Improving online source analysis in history education: Trialling the Ethos model

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Abstract: This paper reports on the findings of a study that compared models of online source analysis. It is argued that there is disconnect between print-based (classical) approaches to teaching online source analysis in history, and how students are informally analysing online information. It will be argued that this disconnect makes it difficult for students to effectively analyse online sources containing false and misleading information. In order to address this issue, formal web-based approaches to online source analysis need to be developed and evaluated. The paper puts forward Shane Borrowman's (1999) application of the Aristotle's concept of Ethos as a framework through which online source analysis can be formalised, and student critical awareness can be activated. The study was conducted with Australian senior high school students, who evaluated Holocaust denial websites before and after an intervention. The responses in each case were compared, and it was found that formalising students' web-based models of analysis significantly increased the depth and criticality of their engagement. This paper contributes to the debate on how to most effectively activate student critical awareness when analysing online historical sources.

Keywords: History teaching, online education, Holocaust denial, source analysis.

Introduction

I have always taught my History students to be critical with online sources. I teach them to look at authorship, to check references, to consider attribution, to corroborate with other sources, to determine relevance, and to explore perspective. These are, after all, the criteria listed on many of the online source analysis scaffolds published for History teachers to use. As such, I felt that the way I was teaching my students to evaluate online sources was sufficient. That was, however, until I received a paper from a senior student on the life and achievements of Albert Speer.

The paper on Albert Speer was well written, and referenced with a range of reputable print sources. Despite this, about half way through, the paper began to change in tone. It began to argue that Speer's claimed ignorance of the specifics of the Holocaust was, in fact, evidence that the Holocaust, as it is currently understood, is an exaggeration. It argued that the systematic, large-scale killing of Jews and other minorities never happened. Somewhat alarmed, I ran some of the text through Google to see if I could determine its origin. I found that the student, when conducting online research, had taken information from the Institute for Historical Review (IHR), which contains Holocaust denial material (Anti-Defamation League, 2005). The student had not cited this reference in their paper. A little confused as to why this bright student sourced information from IHR, I took the time to check the site myself. I found it to be quite professionally developed, with correct academic formatting, referencing, links to

resources, links to other websites that corroborate the views of the IHR, bibliographies containing reputable sources, and even a downloadable periodic journal. In short, I found that this website ticked many of the boxes on the source evaluation checklists I had provided students for online source analysis. Yet it was not a reliable historical source. The whole episode got me thinking: what does one do if unreliable websites simply manufacture the criteria we look for to signify reliability? What happens when unreliable sites follow academic referencing conventions, use primary sources, contain reliable sounding references and a bibliography, are formatted like other reputable sites, and are linked to a range of other sites that reinforce their message? How do we equip students to analyse websites that contain false and misleading information packaged to look credible? I was of the view that a new approach to online historical source analysis needed to be developed, and it was in an attempt to address this important issue that the following study emerged.

Credibility Assessment Online

Research suggests that many Internet users display poor understandings of how to locate and evaluate information online (Eastin et al., 2006; Kafai & Bates, 1997). Due to the complex and multi-layered nature of web-based information, individuals generally do not engage in rigorous or time consuming information evaluation processes but, instead rely on superficial factors such as the website design and navigability to determine the quality and credibility of the content (Metzger, Flanagin & Medders, 2010). As Metzger et al. (2010) note:

> The internet presents a very different environment - one of information abundance - which makes traditional models of gatekeeper oversight untenable. In such an environment, people must defer to external sources of knowledge on a very large scale, resulting in a "radical externalization" of the processes involved in trust assessment. (p. 416)

