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**The Role of Literacy in 21st Century Teaching and
Learning: Themes, Issues, and New Directions**

**Vassiliki Zygouris-Coe
Professor of Education
University of Central Florida
USA**

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Athens Institute for Education and Research
8 Valaoritou Street, Kolonaki, 10671 Athens, Greece
Tel: + 30 210 3634210 Fax: + 30 210 3634209 Email: info@atiner.gr URL:
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**The Role of Literacy in 21st Century Teaching and Learning:
Themes, Issues, and New Directions**

**Vassiliki Zygouris-Coe
Professor of Education
University of Central Florida
USA**

Abstract

Twenty-first century technological advancements have resulted in new educational shifts and paradigms and have also created new challenges. In the USA, teacher education programs are experimenting with changes in teacher clinical experiences, course delivery formats, technology, and inquiry-based approaches to teacher preparation. In addition, there is much emphasis on teacher preparation for high-needs populations, especially student populations in low-income areas with a high number of non-English speaking students and families. The role of literacy in learning in school and beyond is unquestionable. What is questionable is the changing nature of literacy in the 21st century and the need to support it in brick and mortar as well as in digital contexts. This paper will synthesize literacy shifts and emerging trends and issues for the K-20 sectors and especially as it relates to teacher preparation and continuing education, in the context of technology and digital learning. The paper will raise critical questions for research, partnerships, and possible new directions related to the topic.

Keywords: Literacy, 21st century, teaching, learning, teacher preparation

Introduction

Literacy is an integral element of every society's social, cultural, educational, and economic development and success. Unesco views literacy as "an active and broad-based learning process." (2006, p. 5). The International Literacy Association (2018) defines literacy as "...the ability to identify, understand, interpret, create, compute, and communicate using visual, audible, and digital materials across disciplines and in any context." In today's world, being literate requires much, much more than the traditional literacy of yesterday; 21st century literacies are complex, multiple, and malleable. The National Council of Teachers of English (NCTE) (2013), defines literacy as a collection of culturally and communicatively situated practices shared among members of particular groups. According to the NCTE (2013), 21st century readers and writers need to:

- Gain proficiency with tools of technology
- Develop relationships with others and confront and solve problems collaboratively and cross-culturally
- Design and share information for global communities to meet a variety of purposes
- Manage, analyze, and synthesize multiple streams of simultaneous information
- Create, critique, analyze, and evaluate multimedia texts
- Attend to the ethical responsibilities required by these complex environments

The highly networked and complicated world we live in calls for collaborative inquiry, problem solving, and the ability to engage in collective intelligence. Solutions to local and global societal and educational problems warrant collective intelligence (Gee, 2017; Nielsen, 2012). As a result of technological advancements, learning can no longer be housed only within the walls of a classroom or school. Schooling has to be placed into the larger context of diverse teaching and learning practices and diverse literacy and media practices.

According to the 2017 *What's Hot in Literacy* report that is published by the International Literacy Association (ILA), there are notable differences in what educators across the world (i.e., over 1,500 literacy leaders from 89 countries and territories) viewed as important topics in literacy education. At the U.S. country level, the top five topics with the most unmet needs included the following: Parent engagement, access to books and content, literacy in resource-limited settings, early literacy, and teacher professional learning and development. In addition, although digital literacy ranked among the top five hot topics, at both the community and country levels, it did not rate high in terms of importance. Assessment/Standards was ranked as the No. 1 hot topic. New technologies may play in the evolving definition of literacy, but there are still many needs in terms of teacher preparation in digital literacy, school infrastructure, and integration of technology in everyday curricula and learning.

In the 2018 *What is Hot in Literacy* report, survey results showed additional discrepancies in hot and important ratings of literacy topics.

- Digital literacy was ranked No. 1 among all hot topics but it was ranked as No. 13 in terms of importance.
- Early literacy ranked No. 1 in terms of importance and it also ranked among the five hottest topics.
- Equity in literacy education was ranked No. 2 in terms of importance and No. 8 among all hot topics.
- Teacher preparation was ranked No. 3 in terms of importance and No. 12 among all hot topics.
- Strategies for differentiating instruction was ranked No. 4 in terms of importance and it also ranked among the five hottest topics.
- Access to books and content ranked as No. 5 in terms of importance and No. 11 among all hot topics.

