Technology Access and Use in Writing Intensive Courses, Fall 2015

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Part 1: Introduction

The National Council of Teachers of English describes digital literacy as "proficiency and fluency with the tools of technology" (The NCTE definition, 2013), which include utilizing a networked, social approach to designing, sharing, analyzing, and synthesizing information, and the application of ethical considerations such complex environments require. At George Mason University, we strive to embody an innovative spirit at institutional and programmatic levels:

- **2014-2024 Strategic Plan @ Mason:** "The world of 2014 is far different from the one the university's founders faced in the 1970s. New technologies have reshaped the way we work, live, and learn; the world has become more interconnected and interdependent than it has ever been; human talent and innovation have become central drivers of economic competitiveness; new disciplines have emerged and old ones have been redefined."

- **WAC @ Mason:** Supports the 2014-2024 Strategic Plan "by focusing on writing as a pedagogical tool that enables students to develop critical, analytical, and innovative thinking to address complex social issues, and on faculty development in support of excellence in teaching"

As we aim to prepare students for critical thinking and writing in their chosen fields, how are we also preparing students to meet the demands of increasingly complex, digital and public communication?
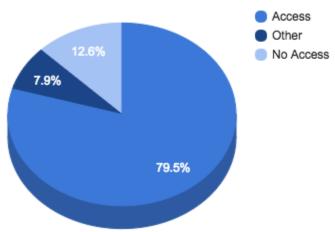
This fall, Mason offered 151 writing intensive (WI) courses. As part of the WAC Re/View Study, this report illustrates opportunities and limitations for instructor and student engagement in digital literacy practices by identifying the following:

(1) Access to classroom technology in writing intensive classrooms
(2) Use of classroom and personal technology in writing intensive classrooms

Part 2: Access to Classroom Technology

Instructor Access. At a minimum, a classroom that provides instructor access to technology is designated *technology enhanced* (TC) by the University Registrar's Office in coordination with the Classroom and Lab Technologies Department, and provides the following technology for instructor use: an overhead, single LCD projector, instructor computer, laptop connection, DVD playback via computer, auxiliary video input, and speech reinforcement.

Figure 2.1 Instructor Access to TC+ Tools

Legend:
- Access
- Other
- No Access

12.6%
7.9%
79.5%

As Figure 2.1 reflects, 79.5% of the 151 WI courses offered meet in classrooms that provide instructors with TC access as a minimum. Another 12.6% of classrooms are designated GC and do not come equipped with these basic TC devices (i.e., instructor computer; laptop connection; LCD projector). The remaining 7.9% represent classes that meet online, off-campus, or are otherwise undesignated.

Student Access. A classroom that provides student access to technology is designated *technology enhanced with student computers* (TSC) by the University Registrar's Office in coordination with the Classroom and Lab Technologies Department, and provides the following technology for student use: one student computer per student seat.

Figure 2.2 Student Access to Classroom Technology
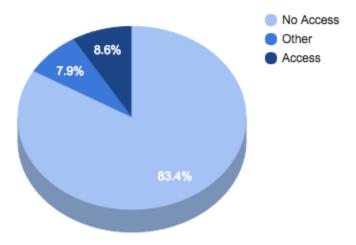

Legend:
- No Access
- Other
- Access

8.6%
7.9%
83.4%

Figure 2.2 illustrates student access to classroom technology within 151 WI courses. Only 8.6% of writing intensive courses provide TSC designation. At 83.4%, the majority of writing intensive courses do not meet in TSC classrooms. The remaining 7.9% "other" represents classes that meet online, off-campus, or are otherwise undesignated.

Part 3: Use of Technology

Instructor Use. Observations of 10 WI instructors indicate a high incidence and moderate variety of technology use for writing intensive instruction, as indicated in Figure 3.1.
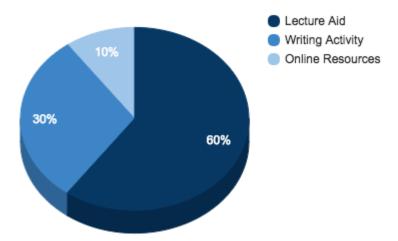
Figure 3.1 Instructor Use of Technology

Over the course of 10 classroom observations, 80% of instructors used technology to deliver instruction. Instructors primarily used technology as a lecture aid, for example using PowerPoint to provide accompanying notes or a YouTube video to support key ideas. 30% of instructors were observed using technology to support a writing activity, for example using the LCD projector to display a writing prompt. 10% of instructors used technology to share online resources, for example sites that support research, writing, or editing processes.

