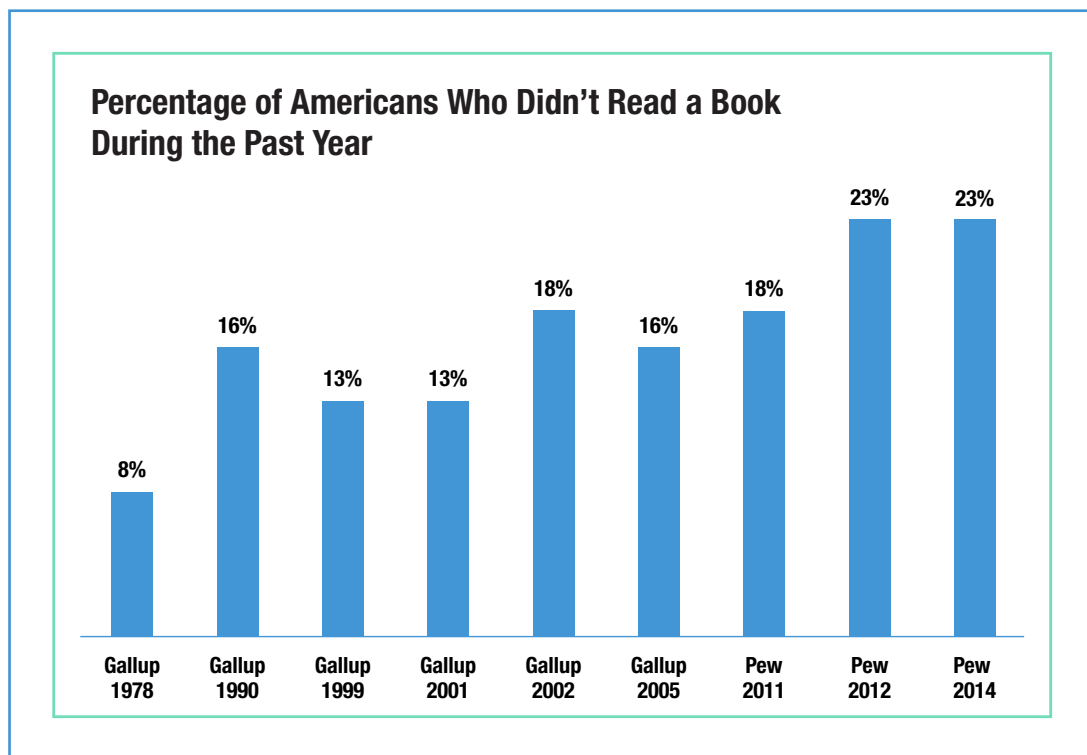
1 National Endowment for the Arts (2007), "To Read or Not to Read: A Question of National Consequence," Retrieved from: http://arts.gov/sites/default/files/ToRead.pdf.
2 http://arts.gov/sites/default/files/ToRead.pdf

It is important to understanding the impact of illiteracy. As reflected in the infographic below, illiteracy is a reliable predictor for social ills, to include low educational attainment, poverty, limited vocational opportunity, and increased crime rates. The Information Age, driven by a robust Digital Revolution, has created an even greater demand for effective knowledge and information management. High level literacy attainment is critically important in the Knowledge Economy, as technological, institutional, organizational and societal changes drive the need for and supply of high-level skills. The basis of high-level literacy attainment is an interest in and motivation to read. A significant body of research now exists that provides significant insights on how reading for pleasure advances high-level literacy attainment.
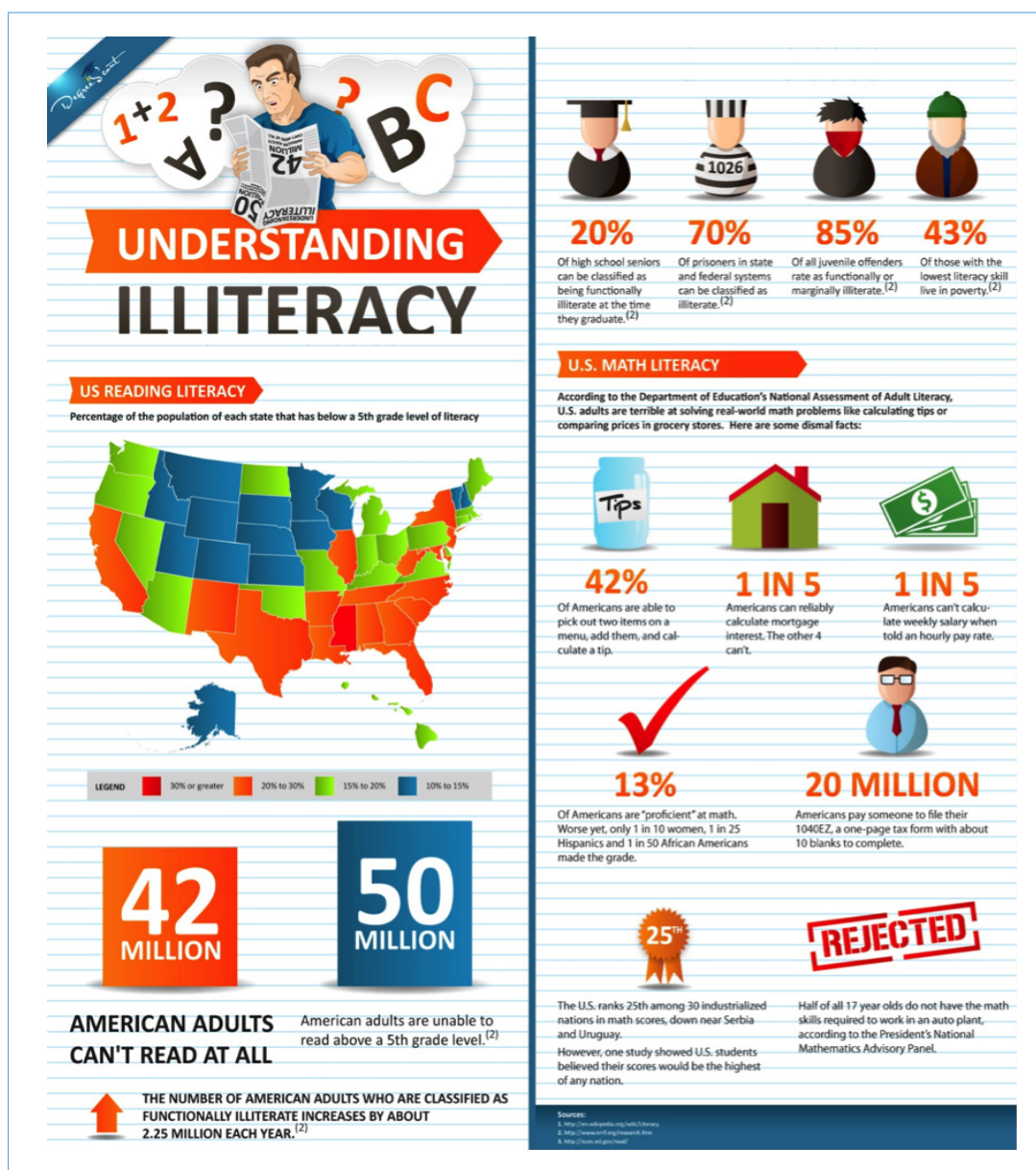
Current research, that highlights a general decline in reading for pleasure among American youth, is gaining significant momentum. There is a direct relationship between decreases in reading for pleasure, and lower academic performance. As importantly, there is a clear correlation between positive behavioral choices related to an enjoyment of reading, and an intrinsic desire to improve reading outcomes. "Without question, the American bookworm is a rarer species than two or three decades ago, when we didn't enjoy today's abundance of highly distracting gadgets. In 1978, Gallup found that 42 percent of adults had read 11 books or more in the past year (13 percent said they'd read more than 50!). Today, Pew finds that just 28 percent hit the 11 mark" (Weissman, 2014).

