Towards Defining Digital Writing Quality

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Abstract This chapter provides a description of current views towards writing quality and promotes a move toward a definition of *digital* writing quality. We argue that, because new digital affordances have changed how writing is learned, taught and delivered, the nature of written products has become increasingly multi-dimensional and interactive. Traditional perspectives toward writing quality offer a foundation for understanding the textual features that are essential to defining digital writing quality, but these views largely disregard non-textual and non-linguistic abilities needed to effectively communicate in digital spaces. We thus address contemporary realia to stimulate discussion about how to consolidate various domains of knowledge for defining digital writing quality. Aligning contemporary writing demands to form a comprehensive definition of digital writing quality can help transform the design and development of future writing technologies and curriculum for an increasingly technology-adept learning audience.

Keywords Digital writing quality · Genre innovation · Multimodality

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1   Introduction

Twenty-first century digital innovations offer new affordances that arguably enhance writing spaces, foster writing processes, and enrich writing development and production opportunities. At the same time, the ubiquity of digital writing technologies challenges traditional perspectives towards writing quality, which commonly tend to focus on textual aspects, linguistic accuracy, and rhetorical conventionality. *Digital writing quality* encompasses a much more complex interplay between textual and non-textual elements, metacognitive processes, sociocultural knowledge, and technical abilities. Therefore, defining this concept can be controversial and thus necessitates careful deliberation.

Working towards a contemporary definition of digital writing quality is important for a number of reasons. This concept is central to how writing should be theorized, researched, taught, and learned in the era of digitalization. It is a substantial indicator of the competencies that present-day and future writers need to acquire. Understanding what constitutes digital writing quality is also imperative for supporting those who teach and formally evaluate written communication. Awareness of what makes writing effective in digital contexts is essential for students as well, especially because they are already producing diverse forms of writing in new digital spaces for various audiences. Social media, for example, is filled with avenues for exchanging ideas and knowledge, developing authentic writer identities, strengthening awareness of audience and authorship, and promoting self-confidence and motivation to write (Ware et al., 2016). Disregarding the writing that takes place within these digital contexts would thus restrict writers' opportunities to practice and produce writing in creative, authentic ways.

Given the predicament of there being little consensus about what constitutes writing quality in general, the 'digital' attribute of writing quality certainly needs time and interdisciplinary input to gestate. The rich spectrum of affordances provided by digital writing tools and platforms poses uncharted potential, for every single tool has its own inherent ways of impacting quality. For instance, the digitalization of writing expands access to multimodal semiotic resources (text, audio, visual), digital spaces (e.g., web interfaces), and new audiences (e.g., bloggers), disrupting traditional conceptualizations of writing quality. This, in turn, compels professionals to rethink writing instruction and evaluation.

In this chapter, we discuss traditional views toward writing quality, exploring theory-driven perspectives that help to define expectations of writing. We then shift to contemporary views to discuss how new digital tools and digital genres challenge traditional notions of writing quality and require practitioners to evaluate what writing practices are most appropriate for reaching today's audiences. We end by posing key questions that will help to move towards a definition of digital writing quality, which can set a foundation for understanding how our digital world affects those who teach, construct, and evaluate writing.

2   Traditional Perspectives on Writing Quality

A lack of a unified view of writing quality has long been noted in first and second language writing research (Huot, 1990), creating an imbalance between theoretical perspectives and writing practice (di Gennaro, 2006), especially when multilingual writers are involved. Collating traditional perspectives from first and second language writing studies can strengthen connections between domains of knowledge and provide a springboard for discussing writing quality expectations in digital contexts. According to those perspectives, writing quality is dependent on several features including (but not limited to):

- complexity, accuracy, and fluency
- task dependent features, and
- genre conventions.

Complexity, Accuracy, and Fluency (CAF) measures are often used in second language studies to replace subjective and sometimes vague delineations (e.g., beginner, intermediate, advanced) of learner performance and development (Ellis & Larsen-Freeman, 2006). In short, complexity refers to the elaboration of the language that is produced, accuracy as the ability to produce error-free language, and fluency as the ability to rapidly produce language (Lennon, 1990). Complexity and accuracy are most commonly evaluated as part of the quality of a written product. Fluency has its place in both quality of process and quality of product. Technologies (e.g., corpus-based technologies in Chitez & Dinca "On Corpora and Writing") have impacted the detection of CAF, offering means for immediate and reliable evaluation of writing quality, which in turn enables evaluators to account for the effects of task-internal features (e.g., task complexity) on writing quality (Robinson, 2011; Skehan, 2016). Evaluating CAF, however, is exclusively based on the linguistic realizations writers use to convey ideas, with a disregard for multimodality.

