**Question 1:** Much of the scholarship on rhetoric and technology addresses shifting notions of literacy and what it means to be literate. Drawing upon 4-5 scholars from the course, focus your discussion on two of the following.
o   How we teach
o   How we communicate

The developments in technology lead to a shift in the notion of literacy, because composition is no longer only using alphabetic text. To include these new types of literacies, what it means to be literate must also change. This is specifically tied to developments in technology. As technological advancements continue to infiltrate daily lives and writing practices literacy “looks” and “acts” differently, and so demands rise regarding new skills, and understandings of these new practices. So, how we teach reflects these changes and demands. The evolution of technology plays a significant role in how technology is implemented into the classroom, and the curriculum in a various ways. Baron (1982), in “Pencils to Pixels” establishes the link between the two when he states that the computer “promises, or threatens to change literacy practices, for better or worse, depending on your point of view” (p. 7). Advancements and changes in technology shift our views and approaches to both the understanding literacy and of rhetorical strategies needed to teach, and use them. These developments in technology change the way we approach, teach, and research literacies, and composition practices. The evolution of technology changes the way we think, and use that technology. The purpose of this paper is to analyze the ways in which advancements in technology influence scholars, and instructors of composition, to shift how they conceptualize, and understand the shifts in the notions of literacy, based on how we communicated and how we teach through the work of Hawisher and Selfe (1991), Kathleen Blake Yancey (2004), Stuart Selber (2004), and Sarah Arroyo (2013).

An early observation about technology in the classroom and what it means to and for how we teach literacy is examined in Hawisher and Selfe’s (1991) article “The Rhetoric of Technology and the Electronic Writing Class.” Specifically Hawisher and Selfe bring to our attention the idea that the technology (computer) used in a classroom “reinforces those traditional notions of education that permeate our culture at its most basic level: teachers talk, students listen; teachers' contributions are privileged; students respond in predictable, teacher-pleasing ways” (p. 55). This is problematic because the implementation of a technology has created boundaries as opposed to promoting freedom for students to explore and work with the computer in a way that encourages them. Hawisher and Selfe warn that instructors need to be aware of the “negative effects of using new technology” (p. 59), because of the dangers of using computers “to deliver drill-and-practice exercises to students” (p. 59). The technology used should enhance the experience of the student, and not replace previous approaches to teaching.. They address this by urging instructors to “plan carefully and develop the necessary critical perspectives to help us avoid using computers to advance or promote mediocrity in writing instruction,” which draws the attention of instructors to think beyond using technology for the sake of including it in their classroom, because it is perceived to be beneficial for the student (p. 59). Therefore when instructors begin to make use of technology they must use a “balanced and increasingly critical perspective is a starting point: by viewing our classes as sites of both paradox and promise we can construct a mature view of how the use of electronic technology can abet our teaching” (p. 62). This approach is beneficial for the student and the instructor because it calls on them to be critical of the technology used. Despite the age of the Hawisher and Selfe (1991) piece, it continues to resonate in rhetorical and technology because we cannot, as instructors, simply respond to shifts by blindly/gullibly implementing technology without looking beyond affordances. This is important when responding to calls regarding the shift in how we think about literacy, and how we teach.

As technologies continue to evolve, and develop, so do literacies. Yancey (2004) in “Made not only in words: Composition in a new key” declared the field to be in a most important moment. Throughout that address, the call to move away from alphabetic text only compositions is clear. Yancey brings to light several important observations and ideas regarding how to proceed in the wake of the “tectonic shift” (p. 298) in literacy. The understanding is that “we are digital already,” (p. 307), which means that continued conversation surrounding the “literacy associated with screen” and how such a literacy “leads us to question what we know” (p. 304). These observations, however, are not only rooted in questioning what is literacy, or the best way to define writing as a result of the technological changes and developments. While the influence and use of technology is vital to this discussion, it must also be noted that this address is just as equally rooted in the changes in how we communicate, and write. When “members of the writing public have learned—in this case, to write, to think together, to organize, to act within these forums—largely without instruction” and more importantly “without our instruction” (p. 301), then the way we, students and instructors, communicate and write has shifted to a point in which we can no longer ignore. Such an observation, and appeal seems obvious now, but in 2004 this call was vital to the field. Being made aware, and more importantly understanding, that the public possesses “a rhetorical situation, a purpose, a potentially worldwide audience, a choice of technology and medium,” and that the writing of students is social then we should pay closer attention to the ways in which the public and academic writing of students converge (p. 301).

