History-Specific Information Literacy in the Undergraduate Classroom

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IN 2012, Dominique Daniel observed an ambivalence from historians towards digital research practice. Daniel argued that historians "have yet to understand the full potential of the new information technologies and to assess their benefits and drawbacks."[1] Writing in these pages, she reflected back on the attitudes of academics she surveyed in 2003, finding that they had not changed in nine years. Tim Hitchcock likewise identified "substantial problems for historians" in 2013, followed by Elizabeth Toon writing in 2019 that researchers' unconscious expectations provoke naïve and complacent practice in digital research.[2] These fears are not just confined to abstract discussion. A Stanford History Education Group (SHEG) study recently concluded that historians' ability to search for and evaluate information retrieved from online environments is poor.[3]

This paper asserts the value of integrating information literacy (IL) processes and competencies into historical research and teaching as a potentially transformative yet consistently overlooked solution to such concerns. I argue that historians should acknowledge the benefits that IL—and, specifically, awareness of IL models—produce for teaching practices. First, this paper highlights that while

historians are equipped to overcome the myriad complications of online and digital research, faculty can do more to instruct such good practice among others. I additionally argue that historians have a responsibility to incorporate IL instruction into their curricula more frequently, but recognize that adopting this as a widespread practice is currently hampered by the absence of a discipline-specific IL model that encompasses the particular skills required in historical research. Second, the paper evaluates Kim Baker's "Information Literacy and Cultural Heritage for Lifelong Learning" model as a potential discipline-specific IL model for use in undergraduate history classrooms.[4] Baker tailored this model for instruction in museums, libraries, and archives, but her work provides numerous opportunities to structure IL instruction around historical content. This paper builds on Baker's model, proposing a lesson plan that demonstrates how information literacy instruction can be successfully integrated into undergraduate history curricula.

Digital Research Practice and History Teaching

The need for effective and structured IL teaching in undergraduate history programs has intensified. Digital archival collections have revolutionized historical practice, providing global access to rare materials and allowing researchers to broaden their source base with the click of a link.[5] Platforms and interfaces can coherently present a rich tapestry of archival material drawn from multiple research methods, such as oral histories, newspaper articles, and written records.[6] Optical Character Recognition (OCR) software and ever-improving search engine functions alleviate the laborious demands of text-based research.[7] Intricate software embedded into archival platforms provides transformative analytical methods, manipulation tools, and extensive metadata to expand the possibilities of source analysis.[8] However, such possibilities also require intense self-reflection of practice. Potential obstacles to "good" history increase when sources are available in digital form, something that has provoked considerable alarm among digital historians, notably from Tim Hitchcock and Michelle Moravec.[9] There is often little oversight of—nor insight into—how digital content companies decide to collate, package, and distribute their chosen material.[10] This selective curation "appears most often based on ad hoc decisions or

on available funds" rather than on a standardized set of guidelines adhered to by all archives.[11] Arn Keeling and John Sandlos warned that, due to "decentralized and idiosyncratic digitization," quality and practices vary wildly.[12] The motivation for profit is a yet another calculation for historians wishing to determine how source material is presented,[13] while the arbitrary rearrangement of material by digital collators can "break the intertextual relationships of documents" and disrupt the provenance essential to historical research.[14] Platforms and interfaces also profoundly affect a researcher's task. Johan Jarlbrink and Pelle Snickars' study of digitized Swedish newspapers, for example, found that the digital encoding and OCR generation transformed the original source material beyond recognition and made the resulting material impossible to study.[15] Beyond this, there is a concern that digital archival collections simply cannot recreate the context provided by a physical archive. As Jon Rimmer et al. found, "Original documents will always have an authenticity and 'magic' about them which cannot be replicated by digital surrogates."[16]

These problems are by no means limited to historical research, but academic historians are uniquely equipped to navigate these issues. In fact, studies show that effective digital research practice across any discipline will reflect the best practice and traditional methods employed by historians' physical research practice. Donghee Sinn and Nicholas Soares' comprehensive investigation into the use of digital archives "found that historians showed the same general research behaviors when seeking and using a digital archival collection that they used, according to previous studies, when seeking and using original materials."[17] Experienced academics simply translate their existing research behaviors to suit online environments. Good online and digital research practice in any discipline exemplifies the professional research standards of academic historical practice.