Percentage of Americans Who Didn't Read a Book During the Past Year

Gallup 1978	Gallup 1990	Gallup 1999	Gallup 2001	Gallup 2002	Gallup 2005	Pew 2011	Pew 2012	Pew 2014
8%	16%	13%	13%	18%	16%	18%	23%	23%

Source: Pew Research Center 2014[3], Pew Research Center 2012[4], Gallup 2005[5]

The research suggests, however, that in the case of youth, this can be attributed to a number of key factors, to include: access to books; exposure to parent's who model the importance of reading through example; opportunities to exercise choice in what to read, in and outside the classroom setting, as well as; exposure to instructional practices that promote a culture of reading.

3 Pew Research Center Survey, Retrieved from: http://www.pewinternet.org/files/old-media//Files/Questionnaire/2014/PIP_Survey%20 questions%20and%20methods_E-reading%20update.pdf
4 Reading Habits Survey (2012), Retrieved from: http://libraries.pewinternet.org/files/2012/04/Topline_for_-e_reading_report_4_surveys.pdf
5 About Half of Americans Reading a Book: Most say Internet has not affected their reading habits, Retrieved from http://www.gallup.com/poll/16582/about-half-americans-reading-book.aspx

In an article originally published on June 19, 2007 in the St. Louis Post-Dispatch, Jonathan Fanton, President of the John D. and Catherine T. MacArthur Foundation, made a revelatory statement,

"... today's digital youth are in the process of creating a new kind of literacy; this evolving skill extends beyond the traditions of reading and writing into a community of expression and problem-solving that not only is changing their world but ours, too."[6] This statement gets us to the heart of the matter. Is it possible that it is not only the youth who must rethink literacy, but it is also us who must rethink literacy within a framework of 21st Century competencies? The 21st Century presents more interesting and complex challenges for today's youth that require educators, policymakers, and other experts to rethink how we examine and address issues related to literacy.

The mass proliferation of digital media requires very different types of competencies. Not only must young people be able to understand what they are reading, but they must also critically assess the value of what they are reading. As stated in The Future of Children's journal article entitled, "Literary Challenges for the Twenty-First Century,"

The literacy challenge confronting children, their families, and schools in the United States has two parts. The first is the universal need to better prepare students for twenty-first-century literacy demands. The second is the specific need to reduce the disparities in literacy outcomes between children from disadvantaged backgrounds and those from more privileged homes. The "literacy problem" we address here is not that literacy has declined among recent generations of children. It is that today's economy and complex political and social challenges facing the nation demand more advanced skills than ever before.[7]

6 http://www.macfound.org/press/commentary/new-generations-new-media-challenges-opinion-editorial-jonathan-fanton-ran-june-19-2007-edition-st-louis-post-dispatch/
7 http://www.princeton.edu/futureofchildren/publications/docs/22_02_FullJournal.pdf

Closer examination of the issue reveals that although the tools for communication and managing information have changed, and the social construct for language and how we communicate has evolved, young people are being taught to read and write using traditional practices, approaches and conventions that are no longer adequate. As we look to the future, a significant body of theory and practice has evolved, that offers new approaches to how we can address the literacy challenges of the 21st Century.

This report will begin with an examination of reading in all its complexities, and as a function of cognition. Reading is, after all, a social construct; reflection on how attitudes about reading affect reading engagement and motivation are important to any understanding of literacy. Clearly, the mass proliferation of digital media have shaped the minds of the readers of Generation M, and this has impacted literacy in profound ways. The future of literacy is being informed by a new and exciting body of research. This report will consider how new theories and innovative practices about transliteracy and multimodal literacies are informing how to advance a new framework for literacy. Finally, this report will conclude by reflecting on trends in literacy, like those emphasizing transmedia storytelling and participatory culture, are designed to improve reader engagement and motivation, rather than diminish them.

Our proposition is, as we consider how to increase motivation and engagement among 21st Century readers (and to, in effect, improve literacy), it is clear that transmedia storytelling presents very specific opportunities for young people to develop skills and competencies that are critically important to leading productive lives in and meeting the demands of the 21st Century. There is obvious overlap between the competencies required when navigating transmedia experiences, and the competencies needed to be an effective writer and reader.

READING, AS A MATTER OF COGNITION: THE MECHANICS

Reading involves an extremely complex sequence of coordinated cognitive processes.

The brain was not originally 'wired' for reading. It has been through a process of evolution that the human brain has adapted to the demands of written language. Semiotics, or the ability to make meaning from symbols, has advanced the brain's ability to engage in the management of increasingly complex forms of communication. Wolf (2007) notes, The brain has evolved for hundreds of thousands of years as a speaking and listening brain, while written language has only existed for 6000 years (as cited in Frey & Fisher, 2010, p. 104). The brain's plasticity can be credited with its ability to adapt so adeptly to the demands that written language require; as the brain gained mastery over increasing levels of complex communication, neural pathways were formed. "Experience changes neural connections. When we experience something, neurons fire. Repeated firings lead to physical changes that, over time with repetition, become more permanent" (Frey & Fisher, 2010, p. 105). The evolution from a 'seeing' and 'hearing' brain, to a reading brain was a significant milestone in human development, as the more primitive brain was singularly focused on processing information needed for survival. Notable changes to the brain's structure occurred as regions of the brain had to evolve to meet new demands. Frey & Fisher (2010) maintain, "…the reading mind must figure out a way to convert the occipital region of the brain, which is designed to recognize objects, into one that recognizes letters and words (p. 104)."

Because reading is a recent cultural invention, it is unlikely that brain structures have evolved exclusively for reading (Brem et al., 2010, p. 7939). Learning to read influences the development of the brain: Cerebral gray matter circuits and the white matter connecting them learn to extract the statistical regularities of text written in a person's native language (Yeatman et al., 2012, p. E3050). Reading requires efficient communication within a network of visual, auditory, and language-processing regions that are separated by many centimeters (Yeatman et al., 2012, p. E3045). Squire and Kandel (2000) demonstrated that there are three areas of the brain involved in the early stages of learning a new skill or procedure: the prefrontal cortex, the parietal cortex, and the cerebellum (as cited in Frey & Fisher, 2010, p. 105). These three areas allow the learner to pay attention, execute the correct movements, and sequence steps (Frey & Fisher, 2010, p. 105). From a psycholinguistic view, understanding a written text is a complex activity that involves different subprocesses: Graphophonemic decoding and lexical access at the word level, syntactic parsing at the sentence level and higher-order subprocesses which ensure the building of a coherent mental representation at the text level (Conoldi & Oakhill, 1996).

Reading comprehension is a highly demanding task that involves the simultaneous process of extracting and constructing meaning in which working memory's executive processes play a crucial role (Garcia-Madruga et al., 2013, p. 155). During reading, people must store textual information recently decoded and apply complex processes of meaning construction to arrive at an integrated representation or situational model (Kintsch, 1998). The sequential process of reading and comprehending a text involves the continuous manipulation and updating of this model in working memory (Garcia-Madruga et al., 2014, p. 42). From a cognitive point of view information-processing theories occupy an important position in the study of children's reading development…To begin with, attention can be seen as a prerequisite for effective reading (Verhoeven et al., 2010, p. 388).

Reading is the process of understanding written language…This requires our eyes to move in such a way as to allow for the extraction of spatially distributed visual information which is in harmony with the speed of comprehension (Findlay & Gilchrist, 2003). Research by Shuett, et al. (2008, p. 2446) reveals that,

> The eyes follow a typical scan path across the text, in the direction depending upon the language of the text (i.e. from left to right and from top-to-bottom for Western cultures). Plotting eye position against time reveals a staircase pattern as saccadic[8] eye movements regularly alternate with periods of fixations. Whereas the majority of the words in a text are fixated, sometimes even twice (i.e. refixation; 15% of total fixations), many words are skipped; 2-3 letter words, for instance, only receive a fixation about 25% of the time. On average, a fixation during reading lasts for about 200-250 ms and is followed by a saccade to some 7-9 characters forward.

It is important to note that the underlying cognitive structures and processes that make reading possible are influenced by the type of reading being performed. Further, cognitive demands are influenced by underlying social and motivational factors, like level of engagement and attitudes about reading, which in effect impact the ability to process language and deepen reading development.