How we communicate, the changes in how we write, ultimately forces us to rethink literacy, and what we teach when we incorporate literacy of the screen. Yancey urged that this could not be written off as “something technical, and outside the parameters governing composing,” and that we could either be part of the moment, or not (p. 320).

The year 2004 proved to be an important year for rhetoric and composition in regards to rhetoric and technology. Stuart Selber (2004) in *Multiliteracies for a Digital Age* urges scholars to help develop students’ multiliteracies by changing their approach to using and integrating technology in the classroom. He believes to do this we must commit to moving beyond the functional level, and assist students in reaching a critical, and rhetorical level. An approach to technology, and developing literacy at a functional level would limit the student, and make their use of the computer more “proceduralist,” which reinforce the “systematic power” of using such a technology (p. 43, p. 46). At the critical level “students might be encouraged to recognize and question the politics of computers” (p. 75). Such a critical awareness of computers, and technology in general, is as necessary in 2004 as it is now. Due to the use of various types of technology in the daily lives of students it is important to question the impact of technology beyond the practical uses. Finally, curriculums should assist in students developing a rhetorical awareness of technology. This means going beyond knowing how to use and navigate a computer and its software. It also accounts for going beyond questioning the technology. Rather, a rhetorical awareness promotes the user’s/student’s ability to “effect change in technological systems” (p. 182). They become a “reflective producer of technology” (p. 182).

The theoretical framework Selber provides helped to establish that students should be questioners of technology (critical literacy), and rhetorical in the way that they understand the implications of technology. Civic engagement has long been a learning objective, or byproduct of the curriculum found in rhetoric and composition classrooms, therefore the many shifts in technology, and their implications for society, result in the necessity of developing students’ multiliteracies. Selber argues, “if students are to become agents of positive change, they will need an education that is comprehensive and truly relevant to a digital age” (p. 234). This comprehensive education must be different than what is taught with the alphabetic text essay. The learning objectives, and elements taught must be different, or else the student only learns how to transfer an essay to a different genre, or format. Selber’s main argument is that how we think about technology, and how we communicate about technology to our students, influences how we teach, and what we teach.
 Moving forward the field responded to the calls of Yancey and Selber. This is evident in the work of Sarah Arroyo. In Arroyo’s (2013) book *Participatory Composition: Video Culture, Writing, and Electracy* shediscusses participatory composition, and the connectedness of students that alters composition classes. Here again we see that as technology continues to evolve, and with it the ways we use it, so does how we communicate. In 2004 Yancey understood that writing was becoming increasingly social in the online world, and Arroyo sees this as increasingly prominent as a result of video culture. Arroyo uses Ulmer’s concept of electracy to guide her work. She views it as a concept that “can be compared to digital literacy but encompasses much more: a worldview for civic engagement, community building, and participation” (Kindle Locations 30-31). Arroyo’s book addresses other issues, including her belief that not all participation is positive, but the concept of electracy is central to her work and as such it is discussed here more than other areas.

Here again there is a scholar noticing a shift in literacy. For Arroyo electracy incorporates more participation and civic engagement on the part of the user/student. Despite the attempt to separate electracy from digital literacy there are still elements of the type of engagement Selber discusses in his book, which is altogether not uncommon in rhetoric and composition classrooms. Therefore, it is clear that while technology changes how we communicate, and that change will indubitably alter how we teach because of what we teach in the wake of technological advancements, the core principles of a composition class remain.

**References**

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