Academic faculty should do more to actively disseminate their experiential knowledge and teach these skills, especially to their undergraduate students. Much pedagogical thought has been influenced by the misplaced presumption that twenty-first-century students are "digital natives." The term, coined by educational writer Marc Prensky in 2001, refers to "those born after 1984… who have been immersed in digital technologies all their lives," who presumably possess sophisticated technical digital skills and learning preferences for which traditional education is unprepared

and unfit.[18] These specific and even unique characteristics make digital natives different from "digital immigrants."[19] Assumptions about this generation has informed pedagogical development, with Prensky believing that "today's students *think and process information fundamentally differently* from their predecessors."[20] Wim Veen and Ben Vrakking similarly observed in 2016 that "a new generation of learners" had developed.[21] Paul A. Kirschner and Pedro De Bruyckere summarized that Veen and Vrakking assumed that these learners developed "without either help from or instruction by others, those metacognitive skills necessary for enquiry-based learning, discovery based learning, networked learning, experiential learning, collaborative learning, active learning, self-organisation and self-regulation, problem solving, and making their own implicit (i.e., tacit) and explicit knowledge explicit to others."[22] To the contrary, Kirshner and Bruyckere themselves argued that "there is no such thing as a digital native who is information-skilled simply because [they have] never known a world that was not digital."[23] Another report from SHEG in 2016 provided an exasperated summary: "Overall, young people's ability to reason about the information on the Internet can be summed up in one word: *bleak*."[24] However, there is some cause for optimism. As summarized by Daniel, Project Information Literacy at the University of Washington's Information School reported that students were "aware of the differences between the types of skills and resources required for academic and everyday research," yet also "were frustrated by the lack of guidance on the part of instructors or other academics."[25] In short, undergraduates expect teaching to cover digital research methods. They know that they need instruction in digital research and, more importantly, they know when they do not receive it.

History faculty do not yet appear to be involved in concerted efforts to teach their students about appropriate methods of digital research. Recent issues of *The History Teacher* include laudable and transformative approaches to teaching digital history; Doris Namala's use of digitized indigenous primary sources, Kelly Schrum, Nate Sleeter, Anthony Pellegrino, and Celeste Tường Vy Sharpe's development of hybrid history courses, and Yonghee Suh and Brian J. Daugherity's instruction in digital oral history are just some examples.[26] But such practices are not widespread. Examining surveys of historians over a twenty-year period, Daniel found

that academic faculty tend to believe instruction in such research methods is unnecessary, with "a strong culture of self-reliance among historians, who have developed their research skills by years of practice on their own."[27] My own limited case study in 2019 found that academic historians use digital archives to accrue material for teaching purposes, but do not necessarily extend this practice to build knowledge of how user interfaces and digital platforms affect analytical methods.[28]

Furthermore, it is apparent that historians' ability to navigate the rigors of digital research is not flawless. The aforementioned 2016 study from SHEG reported, "Historians and students often fell victim to easily manipulated features of websites, such as official-looking logos and domain names. They *read vertically*, staying within a website to evaluate its reliability. In contrast, fact checkers *read laterally*, leaving a site after a quick scan and opening up new browser tabs in order to judge the credibility of the original site."[29] Greater awareness of IL would spur better practice while also helping to disseminate vital skills in digital historical research.

Information Literacy in History

In order to responsibly integrate IL, we must recognize that there are multiple definitions of the term. According to the Association of College and Research Libraries (ACRL):

> Information literacy is the set of integrated abilities encompassing the reflective discovery of information, the understanding of how information is produced and valued, and the use of information in creating new knowledge and participating ethically in communities of learning.[30]

According to the Information Literacy Group of the Chartered Institute of Library and Information Professionals (CILIP):

> Information literacy is the ability to think critically and make balanced judgements about any information we find and use…[It] incorporates a set of skills and abilities which everyone needs…to discover, access, interpret, analyse, manage, create, communicate, store and share information…in all its forms: not just print, but also digital content, data, images and the spoken word. Information literacy is associated with and overlaps with other literacies, including specifically digital literacy, academic literacy and media literacy.[31]