Seigneuric & Ehrlich (2005) reflect that, "In addition to attention and perception (auditory and visual), working memory is one of the aspects of information processing studied most frequently in conjunction with children's reading development (as cited in Verhoeven, et al., 2010, p. 388)." Working Memory is a part of the brain's executive function. Working memory allows us to integrate (access and retrieve) audio and visual-spatial information, sequencing instructions and tasks, and maintaining focus and concentration. "Theoretically, Working Memory Capacity (WMC) is needed to actively maintain text information (Daneman & Carpenter, 1980), to activate text relevant information and to filter out irrelevant information (Hasher & Zacks, 1988), and to maintain attentional focus on the task to prevent lapses of attention (McVay & Kane, 2012b) (as cited in Unsworth & McMillan, 2013, p. 833). According to Unsworth & McMillan (2013),

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8 Saccades are quick, simultaneous movements of both eyes between two phases of fixation in the same direction (Cassin and Solomon, 1990) in Dictionary of Eye Terminology. Gainesville, FL: Triad Publishing Company.

> Research has suggested that factors such as interest in the topic and overall motivation are also important. For example, a large body of research has consistently demonstrated that interest in the text that one is reading has a strong impact on what is read as well as overall comprehension scores. Thus, the more interested one is in the topic of a particular text, the more likely one is to read the text deeply, leading to better overall better comprehension scores (p. 833).

This research has significant implications when considering how to effectively address the issue of how to encourage young people to read for pleasure. The research strongly indicates that while there are specific cognitive processing functions that must work in concert with each other in the process of strengthening reading skills, it is also important to consider that specific behavioral patterns and responses will influence that cognitive functioning.

When Goff, Pratt, and Ong (2005) …related the reading comprehension of children in grades three through five to their word decoding skills, oral language skills, and working memory skills, they found word decoding and oral language skills to be far more important predictors of reading comprehension than working memory (as cited in Verhoeven et al., 2011, p. 390)… Word decoding, vocabulary, and listening comprehension can thus be seen as critical factors for developing the ability to efficiently build up text models during reading comprehension (Verhoeven, 2010, p. 390). This would suggest that frequent and meaningful exposure to both oral language (like being read aloud to) and opportunities to build and use language are more impactful to reading comprehension, than the ability to retrieve and store vital information acquired during reading.

Clearly, reading development, as a product of cognition, relies upon a progression from lower order processes to higher order processes. Bottom-up skills such as word recognition, combined with top-down skills such as comprehension, are both critically important elements in advancing to higher levels of literacy. In addition to the complex cognitive functions, there are also behaviors that shape the advancement of reading development. Factors such as motivation and engagement play an integral role in attainment of higher levels of literacy, and provide insight in to reading and literacy as social constructs.

READING AND LITERACY, AS A SOCIAL CONSTRUCT

FACTORS INFLUENCING ATTITUDES ABOUT READING

According to Russ (1989), "Attitudes have long been held as an important psychological construct as they play an important role in moderating one's level of motivation and intention to read, as well as mediating the relationship between an individual's beliefs and reading activities" (as cited in Petscher, 2010, p. 335). Based on this this theoretical foundation, we define reading attitudes as acquired predispositions to respond in a consistently favorable or unfavorable manner with respect to aspects of reading (McKenna et al., 2012, p. 285). Current research has placed great value on understanding how and why attitudes about reading are so influential to effective reading development. These attitudes, however, are influenced by both internal and external factors. It is important to understand that for both emergent and developing readers, external factors can often impact in profound ways the internal factors that underlie the formation of attitudes about reading. For instance, the research clearly demonstrates that children are influenced by the reading attitudes of others within their family. Children who are read to by their parents, and whose parents also demonstrate a strong preference for reading for pleasure, are more likely to exhibit positive attitudes about reading for pleasure, and are motivated to attain higher levels of reading comprehension. The three factors affecting attitude acquisition are 1) direct experiences with the object, 2) beliefs about the object, and 3) social norms concerning the object" (McKenna et al., 2012, p. 284).

Among classroom teachers, it is widely believed that the students' attitude towards reading significantly impacts students' reading achievement" (as cited in Petscher, 2010, p. 335). This suggests that in instructional settings where reading is emphasized, and students are presented with opportunities to choose when and what they read, students' attitudes about reading are more positive. Thames & Reeves (1994) assert, "Generally, research has indicated that students who have more positive attitudes have more successful reading experiences and read more often, leading to greater reading achievement" (as cited in Petscher, 1989, p. 337). "A positive attitude, under the right circumstances, contributes to intrinsic motivation. A negative attitude, in contrast, tends to inhibit motivation" (McKenna et al., 2012, p. 285). The issue of reading achievement is an important one because it speaks to students' attitudes concerning the attainment of reading competence, beyond the acquisition of basic skills. Students who not only have an interest in reading, but also believe that they are capable of being good readers, are more likely to possess greater motivation to work towards greater reading achievement. Reynolds and Miller (2003, p. 8) delineated intrinsic motivation into three components: 1) expectancy, which comprises "beliefs about one's ability to control, perform, or accomplish a task"; 2) value, which consists of "goal orientations or cognitive representations of the purpose of a task as well as task value beliefs about the importance of a task, one's interests in a task, and one's idea about the ultimate utility of a task"; and 3) affect, which they describe as "general feelings of self and one's emotional reactions to a task that affect cognitive resources and performance" (as cited in McKenna, 2012, p. 285).

Given the relative complexity inherent in attaining high-level skills in reading development, the task of reading must be assigned importance, one must believe that one has the capability to accomplish the task, and one must have a sense of resilience when facing challenges in attaining success in the completion of the task. Burns, Roe & Ross (1988) state, "In the formation of general reading attitude… the home environment, as well as the school and other surroundings are influential. Students who take part in reading practices at home, at school, and in the wider environment carry out more reading activities and develop positive attitudes towards reading as long as they undergo positive reading experiences" (as cited in Keskin, 2013, p. 313). This research points out another important factor important to broadening our understanding of why attitude is so important in reading development, the idea that reading, at its very best, is social. The environment in which one reads carries importance in creating the context that drives an interest and motivation to read.

> Moje et al., (2008) assert …it may be that the new literacies involving digital environments help explain the erosion of attitudes towards reading as conventionally defined. If we view reading through a broader lens, one that includes and dissociates print and digital activities, we may discover that the decline in the reading of print over time and the decline in positive reading attitudes as a developmental trend are reflections, at least in part, of the rise in technology applications and the failure of conventional measures to accurately capture the reading that adolescents do in digital environments" (as cited in McKenna, 2012, p. 289).

This is a very important point, which speaks to why it is increasingly important that we both broaden our definition of and approach to literacy, and begin to address how poorly conventional measures fail to accurately recognize the reading activities that young people engage in when using digital media.
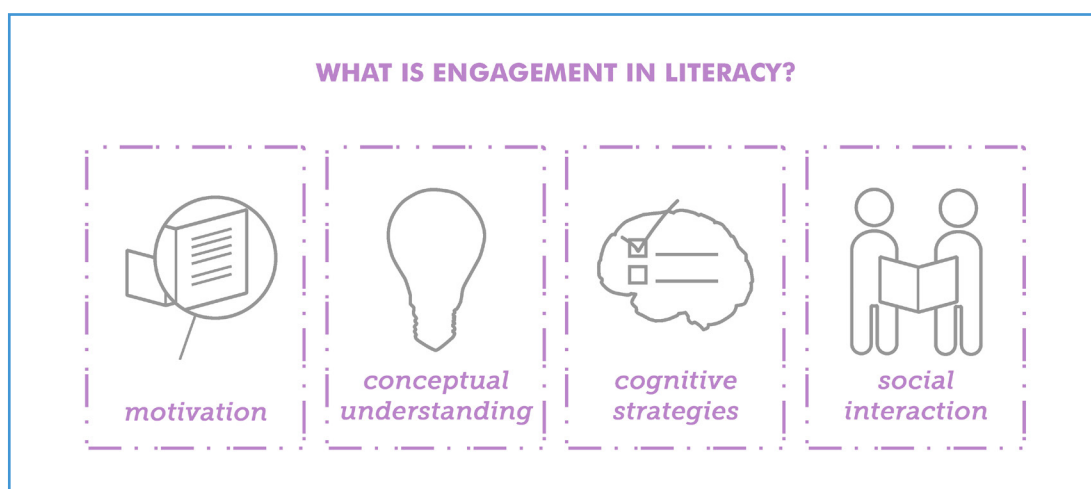
MOTIVATION AND ENGAGEMENT IN READING

As reflected in Guthrie (1996, pp. 433-434),

> Engagement in literacy includes: motivation, in which children internalize a variety of personal goals for literacy activity, such as involvement, curiosity, social interchange, emotional satisfaction, and self-efficacy, they become self-determining; conceptual understanding, which is enhanced by intrinsic motivations for literacy. Interest in a topic enhances the amount, depth, and fullness of conceptual learning from a text about that topic; cognitive strategies, wherein strategies such as problem finding, searching for information, applying prior knowledge to text, generating inferences, and comprehending multiple genre, and; social interaction, whereby engaged readers interact with partners, teams, the teacher, or the classroom community.

