Preface

OVERVIEW

Currently, more emphasis is placed on writing instruction in K-12 schools than ever before. Unfortunately, however, students continue to perform poorly on national writing assessments. One possible solution to helping students become better writers is for K-12 teachers to use the growing number of digital tools to teach writing. Another possible solution is for content area teachers (i.e., math, science, social studies, and language arts) to integrate writing assignments into their curricula. Consistent with the present national STEM (Science, Technology, Engineering and Math) initiative, which also embraces writing across the curriculum, students are no longer taught how to write just by the writing teacher. Instead, teachers at all levels, and in all content areas, are expected to use writing to help students both become better writers and to learn content knowledge. Therefore, it is important that K-12 teachers learn how to use new digital tools to effectively teach writing in the content areas.

This book is especially timely because students are currently using technology to write both in and out of the classroom. In particular, students are writing outside of the classroom in ways which are not well documented or understood. There has been a need for research that reports what students are doing both in and out-of-school and the implications this has on their learning.

This book is intended for educators who are, or who work with, K-12 content area teachers. Thus, the primary audience will be professionals and researchers working in the field of K-12 education and teacher education. Additional audiences are higher education and adult education professionals who can adapt the practical and effective applications for using new technologies to teach writing in their respective content areas.

The book is divided into four sections which focus on: Writing with WEB 2.0 and Social Media, Writing with Mobile and Multimodal Technologies, Integrating Technology with Writing Instruction, and Preparing Educators to Teach Writing Digitally.

SECTION 1: WRITING WITH WEB 2.0 AND SOCIAL MEDIA

In the first chapter, Woodard and Babcock explore how a high school teacher’s design of writing tasks in Google Docs encouraged conversations and revisions in student writing. It details how Babcock, an English teacher in an integrated studies course, developed various scaffolds to improve feedback, including assigning self-annotation “conversation starters” in one class and participating in writing processes as an author himself in another class. Peer conversations in Google Docs were used for two purposes in
the former class—to encourage the writer to revise or to affirm the writer, and for two purposes in the latter class—to debate the writer’s techniques or to talk about the writer. The findings highlight instances where conversations were more and less successful, and explore possible reasons for the classes’ different conversation types in Google Docs. The authors conclude the chapter with research, teaching and learning implications for K-12 teachers using Google Docs to support feedback and revision.

In Chapter 2, McGrail and McGrail indicate writing to learn can support discipline-specific learning and thought development. Traditional writing strategies such as essays and journaling have been found to have a positive impact on recall of information, concept analysis and application. However, interaction with readers is not immediate with these methods. An environment where writers can immediately adapt to their readers’ feedback and become conversation partners for one another is the blogosphere. The authors describe how fifth-grade writers engaged in blog conversations with an audience beyond the classroom walls about their learning in language arts (LA) and social studies (SS) classes. They also analyze the ways in which feedback from the audience facilitated the fledgling writers’ “learning to write and writing to learn.”

In Chapter 3, Albers and Hernandez focus on Latino students in grades seven through nine in Opportunity Class, an alternative school for students with disciplinary problems at their comprehensive school sites, who used the free software tool called Tagxedo to generate stronger thinking and writing. More specifically, the authors describe a study of students’ digital writing through Tagxedo, and how they used Tagxedo as a way to metaphorically and symbolically represent their thinking, and as a tool to support their writing and thinking. This study took place over two years with two different groups of 13 students, each studying different inquiry-based units of study. Located in critical multimodality as a theoretical frame, this chapter positions digital writing as a critical endeavor, one that understands that modes are not neutral, and every choice made by the designer/writer of a digital text has intention and purpose.

In Chapter 4, Castek, Beach, Scott, and Cotanch explore the ways sixth grade students from a linguistically and culturally diverse classroom used Diigo, an online social bookmarking site, to engage in annotation writing focused on the discussion of science ideas within a text. While the use of apps has rapidly increased in schools, there remains little research on the ways annotation writing can be used to support scientific argumentation. Findings from this study indicate that students used the annotation app to pose questions, formulate claims, and request evidence from peers to answer questions or support claims. These results suggest that the process of collaborative annotation encourages students’ documentation, critique, and refinement of ideas, which can aid learners in close reading of science texts.

In Chapter 5, Howell and Reinking consider issues and possibilities for connecting the writing students are doing in digital environments outside of school to developing writing ability within school. They present theoretical frameworks consistent with exploring that connection, including New Literacy Studies and participatory culture and offer a rationale for linking in and out-of-school literacies. They also give specific examples of the types of writing that connect these two cultures with digital writing tools and discuss implications for teaching.

