

Ideals and Realities: Exploring Usability in Born-Digital Scholarship

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BRIEF PROJECT DESCRIPTION

“Born-digital” scholarship—publications and resources created specifically for digital platforms—has become increasingly popular in fields across the arts and sciences due to affordances in augmenting content delivery and their promise for disseminating knowledge. Writing studies (broadly construed) as a field has long been a strong proponent of this approach to scholarly communication as evident in the various models forwarded by leading journals like *Kairos*, *Computers & Composition Online*, *Xchanges*, *Enculturation*, *Present Tense*, and *Technoculture*, as well as book series like the *Computers and Composition Digital Press*, *Digital Rhetoric Collaborative* and *#writing* by the WAC Clearinghouse.

While these scholarly outlets promote accessible digital literature (Ball & Eyman, 2015; Ball, 2016; Eyman et al., 2016), little attention has been given to examining the usability of published scholarship in such modalities. Our field can benefit from a systematic study of the design, delivery, and impact of born-digital scholarship through the lens of usability and user experience (UX) design. This project aims to juxtapose the ideals, assumptions, and intentions of writing studies researchers creating born-digital publications (i.e., webtexts) against the realities of use experienced by people engaging their published works.

Our project will make a case for organic applications of usability evaluation in the design and peer review of born-digital publications, and seek to facilitate such applications by making design resources and usability guidelines available to the born-digital scholarly community. To perform this project, we kindly request a grant of \$1,111.00 to support a student research assistant who will help curate and publish an annotated portfolio of born-digital designs, and assist in data collection and analysis for two studies outlining usability guidelines to inform the design of future born-digital publications.

PROJECT SIGNIFICANCE AND PUBLICATION PLANS

This project is of particular interest to SIGDOC because of the increased use and production of born-digital scholarship (e.g., webtexts) by its members. We draw from existing literature among technical and professional communication, rhetoric and writing studies, as well as human-centered design that have been produced by SIGDOC

researchers (cf. St.Amant, 2017) and beyond to investigate the common threads around digital scholarly communications. Set against the proliferating narratives about breaking academic genre conventions and expectations (e.g., Cushman, 2004; Wysocki, 2005), this project seeks to align webtext designers' ideals with what's practical (and usable). Our study will serve as a "reality-check" for authors of born-digital publications and, at the same time, provide design resources to help authors accomplish their rhetorical and UX goals.

Our project centers on the creation of a web-based, publically-accessible annotated portfolio that curates design exemplars of born-digital webtext features (e.g., navigation menus), design rationales for each feature obtained through interviews with webtext creators, and examples of alternative design features found across the variegated and interdisciplinary landscape of born-digital publications. The proposed budget will be used to hire a student research assistant for the spring 2020 semester who will help curate and publish the annotated portfolio as a web-based resource that can inform the design and evaluation of future webtexts across the born-digital community.

We will share our findings, including the annotated portfolio, with the SIGDOC community via the 2020 conference (phase I results), the 2021 conference (phase II results), and a summative report to *Communication Design Quarterly* that will outline the ideals and realities of born-digital scholarship and chart new directions for research.

METHODOLOGY

The proposed project involves three phases to examine, respectively, user requirements, designer intentions, and usability guidelines for born-digital scholarly publications:

Phase I, already underway, addresses the *realities* of born-digital scholarship: people's experience using born-digital publications for research and authorship. Using thinking-aloud protocol and simple application tasks (Van Waes, 2000), we examine the opportunities and constraints (i.e. usability problems) faculty participants' experience, and describe aloud, while using born-digital webtexts in a series of open-ended tasks. Second, using heuristic evaluation, we ask participants to assess webtexts across seven dimensions of usability: learnability, control, robustness, efficiency, consistency, experience, and accessibility (Nielsen, 2005). This study has already been approved by the Texas Tech Institutional Review Board (#2019-883).

Our findings, to be submitted to SIGDOC 2020, will outline usability requirements for born-digital publications. Our report will i) articulate the usability dimensions of

learnability, control, robustness, efficiency, consistency, experience, and accessibility in the context of born-digital scholarship, ii) elaborate criteria for each dimension using findings from the thinking-aloud tests and heuristic evaluations conducted with participants, and iii) describe general requirements for webtext design that address criteria established for the seven usability dimensions.

Phase II, beginning in spring 2020, will address the *ideals* of born-digital scholarship: designers' intentions for how people will use born-digital publications for research and authorship. In this second study, we will interview creators of born-digital webtexts to explore their design rationales for specific webtext features (e.g. navigation menus). Rationales include designers' rhetorical strategies, goals for user experience, and assumptions of user behavior, as well as practical exigencies of design work such as the availability of technical skills, time, and other factors shaping decision-making in born-digital design processes.

Central to Phase II will be the creation of an online, publically-accessible annotated portfolio of webtext features (Gaver & Bowers, 2012), their respective design rationales obtained through our interviews, and examples of alternative design features found across the variegated and interdisciplinary landscape of born-digital publications. For the spring 2020 semester we will hire a student research assistant to help create the portfolio by gathering design exemplars, curating them by category (e.g., navigation) and usability dimension (e.g., learnability), and publishing the resulting annotated portfolio online as a community resource to inform the design and evaluation of future born-digital webtexts. We plan to introduce the annotated portfolio, discuss its construction, curation and indexing, and communication of design thinking in born-digital scholarship, in a submission to SIGDOC 2021.

Phase III, beginning in summer 2021, will draw together our findings on the realities and ideals of born-digital scholarship in a report to be submitted to *Communication Design Quarterly*. The report will i) theorize usability in born-digital scholarship around seven dimensions— learnability, control, robustness, efficiency, consistency, experience, and accessibility— ii) open a dialogue around design exemplars curated for each dimension in the annotated portfolio to identify issues that emerge when comparing the ideals (i.e., creators' design rationales), realities (i.e., user requirements) and practicalities (i.e., production skills) of born-digital scholarship, and, lastly, iii) discuss emergent issues as directions for future research, including, for example, facilitating usability evaluation in born-digital authorship and peer review processes.

BUDGET OUTLINE

Item	Description	Cost
Student researcher/designer	<p>We will hire a student assistant to assist with data collection and analysis in this research. The student will also help design and build a public-facing annotated portfolio to share our findings.</p> <p>The student will be an undergraduate enrolled at Texas Tech University. The student will learn about UX and user-centered design through this assistantship.</p> <p>The student will work a total of 100 hours in Spring 2020 semester (10 weeks at 10 hours/week) at a pay rate of \$11/hr.</p>	<p>\$11/hour x 10 hours x 10 weeks + Fringes at Texas Tech University (1% of pay)</p>
Total		\$1,111.00

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