Although John Buschman wrote assuredly that "assertions about whole new epistemologies and forms of cognition based on the latest consumer products are hollow and silly, and should disappear from professional literature," the importance of IL in twenty-first-century work and study is clear.[32] Richard Murnane, Isabel Sawhill, and Catherine Snow emphasized the importance of IL instruction in 2012, declaring that "Advanced literacy is a prerequisite to adult success in the twenty-first century," requiring not just reading comprehension, but also "the ability to use reading to gain access to the world of knowledge, to synthesize information from different sources, to evaluate arguments, and to learn totally new subjects."[33] Such skills, they argued, are now required for those "who wish to explore fields as disparate as history, science, and mathematics; to succeed in postsecondary education, whether vocational or academic; to earn a decent living in the knowledge-based globalized labor market; and to participate in a democracy facing complex problems."[34] Following the 2005 High-Level Colloquium on Information Literacy and Lifelong Learning held in Alexandria, Egypt and sponsored by the United Nations Educational, Scientific, and Cultural Organisation (UNESCO), National Forum on Information Literacy (NFIL), and International Federation of Library Associations and Institutions (IFLA), the "Alexandria Proclamation" declared IL as "a basic human right in a digital world."[35]

Full appreciation for the skills and knowledge required to be "information literate" is set out in a variety of IL models. These models fall into two main types: process models and competency models. Process models describe the method by which an individual recognizes their need for information, searches and retrieves appropriate sources, and then evaluates what they find. All process models build upon research into information seeking behavior. One example is the "Big Six Skills" model, developed in 1990 by Michael B. Eisenberg and Robert E. Berkowitz, which is still applied extensively. The Big Six Skills involve six steps or stages involved in information problem-solving:

1) Task Definition
2) Information Seeking Strategies
3) Location and Access
4) Use of information
5) Synthesis
6) Evaluation[36]

A more recent example is the "Digital Information Fluency" model, designed by the Information Fluency Project at the Illinois Mathematics and Science Academy, which involves "the ability to find, evaluate and use digital information retrieved online effectively, efficiently and ethically…[and] knowing how digital information is different from print information."[37] The Digital Information Fluency model is based around five summary questions:

1) What information am I looking for?
2) Where will I find the information?
3) How will I get there?
4) How good is the information?
5) How will I ethically use the information?[38]

In contrast to process models, competency models describe the skills and understanding an individual must demonstrate to be considered "information literate." One example is the "Seven Pillars of Information Literacy" model originally released by the Society of College, National and University Libraries (SCONUL) in 1999 and updated in 2011.[39] According to this model, information literacy is continually developed through Seven Pillars:

1) Identify
2) Scope
3) Plan
4) Gather
5) Evaluate
6) Manage
7) Present[40]

The variability in SCONUL's model is age-appropriate, flexible for individual development within "pillars," and presents robustly defined core skills and competencies suitable to a structured higher education package.

In another example, CILIP's "Information Literacy" model from 2018 tasks individuals with demonstrating competencies or understandings in eight areas:

1) a need for information
2) the resources available
3) how to find information
4) need to evaluate results
5) how to work with or exploit results

6) ethics and responsibility of use
7) how to communicate or share your findings
8) how to manage your findings[41]

The ACRL's "Framework for Information Literacy in Higher Education," adopted in 2016, determined six frames of awareness, "each consisting of a concept central to information literacy":

1) Authority is Constructed and Contextual
2) Information Creation as a Process
3) Information has Value
4) Research as Inquiry
5) Scholarship as Conversation
6) Searching as Strategic Exploration[42]

The malleability of IL instruction enables infinite alternative models. Jane Secker and Emma Coonan from Cambridge University Library proposed "A New Curriculum for Information Literacy" for the twenty-first-century higher education student, amalgamating existing frameworks regarding academic literacies, "new" literacies, media literacies, digital literacies, etc.[43] As Christine Bruce, Sylvia Edwards, and Mandy Lupton asserted, just as "there are different ways of seeing teaching and learning, there are also different ways of seeing IL."[44]