The above results also highlighted the topic of equity in literacy education as well as access to books and content and mother tongue literacy. Developing students' 21st century literacy skills through disciplinary (ranked No. 6 in terms of importance), critical (ranked as No. 11 in terms of importance), and digital literacy (ranked as No. 13 in terms of importance). Disciplinary literacy will help students develop discipline-specific literacy and content knowledge and skills in tandem. Critical literacy refers to the ability to read and comprehend issues of power, social class, inequality, and injustice as they are presented in written texts, visual applications, and spoken words. According to the survey respondents, teaching students to become critical thinkers and consumers of technology is more important than just passively engaging them with technology.

Current educational shifts in American education include student preparation for college and career readiness through the Common Core State Standards (CCSS) (National Governors Association Center for Best Practices & Council of Chief State School Officers [NGA & CCSSO], 2010). Specifically, the English Language Arts (ELA) Anchor Standards of the CCSS state that students should be able to critically and deeply comprehend a variety of print and digital texts, integrate and evaluate information that uses media and other formats (including visual, quantitative, and audio), and also be able to make strategic use of digital media and visual displays of data.

Twenty-first century learning involves enabling today's students to be academically competent and productive citizens in society. Implications of this type of learning include students mastering rigorous content while at the same time producing, synthesizing, and evaluating information from multiple texts and other sources, and demonstrating academic, civic, and cultural integrity and responsibility.

Meeting our society's challenges demands literate and skilled citizens that can collaborate with others to solve critical societal challenges. According to the Association of American Association of Colleges of Teacher Education (AACTE, 2010), there is a need for improving teacher preparation and other educational systems that will adequately prepare all students for 21st century learning, career, in life, and citizenship. In addition to educational standards and integration of emerging technologies in classrooms, student language and cultural diversity, homelessness,

poverty, inequity, and social injustice are societal issues that impact literacy-related teaching and learning.

In the following section, I will summarize recent themes and issues related to literacy teaching and learning in the 21st century.

Literature Review

For the purpose of this paper, I will present summative themes and issues related to 21st century literacy teaching and learning in the following areas: (a) new educational standards for college and career readiness, (b) early literacy, (b) disciplinary literacy, (c) critical literacy, (d) technology and 21st century literacies, and (e) Diversity and English learners.

New Educational Standards for College and Career Readiness

The CCSS describe a literate student as one that demonstrates independence, has deep content knowledge, can respond to the demands of audience, task, purpose and discipline, comprehends as well as critiques and values evidence, uses technology and digital media strategically, and understands other perspectives and cultures (NGA & CCSSO, 2010).

In the areas of English language arts and literacy, many students have difficulty reading and understanding complex text. Although the CCSS have been adopted by many U.S. states, the 2017 National Assessment of Educational Progress (NAEP) reading results show stagnant growth in reading for grades four and eight. Many educators are calling for building students' background knowledge, developing deep comprehension, and expanding their vocabulary in order for them to be prepared to handle the literacy demands of 21st century learning.

According to the American College Testing (2006) report on college readiness in reading, "The clearest differentiator in reading between students who are college ready and students who are not is the ability to comprehend complex texts" (p. 2). Students need to know how to read and comprehend a variety of complex texts (both in print and digital format). They can benefit from print and digital instructional tools that will help them develop deep comprehension of texts.

Although new educational standards define expectations for what students should know and be able to do by the time they finish high school, not all students will be ready to meet these expectations. Provisions need to be made to ensure the preparation of all students for postsecondary education and civic life. Teachers will need to have a clear framework for what they teach and how they assess student learning and they will also need to have an integrated curriculum that broadens students' knowledge across content areas (Conley, 2010).