Student Use. Observation of 175 students in 10 WI classes reported mixed use of personal and classroom devices. During classroom observations, student use of technology in WI classrooms was limited to classroom student computers, personal laptops/tablets, and smartphones.
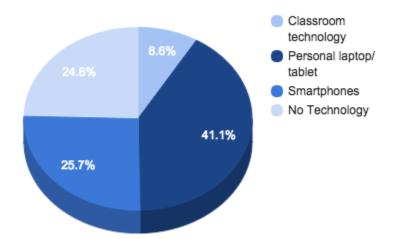
Figure 3.2 Student Use of Technology

Figure 3.2 shows observed use of technology for 175 students[1]. Personal laptops and tablets were the most-used devices, at 41.4%. The second highest incidence of use was smartphones, at 25.7%. Nearly comparable at 24.6%, however, was the percentage of students not using any technology. What is unclear is whether this was student choice or due to lack of access to a personal device. Finally, 8.6% of students used classroom computers.

Part 4: Descriptions of Instructor Use

During interviews, 10 of 27 WI faculty interviewed were asked the question, "What role does technology play in in your teaching, your assignments, or your work with students?" 30% of respondents described no use of technology, and the remaining 70% described use varying from instructor teaching aids to student-created, technology-driven projects. Despite a relatively low number of responses from interview participants, three themes begin to emerge, as indicated below and illustrated with statements from WI instructors.

Theme 1: Lack of expertise in technology influences instructor's ability to support students:

> Participant response: "Their research requires them to use their technology. I say, 'Surprise me. Wow me. Show me stuff that you can do that's interactive when you're giving this presentation' . . . . Some I them I find, 'Wow. That's kind of cool. I've never seen that before.' So, I, I really ask them to do that, because they're gonna have to do that in [the capstone course]."

Theme 2: Assumptions about student ability and use of technology vary widely

> Participant response: "Um, this is a whole, yet another language, that they speak much more fluently than I do."

> Participant response: ". . . for me, it's mostly just that some of the kids lack computer skills."

Theme 3: Genuine interest in learning and using technology, with concerns about time affordance

> Participant response: "...but but we've got these students now . . . doing the livescribes, and that instantly boots up to the Cloud and turns into a document. . . . And so, I know...again, I don't want to put more on the writing faculty; they have enough to deal with. But, knowing some of these different alternative methods…"

Part 5: Recommendations

George Mason University's mission includes the promise to "apply new and emerging learning technologies, environments and methods to improve learning effectiveness and student completion, and to better serve the evolving needs of students, working professionals, and public, private and nonprofit organizations." The Writing Across the Curriculum Program at Mason will continue to align itself with this mission by supporting writing intensive instructors as they prepare students to meet the digital literacy demands of 21st century academic and professional spheres by continuing to 1) work towards improving access for instructors and students, and 2) provide training and support for instructors.

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[1] Some students used both personal laptops/tablets and smartphones.

Innovative digital literacy practices are already happening in many WI courses. As we consider how faculty can be developed and supported, the first step is to identify exceptional instructors already integrating digital and public composing opportunities for students through the use of technology. Leveraging these instructors—our best resources—we can further enhance the teaching practices of WI instructors throughout the university.

Additionally, as we continue to improve access to technology on campus—through access to campus-wide Wi-Fi and high-tech, modern classroom construction—we should also aim for providing access to technology enhanced classrooms (at a minimum) for 100% of WI instructors, and investigate ways to support increased access to personal laptop/tablet devices for students, who may otherwise be unable to afford them.

Project Constraints
Finally, I must acknowledge there were many limitations to this single-semester research project. Findings from classroom observations represent only a small sample of WI instructors dispersed across the disciplines, and are not representative of all WI instructors. Additionally, observations of instructor and student technology use and students only offer us a glimpse into a particular moment and are not indicative of regular classroom occurrences. Finally, because it was impossible to observe how each student used technology during classroom observations, it was impossible to know if the student was using it in productive ways related specifically to the particular class activities. I also recommend further research to include a review of WI syllabi for technology policies and technology-dependent assignments, which would certainly give us further insight into the role of technology in a particular course.