Task dependent features may include content or prompt relevancy and rhetorical quality or coherence. Models of writing have established that writing quality is dependent on an appropriate selection and management of content and rhetorical aspects of writing (Bereiter & Scardamalia, 2013; Flower & Hayes, 1981; Hayes, 1996). These features focus on writers' abilities to contribute relevant information appropriate for a task, build logical and orderly discussion of content, and communicate ideas effectively to the reader. Tools for automated scoring of writing (see Link & Koltovskaia "Automated Scoring of Writing") and automated feedback on writing (see Cotos "Automated Feedback on Writing") can help to evaluate many of these features by utilizing various computational techniques, such as latent semantic analysis for analyzing the content of a text (Landauer & Dumais, 1997; Landauer et al., 1998). These tools offer opportunities for technology to mediate the writing process so that writers can manage choices leading to higher quality written products. The type of mediation, or form of formative and summative automated feedback that is available, is dependent upon developers' expertise and beliefs about what features

are important for heightening writing quality, and again is absent of multimodal representation.

From the perspective of genre, which refers to the socially recognized ways of using language in a context where a text is created and utilized, genre conventions are described as relating a text to a similar group of texts and to the choices (or constraints) acted upon writers (Hyland, 2003). Genre theorists posit that successful writing entails a writer's awareness of the audience and purpose of communication in a target context (Kress, 2009). This idea resounds across three main schools of thought that value different dimensions of genre: New Rhetoric (NR), English for Specific Purposes (ESP), and systemic functional linguistics (SFL). NR highlights the functional relationships between text type and rhetorical situation in which genres are employed (Coe, 2002; Freedman & Medways, 1994). The field of ESP gives prominence to the analysis of communicative events within a discourse community whose members share social purposes (Swales, 1990) and whose rhetorical choices impact the way texts are structured and composed content-wise (Johns, 1997). SFL, in turn, accentuates the ways language is systematically linked to a writing context through lexico-grammatical patterns and rhetorical features (Christie & Martin, 1997). Regardless of these theoretical differences, it is through genre theory that multimodal research has made the most headway in the field of digital writing studies. That said, how digital genres are constructed and evaluated by digital audiences in new digital spaces warrants continued discussions in order to inform the definition of digital writing quality from a contemporary perspective.

3   Contemporary Realia of Digital Writing

The quality of writing produced using digital tools in and for heterogeneous environments cannot be devoid of multi-dimensionality, so a forward-thinking notion of digital writing quality should be multi-dimensional across multi-platforms for authentic and collaborative multi-audiences. To produce successful modern century writers capable of integrating new literacies and technical abilities to create manyfold genres, teachers will need to equip their students and themselves with skills responsive to an expanded view of digital writing quality—a view that comprises textual, non-textual, and non-linguistic aspects of written communication. This view would acknowledge ways in which writers can maximize the effects of digital affordances throughout the writing process to successfully achieve the expectations of contemporary audiences. It would also help formulate guidelines for evaluating the effectiveness of digital communication products as well as for researching the multiple facets of writing in compelling and dynamic ecosystems.

Consolidating both traditional perspectives and contemporary realia is vital for tailoring a theoretically and empirically grounded understanding of digital writing quality for teaching and learning. In other words, given that genre, task dependent, and CAF features of writing quality are essential to the effectiveness of any text, digital writing quality needs to be defined such that these traditional criteria remain

(especially because most are amenable to automated analysis and already integrated in digital writing tools) but are rectified in view of new developments. Audiences, for example, have broadened significantly in recent years. Students are taking on new real-life roles, such as social justice advocates, which are way beyond content creation. Some audiences take on second or alternative identities to shadow or amplify their voices across the internet. The web has become an expanded context for sharing factual content as much as beliefs and interpretations, while also providing new means of interaction. Commenting features and chat rooms, such as those in fan fiction sites, empower writers to accomplish new communicative purposes including writing to get likes/shares or to boost a digital marketing scheme. All these realities present motives for researchers to obtain a better understanding of digital writing quality, which should then be translated to writing pedagogy and assessment, whether traditional or technology-assisted. There is an undeniable need to help educators teach the writing traits and distinguishing conventions that are pertinent to the quality of divergent multi-dimensional genres.