In Chapter 6, Keyes and Baynum suggest a social constructivist model for engaging students in digital texts and composition. They share partial results from a three-year project, Virtual Vacations, which focused on creating digital texts from virtual experiences exploring different geographic settings in a mixed age elementary group. Three participants in this case study provide evidence of students’ strategic knowledge pertaining to the use of digital tools for literacy tasks. The authors provide suggestions for teachers of digital natives such as this one: teachers need to scaffold instruction to balance the duality between digital tasks and literacy skills.
In Chapter 7, Manderino and Ripley describe a historical inquiry project that used a social networking site to engage students in writing both traditionally and multimodally about the 1960’s. Researchers provided students basic demographic information about a fictional individual living in the 1960’s and instructed them to build a social networking profile as they conducted inquiry of the 1960’s over the course of eight weeks. They gathered data from screen capture videos and semi-structured interviews (n=8) as well as online artifacts (n=185) that high school students generated to construct a profile page akin to Facebook for the project. This project demonstrated how student writing in a history class was mediated by the social networking task and the variety of multimodal texts that they could use to represent their historical inquiry.

SECTION 2: WRITING WITH MOBILE AND MULTIMODAL TECHNOLOGIES

In Chapter 8, Greenhow and Gibbins seek to help educators understand trends in students’ writing outside of the classroom, with a particular emphasis on illuminating students’ purposes and practices in writing within social media spaces. The authors synthesize current research on students’ internet and social media practices and offer a case study from our own research on students’ writing within an educational Facebook application called Hot Dish. This chapter seeks to elucidate the reciprocal relationship between students’ out of school writing using popular social media and their in-school practices. Ultimately, the authors seek to help readers make connections between what students are doing with new media in their leisure time and the improvement of students’ writing performance in K-12 settings, believing there may be important but under-explored synergies.

In Chapter 9, Kleifgen, Kinzer, Hoffman, Gorski, Kim, Lira, and Ronan describe a technology-centered intervention project to demonstrate the benefits of a multimodal, Web-based platform, STEPS to Literacy, for teaching academic writing to Latina/o adolescent learners of English. After laying out a theoretical and empirical rationale, the authors provide details about the design features and instructional approach that support student writing. They also provide an example of the use of STEPS in the classroom, in which eighth-grade students with the teacher’s guidance analyze multimodal documents, take notes, and write an essay for a unit on the Civil Rights Movement. A summary of the benefits of such an online system for academic writing development is outlined, and a set of points for teachers to consider for planning and implementation in the classroom concludes the chapter.

In Chapter 10, Martinez-Alvarez and Ghiso describe a series of integrated curricular invitations that sought to unsettle hierarchies of power by creating hybrid spaces that leverage students’ cultural and linguistic resources in the form of multilingual community-based knowledge. The project involved participation from a total of 138 bilingual first graders in two dual language public elementary schools and was implemented, investigated, and revised over a two-year period. The curricular invitations were informed by a conceptual framework that brought together Nieto’s elements of culture with theories of Expansive Learning. The authors suggest dual framework assists us in articulating the theoretical underpinnings of each step of the proposed sequence. They also present teaching implications and future research directions.

In Chapter 11, Tobin and Blanton examine digital storytelling circles (DSCs) as multimodal platforms aimed at improving students’ comprehension of subject matter texts. In a small group, students in a DSC engage in reading, writing, speaking, listening, viewing, using digital tools, and manipulating texts and instructional strategies. Roles are assigned to each group member as they use the tools provided
by the multimodal platform to create a digital story. The authors indicate most literature supports the notion that the experience of creating digital stories can have a positive impact on students’ acquisition of literacy skills and their motivation to engage with the text. They also present a model for using DSCs in the post-reading phase of a Directed Reading Activity (DRA). Case studies findings highlight two DSCs that exhibited qualities of developing the literacy strategies necessary in reading-to-learn with complex content area texts.

In Chapter 12, Curwood and Willmett examine digital technologies which significantly shape and mediate adolescents’ writing practices. Consequently, this chapter investigates the relevance and use of emergent technology in Year 8 English classes in an Australian high school. The importance of this study stems from the introduction of the Australian Government’s Digital Education Revolution and the growing prominence of technology in local schools. Building on sociocultural perspectives and new literacies scholarship, the authors consider how iPads influence student writing. Moreover, they examine what pedagogical strategies teachers use when implementing iPads in their classes to support student learning outcomes. Based on findings from this study, the authors share their understanding of how digital tools influence students’ collaborative learning, multimodal practices, and writing processes.

