The Old and the New in the New Digital Literacies

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There is lots of talk today about "digital literacy". The phrase "digital literacy" may be more appropriate than many people know. Traditional literacy (reading and writing) has and still does come in two grades. One grade leads to working class jobs, once a good thing when there were unions and benefits, but now not such a good thing when it means low pay and no benefits, usually in service work. The other grade leads to more meaningful work and more financial success. What distinguishes these grades of literacy? The premium grade involves mastery of so-called "academic language," the forms of language used in research, empirical reasoning and logical argumentation. Now, I am well aware that nearly everyone hates "academic language" (things like "Hornworms exhibit a significant amount of variation," rather than "Hornworms sure vary a lot in how well they grow"), but when people are in good jobs, they are often there because they got through their high school chemistry book and argued and debated their way out of a good college.

Does digital literacy come in two grades, as well? Are there ways with digital media (as there are ways with words) that lead to quite different results, despite the fact that everyone is participating and using digital media? I believe there are. Further, I believe that the premium grade involves mastery of "specialist/technical language," the forms of language used in specialist communities devoted to technological skills and reasoning. Such language is linguistically fully akin to "academic language"; indeed, it's a variety of it. Two kids may

participate in playing *World of Warcraft*, but the one who can read and write such things as the following has the premium grade digital literacy: "Mitigation from armor class is the only non-linearly scaling stat (that is, each percent of mitigation granted by Armor Class requires more than the point before it)," which is a sentence from a ["theory crafting" site](), where *World of Warcraft* players analyze the underlying statistics and rules of the game.

Premium digital literacy is being able to use specialist/technical language connected to digital tools. Premium traditional literacy is being able to use academic language connected to institutional and public-sphere knowledge-building and argumentation. At the premium level, the digital brain and digital natives are not a new "new thing," but an even higher octane version of an old thing, the literate brain. But now that brain has, for some young people, though not all, left the gardens of academe and the professions and is flourishing among young "pro-ams" (amateurs with professional skills) producing all sorts of media, citizen science, and knowledge in competition with experts via collaborative problem-solving communities on the Internet.

Question: Are the same classes of people who get and don't get premium traditional literacy the same ones now getting and not getting premium digital literacy? The research is still out, but it looks like the answer will be "yes".

Lots of people these days are advocating that we use video games, one particularly important type of digital media, for learning, education, health, social change, and other "non-entertainment" purposes. There are two fundamental truths about books and school success that are, in my view, equally true of games and their potential for success in school and life. First, in

learning to read for later school success, talk in the home is crucial (Gee 2004). That is, oral language is a crucial foundation for literacy learning. For young children the most important variables for later success in literacy and content learning in school is the amount of talk, interaction, and mentoring they have had from adults early in life. The same is true of media (like television) and games if they are to become a basis for success in school and learning (Gee & Hayes 2011). Just as for books, talk, interaction, and mentoring from adults early on is crucial for setting games in the context of critical thinking, ties to content knowledge and the world, problem solving, and innovative thinking. Without such a foundation, both books and games can become passive media, a form of consumption with production of knowledge and future skills.

Second, books tend to make the "rich richer" and the "poor poorer" (Gee 2004). Those who read more in the right way become better and better readers and get more and more out of reading. They read more, learn more, can read at a higher level, learn yet more, and so on and on the cycle goes. Those who read less in the beginning, without the proper mentoring, become poorer and poorer readers and get less and less out of reading. They read less, learn less, and may even stop reading. The former become more and more successful over time, the latter become less and less successful over time. This is called "the Matthew Effect" (from the gospel of Matthew 13: 12).

From initial research it appears that digital media—including games for learning—show just the same Matthew Effect. The better the mentoring and the more a child does with this mentoring early on, the better the child fares and the more successful in learning and knowledge acquisition

the child becomes. Susan Neuman (former Deputy Secretary of Education) has shown just this in a study of digital media in libraries (Neuman & Celano 2006).

However, games do have some special properties that set them aside from books, at least as books are often used (and books have special properties that set them aside from games). Some of these are:

1. Games are based not on content, but on problems to solve. The content of a game (what it is "about") exists to serve problem solving. Books can and should be used this way in school.

2. Games can lead to more than thinking like a designer; they can lead to designing, since players can "mod" many games, i.e., use software that comes with the game to modify it or redesign it. When students are talk to "read like writers" in school, books function this way as well.

3. Gamers co-author the games they play by the choices they make and how they choose to solve problems, since what they do can affect the course and sometimes the outcome of the game.

4. Games are most often played socially and involve collaboration and competition. Of course, books can be put in such a setting as well.

Games and other digital media have special properties, as do all different kinds of media and communicational systems. But, too, digital media and books share important properties; they are both form of literacy in the sense that they are forms of taking meaning ("reading") and making

meaning ("writing"). They are both quite sensitive to early mentoring as part of home-based socialization, prone to the Matthew effect, and come in different grades with different implications of young people's success in school and mainstream society thereafter.

References

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