Historically, literacy has referred to the acts of reading and writing. The Institute of Education Sciences separates it into task-based and skill-based components with both focused on the traditional definition of literacy. Although new Common Core standards emphasize that literacy is about comprehension for understanding the real world, as well as the ability to develop arguments for “text-dependent questions,” they continue to focus on written language. This idea about literacy was acceptable in the 1990s when information was passed primarily through printed books and word of mouth. Today, our world has shifted significantly toward an information economy. Information can become available as quickly as someone can type and can change as quickly as someone else can press a button. This cultural shift has forced a new perspective of literacy that includes not only reading for comprehension and writing to demonstrate understanding, but also active listening, faster cognitive processing, strategies to avoid information overload, and the creation of new information through digital means.

For developmental, low-income, or minority students, closing the achievement gap in literacy is a daunting task; for their teachers, it is tricky territory fraught with barriers.

**An Evolving Perspective of Literacies**

In the 1996, the New London Group convened to discuss the multitude of ways that information was distributed in the changing culture. Together, they coined the term “multiliteracies” to describe the changes and begin including things like audio books, podcasts, and digital storytelling. As use of the Internet diffused more completely across the general public, the ability to read information became secondary to the comprehension of that information. It became necessary for teachers to ask, “If my student is listening to their textbook, are they reading?” Teachers working with low-achieving students needed to rethink the way they taught literacy; this was no longer a field where phonetics ruled.

In 2006, O’Reilly Media coined the term “Web 2.0” to describe yet another change in the information culture: that of shared information and “collective intelligence.” As much as this signaled a change in the way individuals interact with one another, it also signaled a change in the way society interacts with information. Web 2.0 allows, and even encourages, individuals not only to absorb information, but also to distill, manipulate, and recreate it.

Bloom’s Revised Taxonomy can provide a framework for understanding how dramatically this change affects our responsibility as teachers to prepare students for work and life. In our prior perspective of literacy, our goal was to move students upward along a continuum of orders of thinking that began with remembering information and slowly built up to creating new ideas and approaches to that information. In society, their exposure to and use of information would increase from simple recall to evaluation of information over the course of their education, beginning with kindergarten and moving through postsecondary. With Web 2.0, exposure to information begins before schooling and the expectation to create — the highest order of thinking — starts at about the same time, with increasing levels of creation expected as a person grows.

For teachers serving the neediest students, this expectation creates a difficult responsibility, especially if the teacher does not have experience with the technological tools that students will need to know how to utilize when they leave school, if not sooner. After all, the Pew Research Internet Project estimates that 95% of adolescents are online, with the vast majority of them utilizing social networking — that is, Web 2.0 — mediums for accessing and creating information.

**The Continuity Problem – Disparities**

We now know that education begins before a student ever makes it to school. Children from low-income households have less access to books in their homes, fewer pre-schooling educational opportunities, and often begin school with a dramatically smaller vocabulary than students from average income households. The early disparity in skills has long been associated with the achievement gap in secondary and postsecondary education. It makes sense, then, that the same disparity in reading and writing skills that we know exist would also occur in relation to digital media.

In fact, the disparity between low socioeconomic status and/or minority students is not only existent, but is also widely misunderstood. Because studies have shown that so many adolescents use the Internet and have smartphones, teachers at all levels believe some myths about student capacity to perform within the new literacies. The most damaging of these include:

1. **Students know more about technology than I do:** The reality is that low-income students have often had little access to technology, especially computers. Their understanding of basic operations may be impeded, if they have any knowledge of these processes at all. This situation creates a similar problem to the one that reading teachers faced in the 1990s when they needed to focus on basic reading tasks like identifying the sounds that blended letters made.

2. **Students can get help from their parents:** Oddly, there is a myth in the education world that students can ask their parents for assistance with technological knowledge even though teachers themselves sometimes believe that students are more equipped to manage technology because of their age. As a result, the responsibility for teaching multi-literacy skills falls to a population that may or may not be equipped to do so.

3. **Any student can access the Internet if they want to:** This myth is equally prevalent in both secondary and postsecondary education, but it misses two important components of access. The first component is an understanding that not all access is created equal. Technology labs are not usually open 24 hours per day. When they are open for extended hours, transportation can still be a barrier. Internet access on a smartphone does not provide the same level of access to information as high-speed Internet access on a personal computer. Further, it doesn’t provide the ability to manipulate and create information as is expected in today’s world, including in many educational settings.

The second important component of the access myth is that it underscores an assumption that access leads to knowledge about appropriate and effective uses of the accessed information. In truth, although the majority of teens use the Internet, there are sharp contrasts in access between racial and ethnic groups, age groups, and socioeconomic strata. According to the Pew Research Internet Project, even though a majority of Americans have high-speed Internet access at home:

- Fewer than half of seniors do; older people often take developmental coursework when they return to college.
- Just over one-third of high school dropouts have access; GED earners, especially late GED earners, are more likely to need developmental coursework if they go to college.
- Barely half of low-income people have access; the majority of developmental students fall into this category.
- People from rural areas have less access, as do people from minority ethnic and racial backgrounds; these groups similarly often require developmental classes.