Information literacy has long been considered a separate and distinct discipline, with instruction the preserve of library professionals, but there are increasing demands for collaboration and integration across different fields. ACRL's Framework for Information Literacy in Higher Education urged that "Teaching faculty have a greater responsibility in designing curricula and assignments that foster enhanced engagement with the core ideas about information and scholarship within their disciplines."[45] Drawing on Roger Schonfeld's investigations, Dominique Daniel suggests that "history faculty may not value" the role library professionals play in the delivery of teaching support, especially as it relates to managing information.[46] Most current higher education IL models share the need to embed support interventions within existing academic curriculum. Secker and Coonan suggested ongoing training throughout a students' academic career that will "focus on the research process" and be "practical, engaging and transferable" within ongoing contexts.[47] Observing successful strategies in higher education, Ilene F. Rockman recommended "writing across the curriculum" to infuse IL schemes

within specific academic disciplines, widening responsibility "from the library to the entire campus community" and providing a natural complement to links between research and writing.[48] Trudi E. Jacobson also favored this approach to discourage the "implicit assumption" that IL competencies "exist as a separate part of the curriculum when, in fact, they need to be an integral part of the entire curriculum."[49] If nothing else, successful curriculum integration can forestall the tendency for "potential users [who] seemed stubbornly to resist…uptake of digital resources in the humanities" and opportunities to receive instruction in information retrieval techniques.[50] Undergraduate students need active teaching in IL, and it is the responsibility of historians to deliver this instruction.[51]

There are a number of benefits to integrating IL with historical research and teaching. IL models provide defined learning outcomes and step-by-step structures for designing IL interventions, but with enough flexibility for adaptation to various requirements and alternative scenarios. Directly exploiting IL models encourages students to become better historians and equips them with the skills needed to navigate digital problems of source retrieval and evaluation. Developing and using a history-specific IL model also creates a valuable opportunity for historians to become champions for an information-literate generation. As Robert Hellyer argued, the widespread assumption that "history and other humanities majors fail to prepare students adequately for professional success after graduation" should provoke more publicizing of the "job skills" that history courses provide.[52] Emphasising the widespread applicability of information literacy and then asserting that such skills have their natural home in historical research practice could do much to uphold the importance of history as a shaper of personal and professional lives.

Structured IL models can aid teaching faculty, but, as mentioned, existing models lack recognition of specific discipline literacies.[53] Most models of IL are generic and could easily inform the general skills requirements of history students. For instance, CILIP highlighted the importance of "knowing when and why you need information, where to find it, and how to evaluate, use and communicate it in an ethical manner."[54] David Bawden's explication of a 1989 report into IL by the American Library Association could easily be transposed to current undergraduate instruction, particularly in history, because among the most important skills historians must have are "evaluating information

found" and "using the information effectively."[55] Bawden further summarized Chrstina S. Doyle's emphasis on the need for "accurate and *complete* information"; identification of "potential sources of information"; and development of "successful search strategies."[56] SCONUL asserted that its Seven Pillars of Information Literacy model is "generic," and offers "lenses" that can be made appropriate to various academic contexts.[57] But discipline-specific IL models are necessary for precise skills instruction. While IL models consistently recognize the importance of context and source evaluation, they do not consider how historical setting, contested memories, and cultural diversity can shape the appearance of information. Those within the field express a desire for history students to develop a specific type of disciplinary literacy alongside their training in information research methods.[58] As Susan Goldman observed, the "literacy skills needed to acquire knowledge in one subject area, such as history, are quite different from those needed to acquire knowledge in other subject areas."[59] This is particularly true for history. Whereas some groups have identifiably "homogenous" needs, students in history draw upon a vast breadth of resources such as printed materials, physical artifacts, electronic resources, audio visual productions, and statistics. A 2013 study involving scholars of women's history found high demand for books, periodicals, manuscripts, newspapers and correspondence, as these scholars rely heavily on "nontraditional materials due to the paucity of archival holdings for their subjects of interest."[60] This general need applies to the digital environment, where humanities scholars often require a greater range of resources and search strategies than are necessary in other disciplines.[61] Historians deal with entirely different forms of information to users in other fields, working with physical and digital sources that are old and new.[62] Historians must therefore provide a different conception of IL from those in other fields.

