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Link to 21st Century Skills and Resources

by Nancy Frey

Peer over the shoulder of an elementary-aged child who is working on a computer and prepare to be amazed and a little intimidated. The children in today's classrooms have never known a time when the Internet did not exist, and have been raised in an environment where information is just as likely to be presented digitally as it is in print. When presented with an interesting question, they are as likely to turn to a computer or other device with a web browser as they are to look in a book. But this shift in learning is not confined to school-aged children. Increasingly, teachers of these same students have themselves experienced curriculum development as a digital process.

Professional organizations have united in their calls for a 21st century approach to education that broadens our approach to teaching, learning, and literacy. The International Reading Association (IRA) in 2009 called for literacy curricula that emphasize the use of print and digital technologies in learning. The IRA statement said that “students have the right to... teachers who use ICTs [information and communication technologies] skillfully for teaching and learning effectively” (IRA, 2009). The Partnership for 21st Century Learning Skills, a consortium of education and business organizations, states that the 21st century content must include “global awareness, financial, economic, business, and entrepreneurial literacy, civic literacy, and health and wellness awareness” (Partnership for 21st Century Learning Skills, 2009).

However, the development of 21st century learners who are also learning English can be complicated. Black (2008) asserts that “developing such proficiencies can pose an extra challenge for certain populations of students such as ELLs, if they are relegated to classroom contexts where the primary focus is mastery of traditional forms of print-based literacy.” Access to 21st century learning experiences is also limited by access to the Internet. According to the Pew Internet and American Life Project, access to broadband is significantly lower in poorer households, among Hispanics, and in homes where English learners live, and access has declined in the last two years among this population due to cost (2008). This means

that for English language learners (ELLs), the curriculum they use in school must focus on building the types of critical literacy needed for global communication. *National Geographic Reach* is designed to address this need in these important ways:

- building students' capacity for learning with technology
- supporting teachers' efforts in utilizing technology
- accentuating the content knowledge needed by 21st century learners

Student Learning in the 21st Century

Literacy and learning in the 21st century is shifting from an emphasis on the tools (e.g., computers, handheld devices, podcasts, networks) to processes. We know that the tools teachers and students use will continue to change at breathtaking speed. In fact, it is likely that by the time you read this paper, there will be new tools that did not exist when it was written. Today's educators understand the need to focus on the processes used by learners when utilizing technologies. All learners must know how to:

- search for information
- listen to and view information
- produce information
- store information
- share information
- present information (Fisher & Frey, in press)

National Geographic Reach is designed to develop these process skills with ELLs. Students using *Reach* search for information using both print-based and digital texts. They use print and technology to view and listen to information in a variety of formats, including videos, Digital Library images, eVisuals, interactive animations, digital and print versions of the Student Books, the Comprehension Coach, and other resources. Throughout the lessons in *National Geographic Reach*, students produce and store information through

writing, graphic organizers, journals, tables, and charts. Writing genres include those needed for digital communication, such as emails and blogs. In each unit, students have many opportunities to share and present information with both small and large groups, in both formal and informal situations.

Social Learning in the 21st Century

Noted literacy researcher Paul Gee (2007) states that learning is socially constructed between people and requires them to probe, hypothesize, reprobe, and rethink. This process occurs in both face-to-face and digital environments. Evolving technology has made digital spaces increasingly interactive; users now expect to be able to dialogue, confer, and debate on any topic of interest. Whether in a classroom or a digital environment, students need the skills to ask questions, form opinions, ask more questions, and draw conclusions. Therefore, a curriculum designed to prepare 21st century learners must include ample opportunities for students to converse with their peers, ask questions, disagree, and formulate their own opinions.

The lessons in *National Geographic Reach* continually promote this kind of active learning and engagement. Students are involved daily in verbal and written discourse about ideas and information that impact their local communities and the world at large. *Reach* focuses on developing the academic language skills students need to discuss and exchange ideas, express opinions, and understand and present important concepts, in oral, written and digital formats.

Communication in the 21st Century

Both on- and offline experiences are necessary for students to become thoroughly literate in the 21st century. *National Geographic Reach* emphasizes the skills necessary for students to communicate and collaborate in both face-to-face and digital environments. Lessons include a variety of features that support ELLs in developing the academic language and academic vocabulary needed in effective verbal and written communication. These features include Academic Language Frames, Multi-Level Strategies, multiple exposures to important content area and academic vocabulary, and a scaffolded writing strand that models for students how to develop their ideas and express them in writing.

As Leu and colleagues (2009) note, “[o]nline reading and writing are so closely connected it is not possible to separate them; we read online as authors and write online as readers.” The ability to do this requires that learners be immersed in the rich oral and written dialogue with others that *National Geographic Reach* embodies.

Reading and Writing in the 21st Century

Leu et al. (2009) state that the “self-directed text construction” of online reading experiences represents a shift from traditional print-based literacy. Students in an online environment move freely between texts to form understandings. Today’s students need experiences with moving among a group of texts in order to develop the ability to synthesize information.

Each unit in *National Geographic Reach* is organized around a Big Question. Students explore this question as they move through a set of informational and narrative texts to construct understanding. The Big Questions are designed to defy easy answers, and learners are prompted to use both their background knowledge and what they have learned from their readings to draw conclusions and formulate answers.

Print and online resources are available to explore these questions. The robust print materials build print-based literacy. Multimedia resources support the new skills and formats Leu referenced. These include

- Build Background Videos and Interactive animations
- Multimedia resources in the National Geographic Digital Library
- Audio resources in multiple formats including MP3s
- Online games for learning
- Interactive eEditions
- Hypertext supports and guides in the Comprehension Coach

This organization encourages students to engage in the kinds of nonlinear multi-text explorations needed when reading and researching online.

Conclusion

It is imperative that we prepare students for their future as members of a global community where information is shared, produced, and understood across space and people. The challenge is great, especially because the past decades have taught us that we are not able to predict the tools students will be using as adults. Rather, our best approach is to ensure that students know how to communicate and collaborate with one another in both face-to-face and digital environments. They must be provided with daily opportunities to read, write, speak, listen, and view using many kinds of visual and written texts. Students must become increasingly comfortable searching for information, storing it, sharing it, producing it, and presenting it to a variety of audiences. Learners who are able to do these things are well prepared for a new century.