If the phrase “21st century literacy” means anything, what should it mean? If it doesn’t, why should we dismiss the idea? That’s what I want you to examine in your final research paper.

This semester you have created a blog and learned about some of the underlying coding. While you have not received a comprehensive course in coding, you have been exposed to the following technologies (so far):

- HTML (via the “HTML” tab in the Blogger editor; various times through the semester)
- CSS (again, in the Blogger editor; see notes from 18 March)
- Markdown (in the in-class Tumblr exercise from 28 March)
- A few basic notions of SEO (search engine optimization) (“meta” descriptions; exercise from 7 March)
- Other blogging platforms (WordPress—14 March; Tumblr—28 March)
- Various technologies for teaching programming to children (Scratch exercise from 6–8 April)

We have made use of other technologies (not necessarily directly related to blogging), such as Slack, Google spreadsheets, Sakai, etc. Of course we have used the web almost constantly and learned that there are skills associated with that—for instance, distinguishing between reliable and unreliable content or “knowing where to look” for certain kinds of information.

All of this brings up the question: how essential are any or all of these skills? Should some, if not all, be required topics in school? If so, when should they be taught—to young children in primary school? To older students in high school? All of the above? And what should be dropped to make room for these new topics?

Tara Brabazon (see the first major assignment in this course) clearly feels that college students need basic training in finding and identifying high-quality resources. Should such training occur even earlier?

Right now, we have professional programmers creating the software that operates many of our devices. Will the day come when non-professionals will be accustomed to writing little programs for day-to-day tasks (programming the robotic home chef or giving instructions to the android babysitter)? Many people believe that learning how to program is essential—the state of Virginia now requires it and many states (and even countries) are considering it. Is this part of a “new literacy for the 21st century,” on the same level as learning how to read and write?
The resources on the course Web site are intended to be introductory, and deal mainly with the question of learning to program. For this paper I’m asking you to think about more than this. Project your thoughts ten, twenty, or fifty years into the future and think about the implications of robotics, artificial intelligence, research into mind-machine interfaces, and so on. Then try to imagine what would constitute a valid definition of 21st century literacy.

Use credible resources to support your arguments. “Credible resources” in this case refers to any of the following:

- peer-reviewed scholarly journals
- scholarly books (the technical term is “monograph”)
- verifiable factual sources (e.g., government publications, conference papers, mainstream news outlets, etc.)

The same criteria apply as for the first and second papers (citations/references in a standard format, numbered pages, PDF files only, and so on).