This is complicated by a relative lack of insight into the information seeking behavior of historians. IL models essentially build on understandings of the way in which individuals identify an information need and proceed to retrieve and evaluate relevant materials to satisfy their aims. Research into discipline-specific information behavior exists, but T. D. Wilson asserted that "the concentration of interest is found in the health and medical sciences, computer science and information systems, communication and media studies, and psychology."[63] Other researchers have also

examined engineering in this context.[64] There remains comparably little understanding of the unique information seeking behavior of historians. It is commonly understood that humanities scholars, and historians in particular, possess unique information needs and research behaviors compared to peers in different disciplines.[65] Numerous research studies find that users of digital resources in the humanities demand a higher standard of quality from their material, which entails thorough evaluation and vetting of the origins and location of a source.[66] But with only Hea Lim Rhee's tentative investigation examining the phenomenon of historians' information seeking behavior in any depth, more research is required before rigorous, discipline-specific IL models can inform teaching.[67]

Baker's Information Literacy and Cultural Heritage for Lifelong Learning

One model that is suited to IL instruction in history is Kim Baker's Information Literacy and Cultural Heritage for Lifelong Learning.[68] Baker developed the model to facilitate learning in museums, archives, and libraries, with instruction in IL and cultural heritage occurring simultaneously. It emphasizes cultural sensitivity and the possibility that contested histories and memories distort information—an awareness of source context that is not present in other models of IL. Moreover, Baker's model highlights the importance of digital and media literacy by exploring questions of authenticity and representivity. In addition to its focus on lifelong learning and cultural heritage, this model addresses the independent learning, critical thinking, and text-based IL requirements ideally associated with an undergraduate degree in history. The sequence of processes Baker outlines—Discover, Learn, Evaluate, Create, Share, Feedback, and Modify—can perfectly structure task-based learning for an undergraduate history classroom. An example of this scenario would have students independently *Discover* a historical document, *Learn* and *Evaluate* the context of the information therein, *Create* and *Share* a summary of their findings, and then receive *Feedback* and *Modify* their approach. Importantly, the model is designed to be adapted for a range of learning environments, and Baker asserted that the model could allow for IL teaching to be easily incorporated into existing history teaching, which would limit the impact on teaching and student workload.

Baker's Core Processes and Tasks	
Discover	Facilitator's tasks: Provide tours of the learning sites, physical and virtual; provide instruction on searching and using tools of discovery; highlight the differences between print and digital carriers. Learner's tasks: Searching, using tools of discovery, including catalogs, finding aids and online search engines.
Learn	Facilitator's tasks: Facilitate the learning of the group, paying attention to any individual difficulties; outline moral, legal and ethical issues in the use of information, including privacy and data security. Learner's tasks: Read, listen, watch, absorb, make notes, integrate, summarize key points.
Evaluate	Facilitator's tasks: Provide training in critical thinking skills; facilitate group role-play in analyzing information; include media analysis. Learner's tasks: Critical analysis; question, deconstruct arguments; practice cultural sensitivity; note moral, legal and ethical issues.
Create	Facilitator's tasks: Provide training in basic writing, use of computers, PowerPoint, social media. Learner's tasks: Create and write a story of cultural heritage, using visual and audio material.
Share	Facilitator's tasks: Ensure a supportive and receptive environment for the presentations; provide further assistance in the use of social media, and media literacy. Learner's tasks: Orally present the story to the group, using PowerPoint; write a blog entry, or create a page on Facebook, link to them using Twitter.
Feedback	Facilitator's tasks: Ensure a supportive and receptive environment for the feedback; mediate when any negative feelings are experienced. Learner's tasks: Receive feedback on own creations; give constructive feedback to others on their creations.
Modify	Facilitator's tasks: Provide support for the modification process; note where the courses themselves may need to be adapted, modified and updated based on learner feedback. Learner's tasks: Modify the creations based on feedback, to add context or correct any errors.

Figure 1: Core Processes and Tasks for the Information Literacy and Cultural Heritage for Lifelong Learning Model. From Kim Baker, "Information Literacy and Cultural Heritage for Lifelong Learning," p. 4.