Engagement is a very important factor in literacy. Its importance is often underestimated in the design and implementation of effective strategies designed to address concerns regarding literacy attainment. Current literacy research is seeking to address how to effectively bridge the divide between motivation, conceptual understanding, cognitive strategies, and social interaction, in an effort to develop comprehensive approaches and strategies designed to strengthen engagement. Guthrie (1996, p. 435-436) goes on to say, "Literacy engagement is important because it links traditional notions of cognitive competence to learners' personal/motivational needs, to the social milieu in which these needs may be fulfilled, and to the potential of literacy as an avenue for gaining knowledge." A learner's ability to assess needs when attempting to complete a task, the learner's attitude regarding whether s/he is capable of completing a task, and the context in which the needs of the learner are fulfilled all influence engagement in significant ways. Paris & Oka (1986) and Schunk (1985) reflect that, the expectancy component of Eccles's theory is supported by a number of research studies that suggest that students who believe they are capable and competent readers are more likely to outperform those who do not hold such beliefs (as cited in Gambrel et al., 1996, p. 518).

Students who are highly motivated and deeply engaged work harder to set and to attain goals. These students view goal attainment as something that must be approached thoughtfully and strategically. They make every effort to employ strategies and approaches that will support their efforts in effective ways. "Highly engaged readers are very strategic, using such comprehension strategies as questioning and summarizing to gain meaning from text. Likewise, highly engaged readers are internally motivated to read, while reading frequently and deeply. These processes of engagement in reading, we propose, are facilitated when classroom practices directly address them by providing instruction in the cognitive strategies and support systems for the motivational processes of reading" (Wigfield et al., 2008, p. 443). The current research makes a point of emphasizing how important it is to address issues of motivation in the instructional setting when engaging in reading practices. It is important to create opportunities for students to employ effective cognitive strategies that will also spark their intrinsic motivation to read.

According to Wigfield & Guthrie (1995), "With ego involved goals, children try to out- perform others, and are more likely to do tasks they know they can do. Task-involved children choose challenging tasks and are more concerned with their own progress than with outperforming others. These researchers argue further that children who have task (or mastery) goals will be more likely to maintain positive motivation in school. An important implication for reading instruction is that mastery/learning goals should be emphasized in reading instruction (p. 12). Reading instruction must be approached by appealing to mastery goals specific to the reader. More advanced readers must be appropriately challenged by mastery goals that speak to their high interest in reading, while readers who face challenges in reading must be appropriately supported and presented with mastery goals designed to increase their expectancy and self-efficacy around the attainment of the mastery goals. Wolf states, "The more young children are read to, the more they will understand the language of books and increase their vocabulary, their knowledge of grammar, and their awareness of the tiny but very important sounds inside words" (2007, p. 223). There is no doubt that reading instruction and efforts at engagement must be strategically designed to appeal to a young person's intrinsic sense of motivation. As such, individualizing mastery goals in the instructional setting will be key.

WHAT IS ENGAGEMENT IN LITERACY?

motivation   *conceptual understanding*   *cognitive strategies*   *social interaction*

HOW 21ST CENTURY REALITIES HAVE SHAPED THE MIND OF THE READER

CONSTRUCTING KNOWLEDGE IN HUMAN EVOLUTION

As cited in Jenkins (2013, location 577, 589/4643), Neuroscientist Merlin Donald suggests that the evolution of the human mind is "largely the story of the development of various semantic representational systems" (1993, p. 737). Proposing that humans have passed through three major cognitive transitions, Donald's theory describes how each new form of representation (mimetic, language, external memory) builds on previous forms and arises during a period of rapid, radical change, involving dramatic cultural shifts (1991, p. 16). During the first two transitions-as humans moved from the culture of apes to the culture of Homo erectus, and then to the culture of Homo sapiens, the major adaptions were biological. The third transition, however, Donald proposes, was technological, whereby new cognitive skills result from the externalization of memory.

This is an important point to understand, when considering the impact that technology and digital media have had in shaping the mind of the modern reader. It is the unique evolution of information technologies and digital media that has provided the context for our digital culture, and informed how our understanding of literacy has evolved. It is clear that digital media have provided the pretext for our brain's ongoing adaptation, as the previous two biological adaptations did before. Bowen & Whithaus, Eds. (2013, location 2721) write in their ground-breaking article "A Pedagogy of Multiliteracies: Designing Social Futures," presented in the *Harvard Educational Review*,

The New London Group (NLG) (1996, p. 9) found motivational impetus in how new information technologies reshape the kind of literacies needed to lead working, public, and personal lives, and how a refurbished educational practice ought to respond to such demands. These concerns are tightly integrated as new communication and information technologies, coupled with the rapid cultural change we've experienced as a result of such development, have generated an emerging digital culture in which traditional notions of text, reading, comprehension, and understanding are differently realized.

Again, we are reminded that the rapid cultural change, that is a hallmark of the Information Age and the Digital Revolution, require new approaches that take into consideration that new kinds of literacies are necessary. Progress inevitably requires realignment and adjustment. Each successive generation is challenged to adapt to the realities that are relevant for their time.

Language in general, and reading and writing specifically, are dynamic. Kevin Kelley of Smithsonian Magazine puts things in perspective when he writes, "Books were good at developing a contemplative mind. Screens encourage more utilitarian thinking. A new idea or familiar fact will provoke a reflex to do something. Book reading strengthened our analytical skills, encouraging us to pursue an observation all the way down to the footnote. Screen reading encourages rapid pattern-making, associating this idea with another, equipping us to deal with the thousands of new thoughts expressed every day."[9]

DIGITAL DISTRACTION

"The debate about the pros and cons of digital technology is intensified in the case of adolescents. Teenagers – referred to variously in the literature as Generation M, Digital Natives, and "screenagers" – constitute the largest proportion of digital media users, interacting with cell phones, Smartphones, laptops, and gaming devices or the Internet often simultaneously" (Choudhury & McKinney, 2013, p. 198). With the advent of any new technology, concerns typically emerge as to whether it will have a deleterious effect…particularly on the young. These concerns, while noble, are often allayed as deeper examination of the effects and reasonable guidelines for their use emerge.

Some researchers and experts in the neurosciences contend that the explosion in mobile web and interactive entertainment has led to dwindling attention spans and the erosion of engagement in core learning competencies such as reading. "For the last five centuries, ever since Gutenberg's printing press made book reading a popular pursuit, the linear, literary mind has been at the center of art, science, and society. As supple as it is subtle, it's been the imaginative mind of the Renaissance, the rational mind of the Enlightenment, the inventive mind of the Industrial Revolution, even the subversive mind of Modernism. It may soon be yesterday's mind (Carr, 2010, p. 10)." In a nod to futurist Marshall McLuhan, Nicholas Carr suggests in his book, The Shallows: What the Internet is doing to Our Brain, "…media aren't just channels of information. They supply the stuff of thought, but they also shape the process of thought. And what the Net seems to be doing is chipping away my capacity for concentration and contemplation (Carr, 2010, p. 6)." It cannot be disputed, that many believe that digital technologies have impacted reading engagement. Some would argue that, in general, young people are spending far less time reading for pleasure, and spending far more time navigating the seemingly endless bits and bytes of information emanating from their mobile devices. The term 'digital distraction' is used to explain this condition. Presuming this is an accurate assessment, what does this mean?