Echoing these conclusions, a Stanford University study found that 46% of web users believe that the most important factor in establishing the credibility of a website is the 'Design Look'; other topics of importance included Information Design (28.5%), 'Information Focus' (25.1%), 'Company Motive' (15.5%) and 'Information Usefulness' (14.8%), while 'Information Accuracy' languished at 14.3% (Fogg, Danielson & Soohoo, 2002). A North American study conducted by Michael O'Sullivan and Thomas Scott (2000) found that the major factors contributing to student satisfaction in using the Internet were ease in usage, speed in usage, and convenience. Students have been observed to prefer browsing to systematic search strategies, examine only the first screen of most sites, perform only two or three inquiries per search, make quick decisions, construct answers from limited information, are satisfied with any somewhat-relevant hit, are unable to judge the quality of the information, and have a tendency to plagiarise (Todd, 2001). More recent studies indicate that it is not the website content alone that shapes the way users assess its credibility, but also the process by which users arrive at a site, including the use of search engines, branding, and referrals from within personal networks (Hargittai, Fullerton, Menchen-Trevino & Thomas, 2010). These studies of online credibility assessment are significant because they suggest that when evaluating information online, individuals tend to look less at the reliability of the content, and more at external factors such as the visual quality of the website and ease by which the site was found, for example its appearance in the results of a search engine query.

While this is an issue that touches on many areas of the school curriculum, History educators need to be particularly concerned. History is a contested discipline, and it is often used as a tool for communicating, promoting and legitimising a broad spectrum of views, including those that are racist, false and misleading. With many traditional publishers refusing to print such views, the purveyors of extreme material increasingly rely on websites for dissemination. Perhaps the most notorious example of this phenomenon is Holocaust denial.

Holocaust deniers seek to undercut, minimise, trivialise or deny well-verified knowledge about the Holocaust. Initially, Holocaust denial was a print based activity. However, the Internet has afforded many of those who deny this atrocity a fresh means of disseminating their material, and a number of deniers and denial organisations have been active in the online space. This study considered six Holocaust denial websites, chosen because they adopted a range of strategies to make their content appear credible. The first three websites, the Committee for Open Debate on the Holocaust (CODOH) (www.codoh.com), the Institute for Historical Review (IHR) (www.ihr.org), and David Irving's Focal Point (fpp.co.uk), all employ academic language and conventions. They also appeal to liberal ideals such as freedom of expression, and argue that all history is open to reinterpretation and that everyone has the right to freely espouse their ideas. The second three websites, Air-photo[1] (air-photo.com), Gary Lauck's website (www.nazi-lauck-nsdapao.com), and The Zundelsite (www.zundelsite.org), take a different approach, using colourful graphics, free games and anti-authority rhetoric to attract browsers. These websites, albeit to a lesser extent, appeal to freedom of expression as a way of legitimising their content. All of these sites are readily accessible using search engines, and can be located with seemingly benign terms such as 'Auschwitz Stories'. Holocaust denial material is within easy reach of most students. Given the issues associated with how individuals evaluate information online, how can History educators equip students to deal with these websites should they encounter them?

Print-based (Classical) Models for Online Source Analysis

Many of the criteria used in History classrooms to teach online source analysis are adapted from those used with traditional print-based sources. To illustrate this, I have included the following list of criteria from a grid in *Making History: A Guide for the Teaching and Learning of History in Australian Schools* (Taylor & Young, 2003, p. 136). Because of the impact and scope of this publication in Australia, the list can be taken as representative of the criteria used in many Australian schools:

- Locating Information
- Validation of sources
- Motivation
- Primary or Secondary
- Detection of Bias
- Assessment of relevance
- Distinguishing fact from opinion

More recent scaffolds, such as the one available in *History: for those new to teaching the subject* (2010, pp. 62-63) include additional criteria such as 'Links' and 'Decode the URL', but the majority of the criteria are still print-based:

- Decode the URL
- Identify the author or creator of the site

- Links (is the site linked to other sites related to the topic? Most quality sites link to other related sites)

- Purpose

- Currency

Could be unreliable	Should be reliable
Site produced by a private individual but no information is given about them	Site produced by well qualified individuals, e.g. from universities or respected journalists
Site where no information is given about the author or agency	Public organisation which has a clear ethical charter, e.g. Amnesty International
Site where no author or agency is shown	Government, educational sites or non-profit organisation and research sites
Site which uses racist, sexist or violent language to get its message across	Sites which present information objectively rather than emotionally
Site which biased or feature stereotypes, distortions and exaggerations	Sites which provide a statement of intent which will help you detect a point of view and bias
Site which takes extreme viewpoints without providing verifiable evidence	Sites which provide both sides of a discussion, supported by verifiable evidence
Site which is not dated.	Sites which are dated and recently updated.