Baker's Information Literacy and Cultural Heritage for Lifelong Learning model is compelling for two reasons. First, it offers a perspective on information that accounts for the influence of contested history and memory, cultural heritage, and sensitivity to different social environments. IL models generally overlook the significance of these factors on the production of and access to information. While Baker primarily fit her model for use in libraries and museums, nevertheless, as Baker affirmed, "if a program of information literacy intends to present questions and exercises" to guide learners in the use of historical materials, it must account for bias, distortion, and exclusion in its projection of history.[69] The inclusion of this factor in the evaluation of information makes Baker's model unique and particularly well suited to IL in history. Baker also addressed a range of learning levels, identifying a division between old and young learners as a "*text* generation" and "*techno* generation," respectively. Using the model to improve "intergenerational literacies," Baker explained that her "*texttotechno*" provision is designed to "introduce to the *text* generations the world of technological media."[70] The intention is for libraries, archives, and museums to address the digital divide and teach "technological and media literacies" to older "*text* generations."[71] A corollary to this, therefore, is the need to "convey to the *techno* generations the value of text-based collections and cultural heritage."[72] While professional historians already possess sufficient experiential knowledge of physical archival research to navigate the difficulties of digital archives, students often do not. My proposition is that amending this model can incorporate *text* and *techno* literacy skills alongside one another, training students in the importance of physical research methods and empowering new historians to discover the continuing relevance of print media research methodologies by transposing such techniques to their digital research.

Texttotechno: An IL Instruction Outline

The following instruction outline exemplifies how the *texttotechno* approach to IL can be adapted specifically for history instruction. Its premise is that as history undergraduate students encounter a near-infinite suite of digitized archival collections, their quantitative informational needs are largely met. Regarding qualitative needs, instruction should therefore reside less in

where students can access resources, and more in their abilities to appropriately use digital material in historical research, particularly through the skills needed to retrieve and evaluate information from an abundance of potential sources.

Quantitative versus qualitative issues are especially prevalent with digitized newspapers. Historical research makes liberal use of newspapers as primary material and they are among the most popular source type for undergraduate research projects.[73] The rapid expansion of digital news repositories, such as ProQuest and Nexis, has received considerable praise for alleviating cumbersome historical practices.[74] Keeling and Sandlos observed that many modern scholars "appreciate the convenience, flexibility and novel methods" afforded by digitized historical reproductions.[75] However, in order to declutter the viewing experience and improve screen reading, platforms separate individual articles from the pages on which they originally appeared, which detaches stories from surrounding reporting or additional pages as they appeared in physical newspapers. This means that researchers viewing digital newspapers make evaluations on the content and purpose of particular articles without broader contextual knowledge of that day's events.[76] As a result, information is separated from its historic and cultural context. The following proposed instruction therefore intends to highlight two specific skills necessary for IL in historical research: 1) the importance of *lateral reading* (in keeping with the findings of SHEG) and 2) the necessity to account for historical context and sensitivity to contested memory.

This two-hour lesson was first delivered to final-year undergraduate history students at Newcastle University in November 2018 as part of their year-long dissertation research and writing project in the "Writing History" course. In "Writing History," students independently research and write a 10,000-word paper addressing an original historical question on a subject of the students' choice, supported with sufficient primary materials and engagement with relevant historiography. "Writing History" demands twelve months of independent work, supplemented with regular support and a series of workshops from academic supervisors designed to aid research and writing practices. This lesson assumes that undergraduate students determine their information needs based on the requirements of their assignments—specifically, the necessities in "Writing History"—yet also retain a broad and adaptable scope that could cater to disparate

learning styles.[77] It also intended to teach students to think about how they determine their information needs and develop the literacies required to navigate any future research difficulties they encounter. Therefore, this learning intervention was integrated with the standard curriculum design for this course, but appealed to the broader applicability of the subject content.

This lesson ensures that IL instruction does not add to faculty workload or replace other course aims, yet instead supplements, enhances, and supports existing learning outcomes in undergraduate history programs. Additionally, it allows IL instruction to use existing course materials or library provision. This style of intervention encourages and motivates student participation, as interest in digital literacy training improves when learners are given opportunities to "buy-in" to the operations and resources of their own institution.[78] This provides an added benefit of encouraging students to recommend that the library acquire resources that would benefit their studies.

