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New Literacies and 21st-Century Technologies

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To become fully literate in today's world, students must become proficient in the new literacies of 21st-century technologies. As a result, literacy educators have a responsibility to effectively integrate these new technologies into the curriculum, preparing students for the literacy future they deserve.

The Internet and other forms of information and communication technologies (ICTs) are redefining the nature of reading, writing, and communication. These ICTs will continue to change in the years ahead, requiring continuously new literacies to successfully exploit their potentials. Although many new ICTs will emerge in the future, those that are common in the lives of our students include search engines, webpages, e-mail, instant messaging (IM), blogs, podcasts, e-books, wikis, nings, YouTube, video, and many more. New literacy skills and practices are required by each new ICT as it emerges and evolves.

Literacy educators have a responsibility to integrate these new literacies into the curriculum to prepare students for successful civic participation in a global environment. The International Reading Association believes that students have the right to the following:

- Teachers who use ICTs skillfully for teaching and learning effectively
- Peers who use ICTs responsibly and actively share effective strategies applied to a range of literacy purposes and settings
- A literacy curriculum that offers opportunities to collaboratively read, share, and create content with peers from around the world
- Literacy instruction that embeds critical and culturally sensitive thinking into print and digital literacy practices

- State reading and writing standards that include new literacies
- State reading and writing assessments that include new literacies
- School leaders and policymakers committed to advocating the use of ICTs for teaching and learning
- Equal access to ICTs for all classrooms and all students

Expanding Our Conception of Literacy

There is extensive debate about what *new literacies* are—the term is used to mean many different things by many different people. However, there are at least four common elements that apply to nearly all of the current perspectives being used to inform the broader dimensions of new literacies research (Coiro, Knobel, Lankshear, & Leu, 2008): (1) The Internet and other ICTs require new social practices, skills, strategies, and dispositions for their effective use; (2) new literacies are central to full civic, economic, and personal participation in a global community; (3) new literacies rapidly change as defining technologies change; and (4) new literacies are multiple, multimodal, and multifaceted; thus, they benefit from multiple lenses seeking to understand how to better support our students in a digital age.

The changes taking place to literacy have been noted by many in our field (see Alvermann, 2008; Coiro et al.,

2008; Lankshear & Knobel, 2003; Leu, 2007; McKenna, Labbo, Kieffer, & Reinking, 2006). Additional changes are taking place to literacy instruction (see Beach & O'Brien, 2008; Callow, 2008; Grisham & Wolsey, 2009; Jolls, 2008; Leu et al., 2008; Merchant, 2008). All of this work points to the fact that traditional definitions of reading, writing, and communication, and traditional definitions of best practice instruction—derived from a long tradition of book and other print media—are insufficient in the 21st century.

Although there are multiple ways to view the changes in literacy and communication emerging from new technologies (Labbo & Reinking, 1999), it is not possible to ignore them. We need only to consider the experience of students who graduate from secondary school this year to see how literacy is changing their experiences at school and in their everyday lives. Graduates began their school career being taught the literacies of paper, pencil, and book technologies. Many will finish their secondary school careers familiar with the new literacies demanded by a wide variety of ICTs: wikis, blogs, avatars, podcasts, mobile technologies, and many others unimagined at the beginning of their schooling.

Because of rapid changes in technology, it is likely that students who begin school this year will experience even more profound changes in their literacy journeys. Changes to literacy are defined by regular and continuous change (Leu, Kinzer, Coiro, & Cammack, 2004). Thus, the new literacies of today will be replaced by even newer literacies tomorrow as new ICTs continuously emerge among a more globalized community of learners. In addition, the changes to literacy are taking place with breakneck speed. Finally, networked communication technologies such as the Internet provide the most powerful capabilities for information and communication we have ever seen, permitting access to people and information in ways and at speeds never before possible. Such changes have important implications for instruction, assessment, professional development, and research. The literacy community needs to quickly turn its attention to these profound changes.

The Internet Is Rapidly Entering Nearly Every Classroom in Developed Nations Around the World

The Internet and other technologies have proven to be powerful new tools in the classroom as nations seek to prepare children for their future in an information age. Nations such as Australia, Finland, Ireland, New Zealand, the United Kingdom, the United States, and others are developing public policies to ensure that classrooms have a computer connected to the Internet, appropriate software, ICTs integrated into the curriculum, and teachers prepared for the effective integration of these new technologies into the classroom. Developments such as these demand from us a vision that includes the integration of new literacies within the literacy curriculum.

Equity of Access to ICTs Will Ensure Literacy Opportunities for Children Around the World

In many countries, classrooms in wealthier schools have better technology resources than those in poorer schools. Continuation of this trend in societies that profess egalitarian ideals presents an important threat to these societies' long-term political stability. The problem is even greater in developing nations, where classroom Internet access is only a dream. Will this lead to a widening gulf between haves and have-nots around access to information afforded different nations? It is essential that literacy educators and others support equal access to information technologies for all students to ensure that each student has equal access to life's opportunities.

Providing Adequate Education and Staff Development Will Ensure That Each Teacher Is Prepared to Effectively Integrate New Literacies Into the Curriculum

Professional development is also integral to the changes that are essential in this area. We must begin to develop new models of professional development that use the new online tools and resources we expect teachers to use in their classrooms. Simply making new technologies available in classrooms is insufficient. School leaders need to maximize the educational return on the investment that technology offers by supporting long-term job-embedded professional development that is personally relevant, actively engaging, and cognizant of the developmental process through which teachers integrate technology in their classrooms (Apple, 1995; Garry & Graham, 2004).