To meet new educational standards, students need inquiry-based learning experiences that engage them into deep understanding of knowledge, critical examination of learning, and opportunities to transfer, share, and evaluate their knowledge in a variety of settings. Effective teachers should be knowledgeable about 21st century effective literacy development and instruction, the kinds of reading and

writing that are important to student learning, and effective ways to read and comprehend print and digital texts, and engage in learning in a variety of contexts (brick and mortar, hybrid, and online).

Teacher preparation reform, professional development in 21st century literacies and emerging technologies to support students' literacy development, and support for literacy interventions for struggling and linguistically diverse students are current issues in teaching and learning. In order to have different educational outcomes, we need to better understand learning in the 21st century and design teaching environments and support systems that can produce improved educational outcomes.

Early Literacy

Literacy learning begins early in children's lives way before they officially enter the school context. In the U.S., and globally, there is widespread diversity in children's oral and written language development. Children around the world differ in their socialization experiences and skills, in the types and amount of support they receive in reading and writing, and also in the access they have in schools and in books (ILA, 2018). Young children need to learn in culturally relevant, language- and print-rich environments (Pelatti et al., 2014), and developmentally appropriate settings. They need excellent literacy instruction that builds on what children already know and can do (Neuman & Gambrell, 2013), and it provides them with knowledge, skills, and dispositions for lifelong learning. Young children need to learn letter knowledge, phonological awareness, and they need to develop an understanding of speech-sound correspondences that are essential for them to become literate (Wilson, Dickinson, & Rowe, 2013). However, it is critical for children to also develop their oral language comprehension (Neuman, Newman, & Dwyer, 2011), engage in oral discourse, and have opportunities to share what they are learning (ILA, 2018).

According to the United Nations (2015), nearly a quarter of a billion people now live outside their country of birth, and it is predicted that this number will increase dramatically over the next decade or so. War and other crises have forced millions of people around the world to migrate and relocate in refugee camps or in new countries. As a result, today's educators work with increasingly more diverse populations (i.e., immigrant and refugee children and families) who often speak a different language, have different cultural practices and beliefs. Early literacy skills are imperative to children's growth, development, and learning (Snow, Burns, & Griffins, 1998). Educators and policy makers need to collaborate with parents to ensure the literacy development young children (ILA, 2017). Educators of refugee and immigrant children need to understand the importance of first language maintenance (Anderson, Anderson, & Rajagopal, 2017), recognize that families and family units may socialize and interact with children, and family literacy practices may differ from family to family (Lesaux & Geva, 2006; Purcell-Gates, 2017).

Literacy is a powerful tool in educating all children and helping them to become active and informed citizens and the early grades play a key role in building knowledge and vocabulary. Your children need teachers who are well-prepared, can provide them with quality literacy instruction that will help children

become proficient in reading and writing, are committed to social justice, and are innovative.

Disciplinary Literacy

Specialized and advanced literacy skills are necessary for students to meet the demands of the content areas in middle through high school, college, and beyond. Disciplinary literacy is literacy that reflects the structure, content, literacy demands, discourse, and habits of mind that are specific to each discipline (Shanahan & Shanahan, 2008, 2012; Zygouris-Coe, 2015). Disciplinary literacy is characterized by deep comprehension of text, specialized discourse and mindsets, critical thinking skills, and discipline-specific means of communicating, sharing, and evaluating knowledge (Zygouris-Coe, 2015).

Disciplinary literacy requires a shift in how literacy instruction is conceptualized and implemented in the classroom (Pytash & Ciecierski, 2015). Moje (2008) and Shanahan and Shanahan (2014) argue that the disciplines are specific cultures of practice that have their own norms about how knowledge is created, shared, and evaluated. Since research shows that students are generally unable to recognize these nuanced differences between disciplines without direct instruction (Shanahan & Shanahan 2014), teachers must focus on teaching students how listening, speaking, and language norms differ across content areas. Disciplinary literacy instruction focuses on deep and critical comprehension skills that result in knowledge and literacy development (Juel et al., 2010) and supports students' preparation for 21st century learning.