The learning group consisted of six final-year undergraduate history students at Newcastle University. Ranging in age from 21 to 23, they were all native English speakers and possessed a minimum of three General Certificate of Secondary Education Advanced levels (GCSE A-levels), grades B and above. The environment allowed tailored and immersive support from the instructor while also facilitating group work and discussion. In this outline, the instructor and students had access to PowerPoint facilities, a projector, computer workstations, desks, and room for groups to maneuver themselves. Accessibility requirements should dictate the intervention, and the lesson plan can be amended to suit any and all needs. For example, the instructor could print the required news articles and relevant newspaper pages in advance and distribute these as an alternative to screen reading or impromptu research.

Class Outline

This learning intervention ultimately tasks students with retrieving and evaluating a limited piece of information that has been stripped of surrounding context by using the digital newspaper platform available through ProQuest. In preparation for this task, the instructor begins by providing learners with a physical newspaper, guiding them to one particular story, and asking them to extrapolate all they

can from the material within the entire newspaper. The expectation is for students to draw upon surrounding stories, ads, letters, comments, photographs, editorials, and headlines when evaluating the importance and meaning of the selected stories. Following this exercise with a physical source, the class is then given access to a digitized news article that has been isolated from the rest of the newspaper from which it originated (such is the current design of the ProQuest interface). Students are then gradually introduced to surrounding context and stories to emphasise the importance of retrieving and evaluating further material. It is an iterative lesson that repeats the first three steps of the *texttotechno* IL model (Discover, Learn, Evaluate) to ensure students understand the limitations of digital research and how methods of physical research can be applied to online platforms. At the end of the class, students demonstrate their ability to apply contextual evaluation to digitized news articles, create and share historical analysis based on their findings, and engage in group feedback to modify their future practice.

Task 1 (Physical Newspaper)

a. The instructor breaks the class into groups of three and provides each group with the same newspaper. The instructor guides them to one particular article and assigns them the task of explaining the story, its historical significance, and its meaning based on the rest of the day's events. Students work through each step of the *texttotechno* model (Discover, Learn, Evaluate, Create, Share, Feedback, and Modify) to complete this task.

Task 2 (Isolated Digital Newspaper Article)

a. **Discover**: Using a smartphone or a PC, students retrieve a newspaper article through ProQuest (note that the online article is displayed separately from the surrounding newspaper page on which it initially appeared). Students are encouraged to use the search engine's filters and to note the specific keywords they are using to retrieve the article.

b. **Learn**: Students read through the article and summarize its contents.

c. **Evaluate**: In groups, the students then deconstruct the importance of the article and, despite the limited information, attempt to explain the historical significance of the article as well as their understanding of how the contemporary context shapes the story.

Task 3 (Full Digital Newspaper Page)

a. **Discover**: The instructor directs students to navigate through the tools of the online platform and locate the full page where their chosen article appeared. Having located the original article within the page spread, they move onto the next step.

b. **Learn**: Students read through the initial article once again, as well as the surrounding articles, ads, comments, etc. from the page on which it appeared.

c. **Evaluate**: Students analyze the article once again, now having reading *laterally* across the whole page to draw understanding and context from surrounding stories. Students must explain whether their perspective on the article changes with more information.

Tasks 2 and 3 ask students to evaluate an article based on limited contextual understanding. Having developed their skills of information retrieval and gained awareness for the importance of reading laterally, they move to a phase of independent research that completes the *texttotechno* model's sequence.

Task 4 (Entire Digital Newspaper)

a. **Discover**: Students are now unleashed to use whatever navigation tools they wish to read through the entire newspaper. They are tasked with finding any piece of information that can improve their understanding of the initial article.

b. **Learn**: Students read the original article once more alongside the entire suite of stories, ads, comments, letters, editorials, etc. at their disposal.

c. **Evaluate**: Students analyze and evaluate the original article one final time, situating it within the entirety of that day's news. They are then asked to consider how the detached presentation of news articles affects their ability to appropriately evaluate, analyze, and contextualize historic news stories.

d. **Create**: Students use their original article to explain their knowledge of a historical event and its surrounding social, political, cultural, economic, etc. circumstances. They are encouraged to cite surrounding stories, events, and perspectives when describing this reporting.

e. **Share**: Students share oral presentations of their understanding to the rest of the group. The instructor can shape the mode and form of these presentations.

f. **Feedback**: Students both give and receive constructive feedback on their creations.

g. **Modify**: Students consider the feedback they have received and how it reflects on their research practice. They make tangible recommendations for how they can improve their practice.