Equally important, these same demographic groups have less understanding of how to utilize digital information. In turn, this has led to an implicit problem within the education system. The assumptions teachers hold about student learning are handicapped by an incomplete perspective of student capacity to manage the basic component of learning: information. For developmental educators, this has both professional and ethical implications that extend beyond the individual educator to everyone who provides support services to developmental students.

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**New Literacies in Developmental Education**

by Larina Warnock (EdD Student, Creighton University and Career and Technical Education Teacher, Roseburg High School, Oregon) <larinawarnock@creighton.edu>
4. When they need it, someone will teach it to them: At the college level, the demographic of developmental students — students who don’t have college-level skills in reading, writing, and/or mathematics — is not that different from the demographics of a K-12 school that receives Title I funding for students in poverty. These students often struggle with basic technological operations, and this, in turn, impedes their ability to perform traditional literacy tasks such as reading and writing. However, few developmental courses teach digital literacy skills, instead emphasizing strategies to read college textbooks or write a traditional five-paragraph research essay. Not only does developmental education often fail to provide basic instruction in new literacies like podcasting, Internet source evaluation, and appropriate ways to interact with information beyond traditional assessment mechanisms, but assignments in developmental classes often incorporate the very skills that students aren’t learning.

For instance, a student may be asked to outline an essay using a computer without understanding the basic components of software needed to do so. They might be asked to evaluate a peer’s digital storytelling video without having a complete understanding of how to navigate between the video and other software, or how to make sense of the digital storytelling format. Digital peer review processes are particularly prevalent examples of this disparity in practice; students are asked to comment on one another’s essays without understanding functions like commenting, track changes, or bookmarks. If the most important quality of literacy is the ability to learn from and interact with information, we must include these basic functions in our definition of literacy.

Traditional Approaches to Literacy in Developmental Education

Developmental education is defined by the National Association on Developmental Education as “a comprehensive process that focuses on the intellectual, social, and emotional growth and development of all students.” Developmental students in higher education tend to be from low socioeconomic backgrounds and are more likely to be part of a racial or ethnic minority and/or to be diagnosed with a learning disability. These demographic distinctions are important because they have led to conventional wisdom in the field of developmental education that precludes formal instruction in new literacies. While some colleges are actively teaching digital literacy skills within their developmental studies programs, most exclude explicit technology instruction and some avoid including digital components in their programs altogether.

It has long been accepted that effective developmental education is authentic and relevant; that is, the modes of teaching students the skills needed to be successful college reflect the modes by which they will do their actual learning. Instead of teaching them to read a middle-grade level book, for example, developmental educators provide literacy instruction with college-level material, even though students’ reading levels may not be at college level.

Despite this knowledge of best practices in literacy instruction, conventional wisdom in the field has been to reduce exposure to technology as much as possible because developmental students generally don’t have a good understanding of basic operations. This practice has institutionalized a double standard that has undoubtedly contributed to the achievement gap. Although students may come out of developmental education programs as better readers of textbooks and writers of papers, they are all too often still unfamiliar with strategies to approach digital media, open source documents, podcasts, self-functioning presentation materials, and the myriad other forms of information they will be working with in college. Equally importantly, they may not fully understand how to evaluate the credibility of a growing array of source material that does not come from a peer-reviewed database.

Preparing Students for Work and Life

The implications of this gap in knowledge reach far beyond college classrooms. Students who lack the requisite skill to manage and convey information in college, unsure of who or how to ask for assistance with new literacies, may become frustrated and drop out. They may alter their career plans if they anticipate that the classes they need to take in order to enter their desired field includes the utilization of too many tools that they don’t understand.

The real concern is what happens after college. Education is, or should be, more than a stepping stone to a degree. It should provide the basic skills that students need to be successful in both work and life. In the work world, new literacies are commonplace. Businesses rely on social networking for marketing, customer service, and informal assessment. Governmental agencies increasingly use Websites, podcasts, and videos to distribute important information. Nonprofit agencies ask employees with no training in marketing or digital media to produce digital media that furthers the cause. Any student who leaves college without the skill to both evaluate and create information is lacking one of the basic currencies of job security.

For these same reasons, there is an ethical component to redefining literacy. Sadly, the very things that make it imperative that students are taught new literacies are the largest barriers to teaching them. Students taking developmental coursework in an effort to read, write, and think at higher levels often lack basic necessities to ensure their capacity for these tasks. Specifically, high-speed Internet access, a personal computer that is compatible with the most recent software, or transportation to these things outside of school or work hours can be very challenging for students living in poverty situations. Child care can be a barrier for developmental students, who are often working parents. Because of the high level of non-academic responsibilities that developmental students often have, it can also be extremely difficult for them to find a study group or access assistance during hours that are appropriate for them. In-class support to learn new literacies is of paramount importance to help this student population to narrow, rather than widen, inequities in education and beyond.

Libraries as Support Centers

To developmental students, libraries can be a mix of awe and confusion. Because so many developmental students come from low socioeconomic backgrounds, many have also not visited libraries regularly. Certain assumptions about the library and the librarians can increase the sense of confusion that these students feel. They may view librarians as highly intellectual individuals that will look down on them if they ask what they perceive to be stupid questions. This assumption is especially common among first-generation students who already have an extreme sense of not belonging in the college environment. Library staff can help these students come to view the library as an especially helpful support center in a few ways.