In Chapter 13, Blady and Henkin examine how digital tools were integrated into a professional development experience for writing teachers and the ways in which digital tools were then integrated into the literacy practices of a seventh-grade English class. Henkin and Blady are director and co-director respectively, of the San Antonio Writing Project (SAWP), a chapter of the National Writing Project (NWP). Following NWP’s teachers-teaching-teachers model, the site provides opportunities for teachers to share their expertise and teaching practices with other teachers in the area. Over a handful of years, the authors observed a major shift in technology use by teachers during the summer institute. Among other affordances, digital tools became more collaborative and user-friendly. Not only were teacher participants using these tools for their daily learning experiences, but they also modeled effective instructional practices that integrated technology. The authors set out to see how Blady’s middle school students could use these tools in her English class and later reflected on other SAWP teachers’ experiences as they explored various digital tools with their students.

In Chapter 14, Miller, Rowe, and Pacheco examine how 19 emergent bilingual, 4-year-old students used digital composing skills to create dual-language eBooks using touchscreen computer tablets (iPads) and digital photography, drawing, and eBook composing apps. They focus on analyses of children’s composing processes and products, adult supports, and participants’ embodied interactions with the digital tools. Children approached eBook composing through naming, narrating, dramatic play and exploratory play. eBook texts were multimodal and included images, print, and oral recordings. Adult verbal scaffolding and gesture supported children’s skills as digital composers. Children became active designers of digital content, independently navigating and experimenting with the multimodal functions of the iPad. Analyses showed how children used their heritage languages and English to compose dual-language eBooks and support their emergent writing. The authors argue that children benefit from early opportunities to explore ways of combining print, images, sound, and multiple languages to create digital texts that effectively communicate across modalities and contexts.

In Chapter 15, Brown presents the details of a year-long qualitative study that investigates the literacy development of a diverse group of second graders as they engage in digital writing experiences at school using the Barnes and Noble Nook e-reader. Twenty students, including eleven English learners whose first languages were Spanish, French, and Korean, immersed themselves in reading e-books and then, wrote and narrated their own digital books using the available tools from the DrawWriteRead app and
the Tikatoc.com website. The findings reveal students developed a sense of agency while developing new literacies through interactions with others. The authors begin with an introduction to the use of technology with diverse students. Next, they discuss an overview about the theory associated with digital and new literacies. They continue with a review of current research studies focusing on digital writing with young students across a variety of contexts. Finally, the authors detail this particular study through a description of the methodology, findings, and conclusions.

SECTION 3: INTEGRATING TECHNOLOGY WITH WRITING INSTRUCTION

In Chapter 16, Stewart discusses the history of writing and technology and offers an overview of the integration of advances in the use of technology in the writing classroom. The author has framed this overview by highlighting the importance of selecting the most appropriate tool for any instructional task. Grounded in the belief that writing is a key skill for students to master for success in the classroom and, more importantly, beyond the classroom, this chapter is designed to open a theoretical and practical dialogue between readers and this book about how to best theorize and enact meaningful writing instruction in the digital age.

In Chapter 17, Anderson, Mitchell, Thompson, and Trefz describe fifth-grade students’ perceptions of how digital tools support writing instruction in a paperless classroom. Extending a constructivist paradigm that embraces student-centered pedagogies, this study explores both the teacher’s approach as well as the students’ perceptions of the digital process approach to writing. An overview of each stage of the writing process is provided and includes research supporting digital writing tools for that stage. This is followed by the findings from each section which includes: 1) how the teacher implemented the digital writing tools, and 2) the students’ perceptions of the digital tools. The authors conclude the chapter by offering areas of future research as well as offering the limitations of the study.

In Chapter 18, Oliver and Pritchard overview the concept of writing abstraction as two progressions writers must learn to negotiate. In the first progression on audience, students learn to make verbalizations to the self, then write informally to peers who understand the student’s language, then formally to distant others who require more abstract or culturally accepted conventions. In the second progression on topic, students learn to write about sensory stimuli experienced, then to retell past experiences, and finally to propose more abstract generalizations and theory. To help students develop the capacity for writing across these continua, we recommend emerging communication tools and networks for accessing and writing to increasingly distant others, as well as emerging Web 2.0, multimedia, and research tools for capturing and writing about experiences or conceptualizing generalizations and theory. The authors conclude the chapter by noting future research directions in writing across audience and multiple modes with digital tools.