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9 "Reading in a Whole New Way," by Kevin Kelly, Retrieved from http://www.smithsonianmag.com/40th-anniversary/reading-in-a-whole-new-way-1144822/?no-ist

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A 2009 Stanford University research study entitled "Cognitive Control in Media Multitaskers" and published in the Proceedings of the National Academy of Sciences suggests, "…individuals who frequently use multiple media approach fundamental information- processing activities differently than those who consume multiple media streams much less frequently…These results suggest that heavy media multitaskers are distracted by multiple streams of media they are consuming, or, alternatively, that those who infrequently multitask are more effective at volitionally allocating their attention in the face of distractions (Ophir, Nass & Wagner, 2009, p. 15585). Understanding the mechanics of how the brain works is important to understanding how digital technologies impact the brain. As previously indicated, The brain's plasticity can be credited with its ability to adapt so adeptly to the demands that written language require; as the brain gained mastery over increasing levels of complex communication, neural pathways were formed. The brain's ability to adapt to the demands imposed by digital media is still being examined. However, it is clear that in the some areas of function the brains struggles to keep pace, in other instances, enhancements in function are noted.

DIGITAL ENHANCEMENT

As reflected in Hobbs (2006), Hobbs & Frost (2003), Lankshear & Knoble (2008), and Leu, Kinzer, Coiro & Cammack (2004), "The advent of electronic media has expanded the notion of what counts as literacy, from the traditional print setting to digital environments that can include hypermedia applications and an emerging variety of social media" (as cited in McKenna, 2012, p. 285). It cannot be denied that digital media have created opportunities to improve learning and teaching. Some of these tools have improved access, in a manner that, as Giroux (1999) and Luke (1997) suggest, "The influential role media play in organizing, shaping, and disseminating information, ideas, and values is creating a powerful public pedagogy" (as cited in Share, 2002, p. 2). Martin (2008, p. 167) writes, "Digital Literacy is the awareness, attitude and ability of individuals to appropriately use digital tools and facilities to identify, access, manage, integrate, evaluate, analyze and synthesize digital resources, construct new knowledge, create media expressions, and communicate with others, in the context of specific life situations, in order to enable constructive social action; and to reflect upon this process."

Medina (2008) argues that of all the senses, vision is superordinate, and is "probably the best single tool we have for learning anything" (p. 233). In other words, visual stimuli will be attended to over other stimuli most of the time, especially when the visual stimulus moves (Frey & Fisher, 2010, p. 107). But all visual information isn't equal. Pictures consistently trump text or oral presentations (Frey & Fisher, 2010, p. 107).

> As cited in Jenkins (2013, location 577, 589/4643), Neuroscientist Merlin Donald suggests that the evolution of the human mind is "largely the story of the development of various semantic representational systems" (1993, p. 737). Proposing that humans have passed through three major cognitive transitions, Donald's theory describes how each new form of representation (mimetic, language, external memory) builds on previous forms and arises during a period of rapid, radical change, involving dramatic cultural shifts (1991, p. 16). During the first two transitions-as humans moved from the culture of apes to the culture of Homo erectus, and then to the culture of Homo sapiens, the major adaptions were biological. The third transition, however, Donald proposes, was technological, whereby new cognitive skills result from the externalization of memory.

The fields of media psychology and cognitive neuroscience have contributed a great deal to our understanding about the effect that the use (and as some would suggest, the 'misuse') of digital technologies have on the adolescent brain. In their article entitled "Digital Media, the Developing Brain and the Interpretive Plasticity of Neuroplasticity," Choudhury and McKinney (2013) conclude,

> Popularized representations of neuroplasticity obscure the complicated conceptual and ontological entanglement between natural, social, and cultural realms and offer simplified (emphasis added) and contradictory support to debates about youth and digital media. In fact, it is unlikely that further functional neuroimaging experiments on adolescents in cyber environments can resolve the debate or be used as the evidence base for policy guidelines without taking into account behavioural findings. Certainly imaging data can be and should be used as part of triangulated approaches that include psychological and sociological data to make sense of the effects of digital media. However, brain imaging data produced in current studies tell us little about these issues" (p. 208).

Tapscott (2009) indicates, "While there is much controversy, the early evidence suggests that the digital immersion has a tangible, positive impact. Not only do video game players notice more, but they have more highly developed spatial skills that are useful for architects, engineers, and surgeons. What's more, I can see from my own observations that the average Net Gener is quicker at switching tasks than I am, and quicker to find what they are looking for on the Internet. …The Net Gen mind seems to be incredibly flexible, adaptable, and multimedia savvy. …They may read fewer works of literature, but they devote a lot of time to reading and writing online" (p. 98).

> In a survey about the future of the internet, Anderson (2012) indicates that, Some 55% agreed with the statement: In 2020, the brains of multitasking teens and young adults are "wired" differently from those over age 35 and overall it yields helpful results. They do not suffer notable cognitive shortcomings as they multitask and cycle quickly through personal and work-related tasks. Rather, they are learning more and they are more adept at finding answers to deep questions, in part, because they can search effectively and access collective intelligence via the Internet. In some, the changes in learning behavior and cognition among the young generally produce positive outcomes. Some 42% agreed with the opposite statement, which posted: In 2020, the brains of multitasking teens and young adults are "wired" differently from those over age 35 and overall it yields baleful results. They do not retain information; they spend most of their energy sharing short social messages, being entertained, and being distracted away from deep engagement with people and knowledge. They lack deep-thinking capabilities; they lack face-to-face social skills; they depend in unhealthy ways on the Internet and mobile devices to function. In some, the changes in behavior and cognition among the young are generally negative outcomes (p. 2).

Of note, are direct statements from two respondents that offer contending perspectives on the issue:

"I have seen a general decline in higher order thinking skills in my students over the past decade. What I generally see is an over-dependence on technology, an emphasis on social technologies as opposed to what I'll call 'comprehension technologies,' and a general disconnect from deeper thinking. I'm not sure that I attribute this to the so-called 'rewiring' of teenage brains, but rather to a deeper intellectual laziness that the Web has also made possible with the rise of more video-based information resources (as opposed to textual resources)" (Anderson, 2012, p. 34).

Pamela Rutledge, Director of The Media Psychology Research Center at Fielding Graduate University, says this evolution is creating a new approach to thinking. "The new 'wiring' creates the ability to be fluid in adapting to change," she explained. "Experience with rapidly changing technologies, gaming environments, user interfaces, and environmental impact have established a new approach to thinking where how things are supposed to be is a changing rather than a fixed understanding. More importantly, the ability to act and interact, to synthesize and connect, can radically change an individual's sense of agency. There is a new assumption about participation. It is not the expectation to participate that we talk about in convergence culture; it is the belief that each person can participate in a meaningful way. Beliefs of agency and competence fuel intrinsic motivation, resilience, and engagement" (Anderson, 2012, p. 34).

Whether there is general agreement or not regarding the relative detriment or value of digital media, it is clear that these media are here to stay. As such, we must make every effort to insure that meaningful examinations and discussions ensue, that allow us to critically consider how these technologies can and should be used to improve outcomes in areas such as literacy development. Given the manner in which youth have embraced the use of digital media, there is no doubt that there is value to considering how these media may be leveraged in efforts to improve engagement and motivation among young people, when it comes to reading for pleasure. These media require that we think differently about what specific competencies are required to insure that these media are used in a way that support the attainment of those critical competencies. In some cases, digital media create opportunities for young people who are not typically engaged or reached by non-immersive forms of media, to include youth with disabilities. Alper (2014) reflects, "Young people with disabilities are not waiting idly by for others' permission to use new media in interesting and unexpected ways. As they have been historically, youth

with disabilities are drivers of technological change, media makers, and innovators themselves" (p. 66). For some youth, new media create opportunities for inclusion and accessibility, which are not necessarily as accessible through traditional print media. For some of these youth, the path to literacy may very well be mediated through the use of digital media.