1. Remind students that you are there to help. These students need to know that librarians are highly trained professionals who needed to learn strategies to find information. Reducing the anxiety that developmental students have about not knowing as much as others is an important strategy to get them to ask for help.

2. Assume that they know less about technology rather than more. It can be challenging to avoid condescension, but developmental students will often need step-by-step instructions to find the information they are seeking. Must have never been exposed to databases like ERIC or Academic Complete. Showing a student how to use a thesaurus and explaining the functions of “and,” “but,” and “or” can reduce the amount of frustration students feel during the search process. It is especially important to recognize that low income and first-generation students are likely to have lower vocabulary skills than the average student which makes it difficult for them to find specific information rather than generalized information that doesn’t support their thesis.

3. Explicitly explain source evaluation techniques. Developmental students often rely heavily on Internet search engines to conduct research. They may not have a good understanding of methods to evaluate the source material they are using. Helping them understand why some sources are acceptable and others are not can improve their grades and reduce wasted time.

4. Explicitly explain the information cycle. Librarians are in the best position to help students choose a researchable topic. Developmental students often make an assumption that their inability to find information about their chosen topic is related to their skill level rather than availability of such information. As a result, they may spend too much of their time looking for information before asking for assistance. When library staff hear which topic a student is researching, they can help the student by asking evaluative questions and explaining continued on page 24
which phase of the information cycle the topic likely falls under.

5. Walk them through important software applications while explaining the limitations of them. Developmental students may access much of their Web-based information through their cellular phone rather than through a computer. In addition to reminding students that books are valuable sources of information, developmental students may need guidance to understand software compatibility with eBooks, as well as features such as bookmarking, search, and subject indexes. These students may also rely on citation generators for their bibliographies. They may not understand that citation generators can create incorrectly formatted citations, so the student should always review the citations in accordance with the current guidelines of the required format of their paper.

Library staff are in a unique position to help students develop digital literacy skills. In addition to being a place of learning, the library can become a place that helps students replace faulty assumptions with a more realistic understanding of information. Students can build connections with library staff that help keep the student in school despite significant barriers to completion, in addition to helping students improve their GPAs and their self-confidence.

Toward a New Understanding of Literacy and the Achievement Gap

The last two decades have been characterized by innovation in information, and while there is some controversy about whether innovation and technology always create more inequality, the link between innovation and equity gaps is well-established. The two are interdependent. Literacy has also been the centerpiece of equity for centuries. Lack of literacy stifles creativity, growth, and personal achievement.

Increased access to information has changed the way we interact with the world. Where technical skills such as how to operate equipment or balance the books were the path to success just a short time ago, competence with information is the expectation today. Reading and writing are still important, but they are not the only aspects of literacy on which educators need to focus. Just as the invention of the printing press created a demand for educated people who could read, comprehend, and apply the written word, the invention of digital media has created a demand for citizens who can analyze, synthesize, and reinvint information to move us toward a better world. Knowledge, after all, is power.

Endnotes


Rumors

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for support of some important projects, and EBSCO agree to partner to help them accomplish their goals. The financial support from EBSCO will be provided via the Koha Gruppo Italiano founded by the American Academy in Rome, American University of Rome, and the Pontificia Università della Santa Croce, which will be assisted in this development and integration by key Koha contributors ByWater Solutions, Catalyst IT, and Cineca. Koha-community.org.

Who would have ever believed that Reed Elsevier would change its time-honored name to … RELX Group plc as we noted in the ATG News Channel last week. Reportedly there is a simplified corporate structure. But, not to worry, Reed Elsevier, now RELX, is still one of Europe’s biggest players, reporting full year revenue of £5.77 billion, and an operating profit of £1.74 billion. The Evening Standard reported that the “sprawling structure is now combining all assets into a single group entity.” www.against-the-grain.com/

Obituary — Gerald “Jerry” Curtis

by N. Bernard “Buzzy” Basch (Concord, NH; Phone: 603-225-5109)
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On January 13, 2015, Gerald “Jerry” Curtis died peacefully surrounded by his family, after a prolonged illness. To his many friends and admirers in the library and publishing communities, he was far from “pedestrian,” the word he inexplicably used if pressed to describe himself.

Jerry’s powerful and towering physical presence kept him trim by daily gym sessions (no matter how late conference sessions ran the night before), the depth and insightfulness of his knowledge of publishing and business (I have yet to meet anyone who is his equal in the hazards and opportunities of foreign exchange), and his passionate commitment to customers and colleagues made it clear that there was nothing “pedestrian” about him.

At Kluwer, Faxon, and Springer and in libraries throughout North America, Jerry attracted many friends and admirers with his salty words of profession wisdom and his sympathetic ear in times of stress or trouble.

Jerry’s profession life was deeply grounded in his religious faith and his love and pride in his family — his wife Mary, daughter Mary, and sons Gerald and Patrick. They were never far from his thoughts or conversation.