In Chapter 19, Franklin and Gibson offer user-friendly free applications to help teachers incorporate digital writing tools in their classrooms. The authors encourage a collaborative and inquiry-driven environment to help teachers implement new digital tools that can motivate students and develop 21st century writers. Lastly, the authors outline a framework for scaffolding the introduction of these applications in K-12 classrooms and in professional development and aligning traditional writing process tools to digital writing tools.
In Chapter 20, Runge, Atkins, Braunwart, and Klare indicate students are entering 21st century class-
rooms with widely varying technological aptitudes. Almost no student is technologically illiterate and
many are more adept digitally than their teachers. Teachers must learn to utilize technology to inspire
and support learning. Utilizing different digital tools will allow teachers to differentiate learning to
meet the needs of all students in their classrooms while continuing to teach the curricula prescribed by
their districts and state agencies. The authors examine the use of digital technologies in the 21st century
classroom to enhance writing skills. They also highlight several technologies with examples of how they
were integrated in the classroom as well further extensions of the activities.

In Chapter 21, Martin and Polly discuss the Common Core State Standards in Mathematics and
English/Language Arts, which necessitate that teachers provide opportunities for their students to write
about mathematical concepts in ways that extend beyond simply a summary of how students solve math-
ematical tasks. They describe a series of vignettes about how digital tools can provide elementary school
students with the opportunity to write about mathematics concepts they are studying. They also share
implications for providing these opportunities to elementary school students and supporting teachers.

In Chapter 22, Córdova, Taylor, Hudson, Sellers, Pilgreen, Goetz, and Jung, members of a Liquid
Networked Innovating Community (LiqNIC) called the Cultural Landscapes Community, draw on an
interactional ethnographic perspective to examine the theoretical roots of the CoLab; how it emerged
as a LiqNIC; and its impact on their professional learning. By constructing four telling cases, the team
investigated how they drew on the CoLab’s shared theory of action, ResponsiveDesign, to innovate their
practices teaching writing to incorporate new media and digital tools (Twitter, Googledocs, Weebly,
Edmodo, Prezi, Storify). Analyses reveal the local ways each teacher drew on ResponsiveDesign’s iver-
tative cycles of exploring, envisioning and enacting as habits of action. In and through the local ways they
harnessed ResponsiveDesign to integrate digital tools into their writing instruction, the teacher-researchers
developed habits of mind as prototypers and innovators of teaching practices. Analyses also reveal how
ResponsiveDesign’s core theoretical traditions were lived out in the habits of action and habits of mind
that the teachers developed.

In Chapter 23, Assaf, Eikstead, Kaynes, and Woolven assert, as the world becomes more digital and
more connected, teachers must keep pace with the changing spaces of the workplace and processes of
community and civic engagement. These changes are not going away. It is the responsibility of educa-
tors to help students navigate, create and problem-solve within these spaces. The authors investigate one
of the processes undertaken by four teachers, elementary through university, as they worked towards
creating a vibrant digital classroom. Specifically, they address the challenges, systems and successes
of facilitating meaningful online peer response within the context of writers’ workshop. Ultimately, the
authors found that authentic audience and thoughtful peer response improved student writing.

In Chapter 24, Hines, Kersulov, Rowland, and Rupert discuss a qualitative case study of one alter-
native high school English class, tracing students’ engagement and resistance with digital media and
school-based literacy practices, exploring how each student’s use of literacy and digital media led to
the formation of particular identities in the social sphere of the classroom. In this chapter the authors
focus on two students, Callie—loud and socially dominant— and Nina, quiet, reserved, outside the social
circle. They trace the students’ respective discursive practices in two composition units— a multimodal
children’s book unit and a Theater of the Oppressed unit. Lastly, the authors argue that both young
women have strong literacy skills and are strategic in using them, thereby creating particular identities
as they produced texts.
SECTION 4: PREPARING EDUCATORS TO TEACH WRITING DIGITALLY

In Chapter 25, Karchmer-Klein, Shinas, and Park assert writing instruction in the 21st century must attend to ways that the multimodal nature of digital texts transforms consumption and production of text. With that in mind, the purpose of this chapter is to forward a framework for multimodal writing instruction that informs teacher education. In this chapter, the authors provide an overview of multimodality and suggested pedagogical approaches to prepare educators to teach digital writing skills. Second, they discuss a graduate course on multimodality, illustrating a pedagogical framework for teaching educators to recognize and apply multimodality in their teaching. Understanding gleaned from this chapter will illuminate the ways that teachers and teacher educators can approach writing instruction for the 21st century classroom that takes into account the literacy demands of the workplace and the world in which we live.