TRANSLITERACY AND MULTIMODAL LITERACY

The transliteracy movement was an effort to create a construct that broadened the literacy framework. Thomas et al. (2007) define transliteracy as, "the ability to read, write, and interact across a range of platforms, tools and media from signing and orality through handwriting, print, TV, radio, and film, to digital social networks" (p. 2). In transliteracy, there is a specific acceptance of the idea that "we live in a world of multiple literacies" (Thomas, p. 2).

Bowen and Whithaus (2013), in their book Multimodal Literacies and Emerging Genres, discuss this reality. "With Twitter, Facebook, and other social networking sites, students represent themselves textually in a myriad of contexts simultaneously like never before. These contexts, however, do not require a conscious awareness of older text-based literacies. Rather, they require an understanding of the social conventions at the moment and what is acceptable to the receiving community" (Bowen & Whithaus, 2013). It bears noting that different competencies, than those required in the linear, print-based medium present in traditional media, are both needed and utilized by young people as they navigate the non-linear world of digital media. In 1996, the New London Group was formed. The group consisted of ten academics, led by noted professor James Gee, who concerned themselves with examining how literacy pedagogy needed to change in response to rapid shifts in technology, globalization, and diversity in the new Millennium. The group developed a framework for this new literacy pedagogy referred to as the multi-literacy concept. Bowen and Whithaus (2013) go on to cite the New London Group's efforts, which found "motivational impetus in how new information technologies reshape the kind of literacies needed to lead working, public, and personal lives, and how a refurbished educational practice ought to respond to such demands." There is no doubt, that in order to motivate and engage young readers, educational practices and learning experiences must value multimodality. Further, as reflected in Jennifer Roswell's book, Working with Multimodality: Rethinking Literacy in a Digital Age, "The fact is communication increasingly works on a converging of disciplines and accessing a variety of modes of expression and representation to communicate. Research featured in this book attempts to offer a more converged framework, which will have implications for education and training because it suggests a need to think far more progressively about what literacy might mean in the future with digital and media convergence" (Roswell, 2013)." Conversations about literacy need to be reconsidered in the framework of transliteracy, as this is a context that is very familiar to 21st Century youth. Ipri and Newman (n.d.) write, "Basically, transliteracy is concerned with what it means to be literate in the 21st century. It analyzes the relationship between people and technology, most specifically social networking, but is fluid enough to not be tied to any particular technology. It focuses more on the social uses of technology, whatever that technology may be. Transliteracy calls for a change of perspective away from the battles over print versus digital, and a move instead towards a unifying ecology not just of media, but of all literacies relevant to reading, writing, interaction and culture, both past and present." In transliteracy, there is a movement away from creating silos between different literacies, and a movement towards multimodality. This multimodality is absolutely critical to navigating the transmedia landscape.

The graphic below represents a vision for the future of learning. This learning 'ecosystem' speaks to how approaches to learning, and perhaps even a new literacy framework might evolve, in an effort to engage and motivate young people in meaningful ways to appreciate the value of being literate, in a world that requires them to master competencies in complex information management and language development. Being literate requires more than compulsory reading. Higher levels of literacy are now indicated, to insure that young people are able to make sense of the world in which they must live and work. Navigating narratives in a manner that allows young people to understand and appreciate both the breadth and depth of enriched reading experiences is now a requisite skill. As such, it is now critically important that opportunities that promote intrinsic motivation that drive excitement about reading for pleasure.
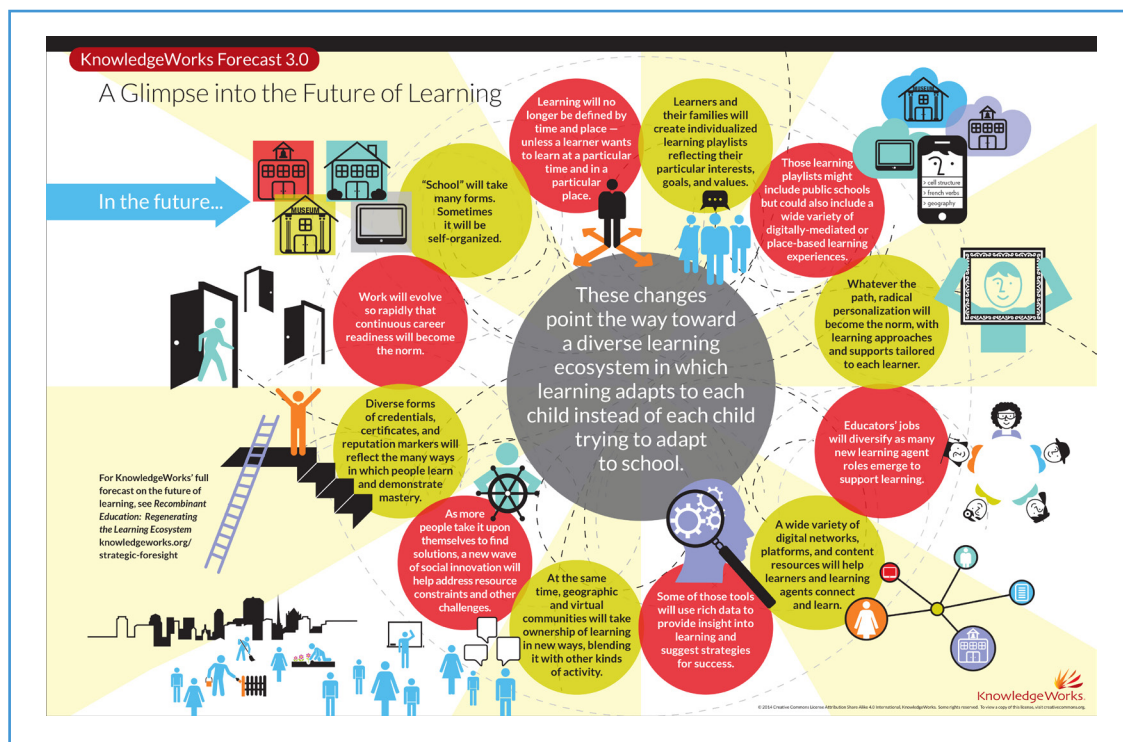
In an effort to address less than favorable attitudes about reading, opportunities for engagement must be created in young people's social milieu, in schools, and in the home. As suggested by Alper & Herr-Stephenson (2013), "Well-crafted and well-designed transmedia play experiences have the potential to be a valuable tool for enhanced and expanded learning, contributing to efforts to address some of

the most pressing challenges facing educators and children's media producers" (p. 367). Researchers, scientists, policy-makers, educators, and experts in many fields have committed significant resources to considering how new media can be constructively used to engage young people in developing the intrinsic motivation needed to be more engaged and thoughtful readers.

PARTICIPATORY CULTURE AND TRANSMEDIA STORYTELLING

Transmedia is a form of storytelling that uses multiple media platforms to create an immersive experience that are designed to strengthen and enhance the audience's connection to the story. Henry Jenkins, considered to be one of the foremost new media experts and influencers, is at the forefront of advancing innovations in the application of new media technologies in educational settings.

Henry Jenkins is the Provost's Professor of Communication Journalism and Cinematic Arts at USC's Annenberg School for Communication and Journalism. He joined USC from the Massachusetts Institute of Technology, where he was Peter de Florez Professor in the Humanities. He directed MIT's Comparative Media Studies graduate degree program from 1993-2009, setting an innovative research agenda during a time of fundamental change in communication, journalism and entertainment. Jenkins has also played a central role in demonstrating the importance of new media technologies in educational settings. He has worked closely with the John D. and Catherine T. MacArthur Foundation to shape a media literacy program designed to explore the effects of participatory media on young people, and reveal potential new pathways for education through emerging digital media.[10]

Jenkins (2007) reflects that:

> Transmedia storytelling represents a process where integral elements of a fiction get dispersed systematically across multiple delivery channels for the purpose of creating a unified and coordinated entertainment experience. Ideally, each medium makes its own unique contribution to the unfolding of the story. See more at: http://henryjenkins.org/2007/03/transmedia_storytelling_101.html#sthash.3Z0sis5l.dpuf[11]

For youth today, transmedia storytelling is organic, authentic, and most importantly, engaging. The transmedia experience is framed in the space of participatory culture.