Critical Literacy

Critical literacy extends basic reading and writing skills; it values language, the context and uses of language, and the ways in which language that questions the social representation of self (Shor, 1999). Critical literacy refers to the ability to read (print and digital) texts and multi-media in a way that promotes a deeper understanding of power, and social justice/injustice, equity/inequity in human relationships (Zygouris-Coe, 2015). When students read print and digital texts, images, or symbols, they need to be able to question and even critically analyze and evaluate how authors use language to represent gender, socio-cultural issues and power. For students to become critical readers and thinkers, they also need to think about the author's point of view and the role of the historical, social, and cultural context in which the text was written.

Paulo Freire, in *Pedagogy of the Oppressed* (2007) suggested that for students to become more socially aware and active, they need opportunities to engage in conversations that question power relations. Critical literacy skills enable students to uncover hidden agendas within texts and multi-media. For example, when reading a book, students also need to question who wrote the book and why? What is the effect of popular teen television programs, video games, or music on teens' self-image? How does Facebook, or Twitter shape the way students view communication, or relationships? Critical literacy plays a pivotal role for students'

lives inside and outside school (Wray, 2013). Students need the literacy knowledge and skills that will equip them read, write, and evaluate a variety of print and other texts that arise from current and future technologies. Twenty-first literacy skills include critical literacy skills. Together, they will drive educational and civic participation in the world.

Technology and 21st Century Literacies

It is difficult to harness the evolution of literacy when "...the meaning of 'tomorrow' becomes 'today' every 24 hours." (Leu, Kinzer, Coiro, Castek, & Henry, 2013, p. 1). Today's literacy is deictic, multimodal, and dynamic; it changes as quickly as new technologies for ICT emerge and as individuals develop new uses for them (Leu & Kinzer, 2000). Twenty-first century innovations, and ICTs warrant new literacies (Alvermann, 2008; Lankshear & Knobel, 2003, 2006a; Leu, 2000; McKenna, Labbo, Kieffer, & Reinking, 2006).

In 1996, the New London Group coined the term multiliteracies to describe a more contemporary view of literacy that reflected multiple communication forms and a context of cultural and linguistic diversity within a globalized society.

Multiliteracies refer to the multiple ways of communicating and making meaning, including such modes as visual, audio, spatial, behavioral, and gestural (New London Group, 1996).

Based on the idea that literacy is constantly changing and evolving in response to technology, Leu et al. (2004) have proposed a dual-level theory of new literacies, Uppercase New Literacies Theory and lowercase new literacies theory. According to Leu et al. (2013), uppercase new literacies theory describes the principles that represent the "most common and consistent patterns being found in lowercase theories and lines of research" (p. 1157). On the other hand, lower case theories reflect the rapidly changing nature of literacy in a deictic world since they are closer to the specific types of changes that are taking place and interest those who study them. Lower case theories enable the use of multiple lenses that are used and the technologies and contexts that are studied. In addition, lowercase new literacies theory describes the knowledge, skills, and dispositions needed to navigate specific areas of new literacies, such as online research and comprehension.

Digital literacy is at the forefront of national and international educational conversations. A recent study by Leu et al. (2015) found that the reading achievement gap might be larger than originally thought to be when online research and comprehension skills are included. Although new U.S. educational standards call for students to develop online reading, research, and comprehension skills, many teachers are not adequately prepared to teach students the skills and strategies needed to be successful with these skills.

Twenty-first century literacies are malleable and collaborative; they contribute to the development of collective intelligence. Therefore, in order to best prepare students to learn and work in 21st century learning spaces, educational systems and teachers will need to help students "learn how to learn" new technologies (International Reading Association [IRA], 2009; National Council of Teachers of English [NCTE], 2008). Current research suggests that comprehension of digital text requires

additional strategies such as problem-solving, metacognitive, and critical literacy skills (Corio, 2009; Coiro & Dobler, 2007; Hartman, Morsink, & Zheng, 2010; Leu, Kinzer, Coiro, & Cammack, 2004; Wilson et al., 2013).

Today's teachers must re-conceptualize their definitions of literacy, become knowledgeable about how students learn in 21st century environments. Preservice and inservice teachers need to provide literacy instruction that is culturally responsive to a diverse student population and is also aligned with standards and student needs. Learning how to develop students' literacy skills in a variety of contexts and formats is important for 21st century educational preparation.