In Chapter 26, Gillis and Marshall address the issue of professional development as it relates to teaching writing in a digital environment. Their goals include describing the genres of digital writing tools currently in use, along with their affordances and constraints and the means by which teachers use these tools professionally. The authors explore leveraging affordances of digital writing tools to communicate with stakeholders and reflect on practice, and also describe effective professional development linked to the teaching of writing using digital tools. Finally, they address recommendations for future research.

In Chapter 27, Garcia and O’Donnell-Allen examine how culture, technology, and standards intersect to create a complex environment for preservice teachers that shapes their understanding of how to teach composition. The authors draw on the cases of two undergraduate students engaged in immersive digital writing experiences to present a model called “Pose/Wobble/Flow.” This model attempts to capture the non-linear, recursive nature of teachers’ professional growth by acknowledging and interrogating uncertainties, positionality, and cultural privilege. The authors recommend the creation of virtual and face-to-face communities of practice wherein preservice teachers can take up stances, or poses, toward their practice and reflect on areas in which they “wobble” with the intent of attaining provisional moments of progress in their teaching. They conclude that engaging preservice teachers in cycles of Pose/Wobble/Flow increases the likelihood that they will in turn construct learning experiences for their students that include robust opportunities for digital composing and interaction.

In Chapter 28, Taylor, Vintinner, and Wood suggest technology is shaping and reshaping K-12 teaching and learning across grade levels and subject areas. The emergence of Information Communications Technologies has changed the nature of literacy including what it means to read and write. Despite these transformations, schools have been slow to integrate technology in meaningful ways. New curricula like the Common Core have attempted to bridge the gap between teaching and learning and the use of technology; however, teacher professional development has yet to catch up with these changes. The authors focus on two models of teacher professional development used to engage and prepare inservice teachers for using digital technologies and Web 2.0 tools in their writing instruction. They explore the challenges and benefits of both models and discuss what they have learned about teacher professional development around technology and writing. The authors argue that while neither model is a “best way” of approaching teacher professional development, elements of both are beneficial in meeting the needs of teachers.

In Chapter 29, Guise and Benko advance the use of digital tools in the composing process and the development of 21st century literacies in order to equip students with the skills needed for college and career readiness. As new technologies continue to emerge and shape daily life, it is important for teachers and students to envision how these digital tools can be used to enhance communication, particularly writing. The authors share effective strategies for helping pre-service teachers to become more comfort-
able – as writers – with certain digital tools and to critically evaluate the benefits and limitations of these digital tools. In addition, the authors present a unit of instruction that scaffolds pre-service teachers to develop their own writing instruction and assignment for secondary students, which require secondary students to utilize digital tools throughout the composing process. The authors argue for working towards greater inclusion of technology in the English classroom.

In Chapter 30, Kilpatrick, Saulsbury, Dostal, Wolbers, and Graham examine the ways a group of elementary teachers of the deaf and hard of hearing chose to integrate digital tools into evidence-based writing instruction and the ways these technologies were used to support student learning. After professional development that exposed these teachers to twelve new digital tools, they were observed incorporating several new tools into their instruction; however, most of the tools were not the ones targeted during professional development. There are factors related to both teacher perspectives and professional development design that seem to play a role in what digital tools are used, how they are used, and who uses them. Based on these factors, the authors provide suggestions for the design of future professional development that more effectively introduces technologies to teachers and supports their efforts to integrate these tools into classroom instruction.

In Chapter 31, Hicks asserts, though many teachers are incorporating digital writing tools and making significant changes in their instruction, too many other teachers are not. Based on the results of a Pew Internet and National Writing Project survey, this chapter explores six skills that a majority of writing teachers describe as “essential” or “important.” Building on the premise that all teachers want their students to learn these skills, the author describes strategies for how digital writing tools could be used in that capacity. With examples such as alternative search engines, creating a personal learning network, modeling the digital writing process, and understanding the dimensions of fair use, copyright, and citation, the chapter provides entry points for all teachers -- even those unsure about why or how to use particular technologies -- to begin teaching digital writing.

**CONCLUSION**

This edited book is timely for primarily four reasons. First, educators at all levels are challenged to stay abreast of how to use the growing number of technology tools. Second, there is a greater emphasis on writing instruction in both K-12 settings and in teacher education programs. Third, national standards and current initiatives expect content area teachers to integrate writing across the curriculum. Finally, the book has value for the growing number of educators involved in K-12 online teaching and learning. Both hybrid and total online courses entail a heavy emphasis on writing, as well as the use of new technologies.

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