11 (Jenkins H., Transmedia Storytelling 101: Henry Jenkins, 2007)

Participatory culture assumes certain precepts, to include: 1) low barriers to creative expression; 2) strong support for creating and sharing content; 3) a mentor guides the novices; 4) members of the community feel as if their contributions matter, and; 5) members of the community feel a strong sense of connection and value each other's opinion (Jenkins, Parushotma, Weigel, Clinton, & Robison, 2009). Most importantly, the line between content producers and content consumers is blurred; the world of the "prosumer." It is very important to note that transmedia storytelling is built on a foundation of multimodal experiences.

Reading in the transmedia world connects you to community, and reading is an active and open, rather than a passive and closed, experience. The fans, and the community they build, frame the context of the interaction. Gee (2004) asserts, "video games are particularly good examples of how learning and thinking work in any semiotic domain when learning and thinking are powerful and effective, not passive and inert." Semiotics is particularly significant to videogames because they rely upon artifacts or symbols to drive meaning-making. Because semiotics is simply an exploration of visual literacy, artifacts and symbols also hold particular significance in building literacy. In transmedia storytelling, there is the potential for natural synergies between video games and improving literacy. McGuire and O'Leary (2012) state it best, when they write: "…digital removes isolation. The corollaries: an increase in connectivity, a mutability of artifact, continuous engagement with readers, and most excitingly, a potentially public record of change, comment, discussion – digital marginalia – layered atop the artifact, adding to the artifact, and redefining 'complete'." Again, the issue of co-creation emerges. This is what transmedia does best; it creates a space for the reader, the author, and the larger community of readers to interact in more meaningful and organic ways. More importantly, the reader is not only invited, but encouraged, to share experiences and enrich the story through some form of co-creation. The transmedia storytelling experience elevates fandom, because at the heart of fandom is reader engagement. The fan as evangelist is assumed in the transmedia space. As we reflect back on our original proposition, how to increase motivation and engagement among 21st Century readers (and to, in effect, improve literacy), it is clear that transmedia storytelling presents very specific opportunities for young people to develop skills and competencies that are critically important to leading productive lives in and meeting the demands of the 21st Century. There is obvious overlap between the competencies required when navigating transmedia experiences, and the competencies needed to be an effective writer and reader.
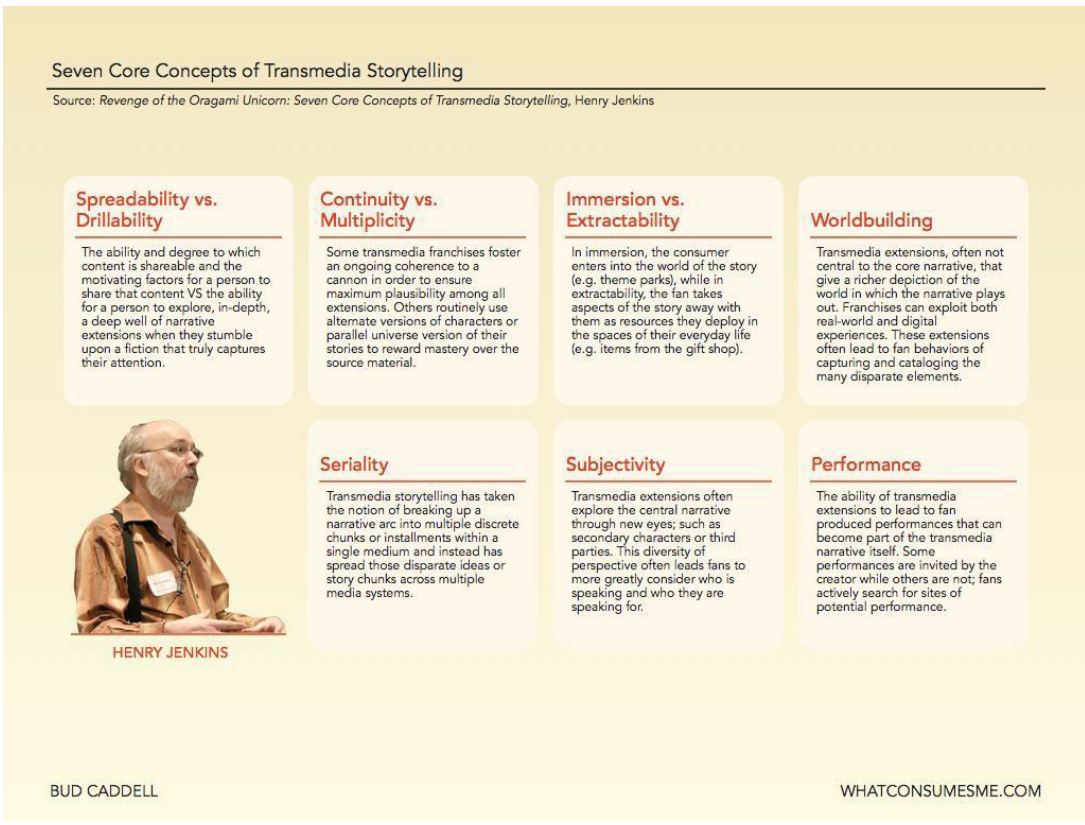
There is one more critically important element in transmedia storytelling that warrants a mention, because of its intimate relationship to and important role in anchoring community: world-building. Karlin (2014) defines world-building as:

> …a system for creating rules and behaviors for fictitious worlds that arises from the science, technology, social structure, geography, economics, and politics governing them. These parameters can then inform plausible characters, conflicts, and plotlines.

World-building is critically important to transmedia storytelling. Alex McDowell, a production designer known for pushing the world-building envelope in transmedia storytelling, has defined world-building as "a world as the container for narrative, or possibly many different narratives (Willis, 2012)." Creating a sense of 'place' within transmedia spaces is very important for grounding the audience. As in the real world, people rely upon artifacts, landmarks, and other constructs to orient oneself within a space. Because transmedia worlds are both horizontally and vertically oriented, tremendous resources are committed during production to insuring not only that the world looks and feels real, but also that the audience understands his place in the world. As such, continuity across transmedia platforms is key. There must be some sense of continuity as the audience moves through each transmedia experience. Transmedia storytelling experiences are useful tools for deepening content understanding and constructing knowledge. Transmedia experiences are, by their very nature, constructivist in nature.

Constructivist experiences allow young people to construct knowledge and meaning through their experiences and ideas. As such, constructivist experiences are action-oriented.

Seven Core Concepts of Transmedia Storytelling

Source: *Revenge of the Oragami Unicorn: Seven Core Concepts of Transmedia Storytelling*, Henry Jenkins

Spreadability vs. Drillability

The ability and degree to which content is shareable and the motivating factors for a person to share that content VS the ability for a person to explore, in-depth, a deep well of narrative extensions when they stumble upon a fiction that truly captures their attention.

Continuity vs. Multiplicity

Some transmedia franchises foster an ongoing coherence to a cannon in order to ensure maximum plausibility among all extensions. Others routinely use alternate versions of characters or parallel universe version of their stories to reward mastery over the source material.

Immersion vs. Extractability

In immersion, the consumer enters into the world of the story (e.g. theme parks), while in extractability, the fan takes aspects of the story away with them as resources they deploy in the spaces of their everyday life (e.g. items from the gift shop).

Worldbuilding

Transmedia extensions, often not central to the core narrative, that give a richer depiction of the world in which the narrative plays out. Franchises can exploit both real-world and digital experiences. These extensions often lead to fan behaviors of capturing and cataloging the many disparate elements.

HENRY JENKINS

Seriality

Transmedia storytelling has taken the notion of breaking up a narrative arc into multiple discrete chunks or installments within a single medium and instead has spread those disparate ideas or story chunks across multiple media systems.