As a starting point, conceptions such as genre innovation, multimodality, hybridization, resemiotization, and translingualism would need to be conjoined. Genre innovation refers to "departures from genre convention that are perceived as effective and successful by the text's intended audience or community of practice" (Tardy, 2016, p. 9). Innovation can be realized at a stylistic level using modal variation, at the structural level through reordering and changing a text in unconventional ways, and at the discourse level by uniting different genres or discourses. Technology has added to the potential for genre innovation by offering new modes for communicating meaning across diverse communicative platforms. The interplay between multiple representational modes (e.g., visuals, spoken and written text), or multimodality (Kress & Van Leeuwen, 2001) afforded through digital tools can bolster genre innovation by offering a range of semiotic resources that go beyond textual and language features and, consequently, impact digital writing quality. Associated with that is hybridization, which refers to "all kinds of blending, mixing, and combining that occur in genres and texts" (Mäntynen & Shore, 2014. p. 738). These processes can contribute to endorsing multimodal and hypertextual features for online texts in digitized spaces, potentially changing conventional texts such that they reach expanded audiences (Bhatia, 2010; Tardy, 2016). Furthermore, resemiotization as an analytical means for determining how meaning making can shift from context to context and across multiple practices and stages of the writing process should be accounted for as well. It allows writers to consider choices in how semiotics are translated and why certain semiotics (over other semiotic resources) may be mobilized to communicate certain meanings (Iedema, 2001). Making logical choices in these shifts is important for enhancing digital writing quality. Finally, translingualism is a fundamental notion, as it connotes that communication occurs through language as a vehicle for all linguistic and nonlinguistic semiotic resources, such as color, images, symbols and sound, to enable multilingual writers to negotiate cross-language relationships (Canagarajah, 2013). In this practice- and process-oriented view, a genre shifts focus from the 'grammar' of the genre to considerations of the performance. Thus, the quality of digital products should be negotiated between writer and educator, as

well as audience whenever possible. Educators should consider evaluating learners' awareness of writing quality, degree of reflexivity, and learning trajectories instead of only the quality of the written product (Canagarajah, 2013).

Methods for evaluating multi-dimensional genres have not evolved as readily as classroom practices. It is often the case that, while engaging students in multimodal writing tasks, assessments tend to focus on text quality, to a great extent reflecting educators' discomfort with evaluating anything other than written text (Sorapure, 2006). Applying the aforementioned conceptions can help alleviate some uncertainties and concerns in writing pedagogy and assessment. Moreover, this can cardinally contribute to devising new methods that would foster extended forms of agency– the "power to control one's situation, be fully heard, be free from oppression, and have choices" (Oxford, 2003, p. 79). Agency in digital spaces should enable writers to make personal choices, create new means of expression, and act against social constraints to foster self-concept, i.e., their self-descriptions of competence and evaluation of self (Dörnyei, 2005). In other words, through new digital spaces, writers should know how and be able to control their sense of self by mediating interactions with new audiences and challenging power hegemonies that tend to standardize the evaluation of writing quality.

As we deliberate on the digital writing realities of our contemporaneity, our intent is not to dismiss the importance of established features of writing quality; those will remain the foundation of writing as a measurable construct and of writing quality standards in personal, professional, and academic contexts. Building on that, we argue that accounting for the multi-dimensional aspects of digital writing has the potential to bind measurable textual and linguistic features to contemporary expectations by which digital writing quality could be more comprehensively and inclusively defined.

4   Towards a Definition of Digital Writing Quality

Despite the advent of technological innovations and the pervasiveness of digital writing tools, educators remain unsure of what exactly digital writing is and how it should be taught and evaluated. Therefore, theorists, researchers, and practitioners should embark on a joint endeavor aimed to define digital writing quality because it is integral to the art and goal of writing better. Leveraging different levels of expertise and aligning interdisciplinary perspectives is key in this rather challenging (perhaps even daunting) yet high-stakes endeavor. Acknowledging potential hurdles and ethical considerations is also important, as these concerns may impact judgments of writing quality in unexpected ways. Emerging writers, for instance, may be highly influenced by language use in forums and chats. McKolloch (2019) noted that people who first used the Internet for socialization tend to adhere to writing conventions that coalesce online (e.g., irony punctuation as in ~*~* to show enthusiasm or word lengthening as in "sameee" when sharing agreement); less frequent Internet users, on the other hand, often use offline communication styles online (e.g., sending texts with punctuation patterns that younger recipients may instead replace with line breaks).