Conclusion

Greater awareness for information literacy among history academics will reap numerous benefits, especially by helping historians navigate digital research platforms, and it is increasingly apparent that teaching faculty must also use opportunities for IL instruction in classrooms. This article recognizes some difficulties in this at present, not least in the absence of discipline-specific IL models. The profession should work closely with library professionals to determine the information seeking behavior of historical researchers with the goal of producing a more authoritative and rigorous IL model in history. As a bridge to achieve this goal, adapting Baker's existing Information Literacy and Cultural Heritage for Lifelong Learning for use in undergraduate history classrooms produces numerous benefits. The cultural heritage and discipline-specific foundation of the model allows IL instruction to be integrated into existing history curricula. In this example, the *texttotechno* model, based in historical academic practice and understandings of cultural heritage, provides a framework to design teaching around a set of core competencies in discipline-specific IL. This suggested lesson can be used as a template for classroom activities that can be embedded within existing curricula—a very attractive aspect of information literacy training.

Notes

1. Dominique Daniel, "Teaching Students How to Research the Past: Historians and Librarians in the Digital Age," *The History Teacher* 45, no. 2 (February 2012): 261.

2. Tim Hitchcock, "Confronting the Digital: Or How Academic History Writing Lost the Plot," *Cultural and Social History* 10, no. 1 (2013): 9-23; Elizabeth Toon, "The Tool and the Job: Digital Humanities Methods and the Future of the History of the Human Sciences," *History of the Human Sciences* 32, no. 1 (February 2019): 83-98.

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Appendix A: Outline of Lesson Plan

Time	Instructor Activity	Learner Activity
0:00	• Register and icebreaking • Instructor sets out lesson plan, aims, and objectives	• Confirm attendance • Converse with instructor and classmates
0:10	**TASK 1 (PHYSICAL NEWSPAPER)** • Separate students into groups of three • Disseminate physical newspapers and direct students to evaluate the context of a particular news story	• Watch and listen • Complete task as set out by instructor
0:15	• End Task 1: Discussion and feedback	• Report back their findings • Contribute to class discussion • Take notes
0:20	**TASK 2 (ISOLATED DIGITAL NEWSPAPER ARTICLE)** • Introduce ProQuest and explain use of newspapers in historical research • Ensure provision of technology • Explain Task 2 and distribute explanatory handouts if required	• Watch and listen • Take notes • Break into groups • Study handouts/watch and listen to instructions
0:25	• Guide students as required	• As a group, retrieve and evaluate news article on smartphone or PC • Converse with group; participate in activity
0:35	• End Task 2: Discussion and feedback	• Discuss as a class; feedback, listen, ask • Take notes

Time	Instructor Activity	Learner Activity
0:45	**TASK 3 (FULL DIGITAL NEWSPAPER PAGE)** • Explain Task 3 • Guide students through navigation to the full newspaper page • Supervise and support students as required	• As a group, retrieve and evaluate news article and full page on smartphone or PC • Converse with group; participate in activity
0:55	• End Task 3: Discussion and feedback	• Discuss as a class; feedback, listen, ask • Take notes
1:05	**TASK 4 (ENTIRE DIGITAL NEWSPAPER)** • Explain of Task 4 • Guide students through navigation for entire newspaper • Supervise and support students as required	• Evaluate news article and full newspaper on smartphone or PC • Converse with group • Create an oral presentation to describe their interpretation based on the full contents of the newspaper
1:30	• End Task 4: Discussion and feedback • Oversee informal presentations of findings • Emphasize the importance of information/digital literacy, retrieval, and evaluation	• Participate in presentations • Discuss as a class; feedback, listen, ask • Take notes
1:55	• Sum up, feedback, and key points • Ask students to consider ways to change their practice • Direct to further resources – library, authoritative sites, etc.	• Discuss as a class; feedback, listen, ask • Take notes • Prepare ideas for improved future practice