Subjectivity

Transmedia extensions often explore the central narrative through new eyes; such as secondary characters or third parties. This diversity of perspective often leads fans to more greatly consider who is speaking and who they are speaking for.

Performance

The ability of transmedia extensions to lead to fan produced performances that can become part of the transmedia narrative itself. Some performances are invited by the creator while others are not; fans actively search for sites of potential performance.

BUD CADDELL   WHATCONSUMESME.COM

Source: Bud Caddell, Retrieved from: https://transmediaactivism.files.wordpress.com/2010/08/418633 0101_4ef1e18b88_o1.jpg

Jenkins (2013) asserts, "Popular media representations often set so-called digital literacies at odds with the values and norms of traditional print culture. This book's author wanted to work across that divide, envisioning a generation of students who could read with a book in one hand and a mouse in the other" (Loc. 446/4643).

TRANSMEDIA UNIVERSE
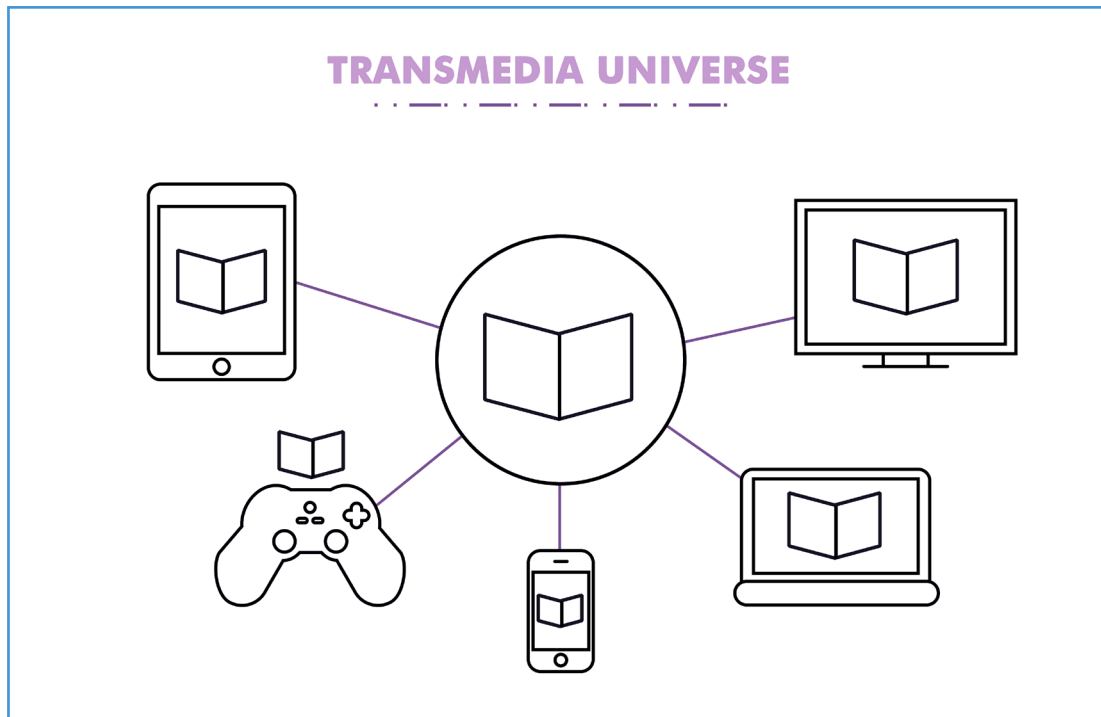
Digital media offer to young people the promise of inclusion, community, engagement, and co-creation. However, these media also raise questions about whether deeper understanding, reflection, and quiet contemplation are lost as young people feed their seemingly insatiable appetite for data and immediate access. The promise and opportunity of digital media, as a means of engaging and motivating the 21st century reader, is creating the context for broadening how we define literacy. To fully advantage the power of transmedia, thought leadership that allows us to consider how the power of print books can be manifested.

WHAT WE HAVE LEARNED: THE FINDINGS AND CONCLUSION

   This paper reflects a belief that the tools of new media and transmedia storytelling present some very interesting opportunities to meet young readers where they are, and to get them where they need to be. As both media consumers and media producers, today's digital youth have come to expect more organic and immersive forms of engagement when they read. Deepening the reader's experience can both drive engagement and motivate the reader to take advantage of additional opportunities to read, and to embrace storytelling as both a consumer and a producer. Immersive media also allows reader to experience content in a multisensory context; allowing broader audiences, including readers with reading disabilities, to appreciate the reading and storytelling experience more fully.

> "When done thoughtfully, transmedia isn't about exploiting trendy new platforms or growing additional revenue streams for greedy content producers. Rather, it allows participation in a narrative in powerful and original ways. This kind of transmedia doesn't show up as a flashy add-on to curriculum, but it becomes a streamlined way to embed media literacy and technology literacy."[12]

   Henry Jenkins (2013) goes on to remark that young people have to be at the center of any changes designed to increase their reading engagement. "Young people in online forums are engaging in close reading activities directed toward popular music or cult television shows, sometimes engaging in prolonged and impassioned debate about what such works mean and how they convey their meanings; they are recording their impressions, including their reflections on what they read, through blogs, online journals, video reflections, social networks, and microblogging platforms" (Loc. 516/4643). As we have discussed, the development of high level literacy skills is an inherently complex process that is strongly dependent upon a motivated and engaged reader. Youth today are innately active "prosumers," who would greatly benefit from opportunities to strengthen their literacy development by tapping into intrinsic motivational processes to find meaning in compelling and high interest narratives. It is intrinsic motivation that is correlated with high levels of engagement, and the attainment of more complex levels of literacy development.

12 http://www.thedigitalshift.com/2012/06/k-12/every-platform-tells-a-story-transmedia-has-the-power-to-make-any-topic-more-vivid-and-personal/

Transmedia storytelling, and the naturally social milieu of participatory culture, present unique opportunities and challenges to motivate and engage youth to choose narratives that speak to their interests and passions. Scholastic's Kids and Family Reading Report (2015) offers some telling insights:

- While many speculate as to why youth are reading books for pleasure less frequently, it was clear that the most powerful predictors reading engagement was whether children said they enjoyed reading, whether they felt that it was important to read for pleasure, and whether their parents were also frequent readers.

- Even though parents of preschoolers indicated that they placed a high value on reading aloud to their children, less than two-thirds did so.

- Even if e-books are available, young people still seem to prefer books in print.

- Young people continued to value having their parents read to them after they reached school age.

FINDINGS

- Youth today are experiencing notable declines in reading for pleasure. It is believed that a number of factors, directly or indirectly, are responsible for this trend. This presents a crisis because the frequency of reading for pleasure correlates strongly with better test scores in reading and writing.

- Although "digital distraction" is often cited, in popular media, as the cause for the decline in reading, and other signs of cognitive malaise, brain imaging data does not support these assertions. More notable factors attributed to declines in reading for pleasure, include: lack of access to books, and an absence of encouragement to read for pleasure at home and/or in school.

- Transmedia storytelling can be used to create multimodal learning experiences that are designed to improve reflective thinking, reading engagement and literacy.

- The environment in which one reads carries importance in creating the context that drives an interest and motivation to read.

- Youth today are motivated by opportunities to participate in co-creation and in being co-constructors of meaning through reading, viewing, understanding, responding, and interacting through storytelling.

- It is increasingly important that we both broaden our definition of and approach to literacy, and begin to address how poorly conventional measures fail to accurately recognize the reading activities that young people engage in when using digital media.

- Engagement is a very important factor in literacy. Its importance is often underestimated in the design and implementation of effective strategies designed to address concerns regarding literacy attainment. Current literacy research is seeking to address how to effectively bridge the divide between motivation, conceptual understanding, cognitive strategies, and social interaction, in an effort to develop comprehensive approaches and strategies designed to strengthen engagement.

- It is important to create opportunities for students to employ effective cognitive strategies that will also spark a young person's intrinsic motivation to read.

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