Diversity and English Learners

In recent years, educating preservice teachers for cultural diversity has become an increasingly important part of teacher education programs across the United States and in Europe. The increasing challenges related to students' cultural, racial, linguistic, socioeconomic, and educational diversities, call for the widespread implementation and training of culturally responsive teachers, who "cultivate cooperation, collaboration, reciprocity, and mutual responsibility for learning among students and between students and teachers" (Gay, 2010, p. 45).

Colleges of teacher preparation have been implementing various models of teacher preparation such as, integrated multicultural education in teacher preparation, urban education partnerships and clinical experience placements, recruiting diverse teacher candidates (Boser, 2014), and preparing teachers to teach teaching English language learners (Mule, 2010). The teaching workforce needs to be come more diverse. Teachers need preparation and professional development on how to teach culturally responsive literacy and interact with diverse communities. They also need culturally responsive curriculum and a variety of experiences that will help them to develop cultural capital (Delpit, 1995).

English learners (ELs) have unique language and literacy characteristics and needs. Research has shown that there are unique challenges related to improving English learners' literacy (e.g., Gretchen et al., 2007; NCTE, 2008, Short, & Fitzsimmons, 2007). For example, educational systems do not use common criteria for identifying ELs' progress and needs, there is a lack of appropriate assessments, and teachers are not adequately prepared to meet the literacy needs of ELs.

According to the 2015 report, *Preparing Teachers for Diversity: The Role of Initial Teacher Education*, that was published by the European Union Commission on Education, although diversity is not a new phenomenon, its nature has been evolving in lieu of the current refugee crisis. The increasing number of refugee, asylum seeking, and migrant children that have been entering Europe in recent years, creates new opportunities and challenges for teachers and schools. Aside from linguistic and socio-cultural differences, children with a migrant background are more likely to leave school earlier than their peers with a native background. Other evidence shows that teachers do not feel efficacious to teach diverse student populations (OECD, 2014). These societal changes and their related challenges raise new questions about teaching and learning in the 21st century.

Conclusions

A solid foundation in literacy is an essential aspect of a successful education and life. Twenty-first century innovations have brought about many changes to how people communicate, live, work, and learn. In addition to how and where students learn today, literacy skills include the ability to problem-solve, communicate, collaborate, create, evaluate, and present information through multimedia. Although technology is central to literacy in the new century, there are additional important dimensions of teaching and learning. International studies of career readiness show that employers rate written and oral communication skills very highly, and collaboration, work ethic, critical thinking, and leadership all rank higher than proficiency in information technology.

According to OECD (2016), although digital technologies have impacted how we work, communicate, and live our everyday lives, the innovative capacity of technology is very much conditioned by the level of digital skills of the population. The role of education and skills in promoting innovation is critical. Yet, although we have had widespread investments in ICTs in schools, we have not had parallel transformation in educational practices. Connectivity still remains a major issue in many schools and there is a tremendous need for increasing teachers' ICT skills, improving teachers' professional development, supporting them in reforming their pedagogies and in providing them with appropriate software and courseware.

Technological advancements and 21st century learning demands call for many changes in teaching and learning across grade levels and content areas. New and transformative advances of technologies have the potential to expand and transform teaching learning, educational opportunities, and outcomes for teachers and students, making it possible to personalize learning and adapt it to student interests, needs, prior knowledge and available resources. In the context of these new educational frontiers, what can we do to ensure that students are prepared for the literacy demands of the 21st century and beyond?

The 21st century learner is described as someone who is a problem solver, a critical thinker, and an effective collaborator and communicator. The following issues are bringing about new directions in educational standards, curricula, classroom instruction, and assessment of student progress and teacher effectiveness: (1) global economic comparisons; (2) international comparisons of student attainment; (3) the role of the Internet and ICT in daily life; and, (4) national policies to integrate literacy and technology into daily instruction. The evolving concept of literacy places new demands on teaching and learning and warrants new and collaborative conversations.

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