Teacher Education Programs Can Play a Critical Role in Preparing Teachers to Use New Technologies for Instruction

New teachers should participate in technology-based planning and teaching to meet their students' academic needs in all content areas (Bruce, 2004; Grisham & Wolsey, 2009). State and national standards for technology should infuse all components of teacher preparation so that new teachers are ready to teach with technology available to them in their classrooms and schools. Teacher preparation programs must prepare teachers to use technology to motivate students, bridge the gap between students' social and academic uses of technology, and, in many cases, provide access to technology for their students. Induction and professional development programs should infuse ICTs to ensure that teachers use new literacies for instruction. Universities must embed ICTs strategically in graduate programs for teachers.

Creative Initiatives to Increase Access, Provide Professional Development, and Enhance Teacher Education Should Be Supported by Professional Literacy Organizations

The International Reading Association is committed to conducting and supporting professional development for teachers through both traditional methods and the most innovative ICTs available. The Association encourages all professional literacy organizations to work separately and collaboratively to generate support for open and free access to technology for teachers and students.

We Must Pay Particular Attention to Developing the Critical Literacies These New Technologies Demand

Information is widely available from people who have strong political, economic, religious, or ideological stances that profoundly influence the nature of the information they present to others. As a result, we must assist students to become critical consumers and informed creators of information in these new online contexts (Alvermann, 2008; Fabos, 2004; Stevens & Bean, 2007) by providing instruction in how to critically evaluate the relevancy, accuracy, reliability, and perspective of information created for a range of purposes and audiences.

An Intensive Program of Research on Literacy and Technology Issues Will Enable Us to Better Understand the Rapid Changes Taking Place in the Nature of Literacy and Literacy Instruction

Although research in literacy and technology integration is gradually beginning to emerge (see Coiro et al., 2008; McKenna et al., 2006), the paucity of hard data in this area remains all too obvious. The task is so large, involves changes to literacy in such profound ways, and must be accomplished so quickly that all literacy researchers need to consider how they might contribute. They should consider bringing their special area of expertise to the study of literacy within the context of ICTs to address the many new questions that face us.

Public Policy Debates on Reading Must Begin to Attend to the Profound Changes Taking Place to the Technologies of Literacy

As public policies are developed, defining reading solely around book technologies will shortchange our students. Proficiency at effectively using the new literacies of networked information technologies has become critical to our students' success in the workplace and in their daily lives. Public policy leaders must be informed about the changes taking place in reading so that thoughtful policies may be developed to prepare children for the literacy demands of their future.

Our Responsibilities

What can we do to make sure that students are prepared for their literacy future? The International Reading Association recommends the following:

Teachers

- Take full advantage of professional development opportunities to explore new instructional strategies and resources that effectively use ICTs in the classroom.
- Explore new instructional models for integrating the Internet and other ICTs as part of literacy instruction.
- Provide equal opportunity and access for all students to use ICTs that foster and improve learning.
- Read professional publications on a regular basis to keep up with current research and best practices for using technology in instruction to enhance students' literacy learning.

Parents

- Inquire as to how your district and school integrates the Internet and other ICTs into the reading and writing curriculum.
- Support district initiatives to provide up-to-date technology resources and professional development in the effective use of ICTs.

- Join children in exploring age-appropriate websites and social networking opportunities to better understand the new experiences that shape their lives at home and in schools.
- Participate in local school-based online networks that share and exchange resources with parents.

Teacher educators

- Provide professional development and support to teacher education faculty to incorporate technology into their courses across the curriculum.
- Ensure that teacher preparation programs provide distributed practice to teacher candidates in technology-enriched teaching throughout their teacher preparation.
- Assist induction programs for new teachers to provide applications of instructional technology in the classroom.
- Support graduate teacher education for practicing teachers that incorporates technology into all professional development at colleges and universities.
- Provide at all levels interest-driven, inquiry projects with opportunities for exploration and expansion of teachers' knowledge base.

School administrators

- Ensure that sufficient time and 30% of your district's technology budget are devoted to professional development in the effective use of ICTs in the classroom.
- Encourage teachers and staff to work collaboratively and integrate effective instructional models that use the Internet and other ICTs when creating lessons in literacy instruction.
- Provide teachers and staff with access to online journals, professional publications, and opportunities to attend professional conferences that offer current research and best practices for using ICTs to enhance students' literacy learning.
- Develop acceptable policies for safe Internet use for students and staff.
- Support teachers' attempts to develop classroom websites to publish student work and share literacy resources with students and parents.

Policymakers

- Expand definitions of reading and writing to "literacies" that include the ability to locate, critically evaluate, communicate, and thoughtfully construct new ideas within networked information environments such as the Internet.
- Support initiatives that guarantee Internet access for schools and libraries.
- Support initiatives that provide funding for staff development and teacher education in integrating Internet and other technologies into the literacy curriculum.
- Ensure that the new literacies of the Internet and other ICTs are integrated within assessments of reading and writing proficiency

Researchers

- Bring your particular area of expertise to research ICTs use in ways that better inform policymakers and educators about how best to support new literacies.
- Examine carefully ways in which definitions of literacy are changing as well as the implications of these changes for research and development.
- Conduct research that identifies the new Internet literacy practices as well as instructional strategies essential for supporting successful literacy performance within different information and communication technologies.
- Report findings about effective classroom ICTs use in ways that schools can understand and use.

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