While the influence of the Internet on the typographical tone-of-voice system is evident, its impact on writing quality for formal and informal digital contexts is relatively unknown, challenging how or to what extent educators can address digital writing quality in writing classrooms.

Furthermore, the social impact of online interactions and collaborative spaces (see Castelló et al., "Synchronous and Asynchronous Collaborative Writing" on collaborative writing) enables collaborative thinking and knowledge sharing. Digital collaborative writing has been shown to improve accuracy and critical thinking (see Talib & Cheung, 2017, for a review) and may boost motivation to improve writing quality. Collaborative writing, however, calls into question notions of ownership attributions. Ownership of writing has long been a point of discussion within professional communication (see Rehling, 1994), with contributions to writing quality traditionally being a top factor in how workplace writers attribute ownership. Modern writers can challenge this belief by altering audience perceptions about what high quality writing entails.

Finally, new forms of writing can also raise academic integrity concerns given the widespread access to information that can be misused as stimuli for academic misconduct (e.g., plagiarism and *e-cheating*, see Dawson, 2021). Modern writing is often data driven, based on research, but burgeoning information across the web has stimulated many writers to draw on falsifications of information that spread more rapidly and more expansively than ever before. Misinformation can be an insurmountable problem and should be of high regard when evaluating digital writing quality.

These hurdles and ethical considerations, along with both traditional and contemporary views towards digital writing quality are important for equipping the field with a comprehensive and inclusive characterization of the concept, or even phenomenon, of digital writing. The research territory is wide open; we only provide here several questions in an attempt to suggest a few directions and to spark interest.

- To what extent should domains of knowledge be expanded, taught, and assessed to cover multi-/digital-literacy development and performance as dimensions of digital writing quality?
- How can digital writing quality be evaluated for communicative success and genre efficiency when multidimensional digital products are divergent from conventional genres?
- How can educators be prepared to evaluate digital writing quality given long-standing concerns about the non-stable development of technology across time?
- How does the digitalization of writing change the social nature of the writing process and feedback provision? In other words, is text composition and evaluation of writing quality only meant for individuals?
- How can students and educators best work with Artificial Intelligence-informed writing systems to improve writing quality?

With these questions in mind, product versus process, expression versus substance, complexity/accuracy/fluency versus meaning, generic versus genre diversity are all assumptions about writing practices that warrant unpacking, if assumptions should

be made at all. Otherwise, what is valued and/or assumed in regard to writing quality may not be what is operationalized when designing digital classroom tools, many of which integrate formative and summative assessments of writing. While much is yet to be uncovered, what seems to be known is that researchers, teachers, and other professionals must technologize their views towards writing quality in light of digital affordances. In turn, the developers of tools and assessments need to integrate what is known and valued about writing in digital environments as they design and develop the next generation of digital innovations.

5 Final Remarks

For all writing studies audiences, the progressive rise in digital spaces and telephony via mobile devices and tablets have transformed written performance, reshaping and repurposing sociality (how writers form personal relations) and spatiality (where writers form personal relations). These platforms offer new opportunities for extensive social engagement, enabling writers to develop their agency and self-concept. As a writer's agency grows, so might the influence of technology on the choices made to produce high quality digital products. These days, we see the influence of technology grow exponentially through advances in corpus-linguistic and computational perspectives. On one hand, these perspectives suggest that twenty-first century digital advances can provide experimentation in evaluating writing quality while controlling for extraneous contextual factors, as much as possible but in efficient ways. On the other hand, traditional perspectives have under-explored the essence of twenty-first century writing skills where multi-dimensional competencies and digital literacies are pertinent to engaging new audiences in new digital spaces. Moving forward, our understanding of digital writing needs to include the interplay between modes to foster genre innovation, multimodality, hybridization, and resemiotization. Multilingual and translingual views also recognize multimodality as serving populations where semiotic resources offer extended opportunities to not only reach new audiences and purposes but support the creation of meaning as a negotiated experience between a writer and reader. As traditional and contemporary perspectives begin to unite within writing studies, clarity in how digital writing quality can be defined can begin to form. This discussion about the nature of writing will move the field toward a future where educators are the drivers in producing and evaluating products with high digital writing quality in a world where writing is fully digitalized.

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