Many evaluation scaffolds developed in the USA, Canada and Britain contain variations of the same basic criteria, and it becomes evident when examining these lists that they are essentially adaptations (in some cases a direct lift) of evaluation scaffolds developed for use with traditional print-based source material. The type of analysis facilitated by these classical scaffolds is effective when engaging with online information types that mirror those found in print-based sources, such as tables of contents, indexes, keywords, graphs, headers and titles, timelines, glossaries, photographs and classification graphics (McPherson, 2005). However the print-based nature of these criteria may limit their effectiveness; the way individuals are evaluating information online, and the strategies websites use to make their content appear credible, are inconsistent with traditional criteria. It is proposed here that in order to address this issue, additional criteria need to be developed so that students can more accurately assess the quality and validity of selected websites.

A Web-Based Model for Online Source Analysis

The research considered earlier, whilst highlighting the poor understandings of individuals when it comes to analysing online information, also indicates that students are already deploying web-based criteria in their analysis. The fact that students rely on how they located an online source (Hargittai, Fullerton, Menchen-Trevino & Thomas, 2010), or the quality of its design and technical features (Fogg, Danielson & Soohoo, 2002), is evidence that they are using a set of informal criteria for online source analysis. That many studies have found these informal criteria to be inadequate for research work speaks to the need to develop formal models that can help to activate critical awareness. In response to this, Metzger (2007, 2010)

has argued that for any web-based model of analysis to be effective, it needs to focus on the structural, textual and procedural features of web-based sources. As such, it is these features, along with considerations for how digital historical sources differ from print-based historical sources (Lee, 2002), that determined the criteria that were selected in the study. The criteria are: *Access*, which refers to the sheer volume of information available to those browsing that has not been filtered by traditional gatekeepers. *Hypertext*, through which websites create information pathways not present in traditional source material. *Search Engines*, which function as the gateway to most online material and can be directly linked with credibility assessment (Hargittai et al, 2010); and *Multimedia*, which refers to the combination of textual, visual and audio media that is not present within print-based sources. These features of online source material also impact significantly on credibility assessment (Fogg et al., 2002; Hargittai et al., 2010; Metzger, et al., 2010; O'Sullivan & Scott, 2000).

This paper uses 'Ethos' as a framing concept within which these features can be operationalised into a set of formal criteria that aim to activate critical awareness. Ethos, as an umbrella term, refers to the strategies used by websites to make their material appear credible and believable. Ethos was initially conceptualised in Aristotle's Rhetoric (1991), and forms a part of classical rhetorical theory, however the concept has recently been applied to the study of digital information (Apostel & Folk, 2013). The salience of Ethos in the current study stems from its application to the analysis of Holocaust denial websites by Shane Borrowman (1999). Borrowman recognised the advantages that Holocaust deniers gain through their utilisation of the electronic medium, arguing that the intellectual freedom of the Internet "allows [the deniers] great latitude when constructing their Ethos - their credibility or authority" (1999, p. 45). This framing is broad, but flexible enough to accommodate the discreet elements of web-based information being targeted. One of the advantages of Ethos is that it is conceptually simple, making it a suitable tool for use in classrooms. It also encourages students to consider information sources in ways that are not evident in popular checklist models. Borrowman (1999) identifies two types of Ethos in his study: Academic Ethos and Techno-Ethos. *Academic Ethos* is the credibility that comes from being recognised as an expert in a particular area of knowledge, and can be achieved through the use of academic terminology, objective prose without a strong authorial voice, and by adopting formatting conventions common to credible sources. *Techno-Ethos* is the credibility constructed by websites through technical sophistication and appealing aesthetics (Borrowman, 1999).

Beginning with these two types of Ethos, four additional types were developed to reflect the distinct features of online sources considered earlier, including access to information, which was termed *Liberal Ethos*, the use of hypertext in persuasive ways, which was termed *Hyper Ethos*, the use of multimedia and appealing visuals to promote credibility, which was termed *Multimedia Ethos*, and drawing upon the credibility associated with search engine results, which was termed *Search Engine Ethos*. Each type of Ethos will now be considered in more detail as they relate to the Holocaust denial sites.

- *Liberal Ethos:* the appeal of Holocaust denial websites to notions of freedom of speech, anti-censorship, 'First Amendment' rights, and anti-authoritarianism. IHR, Focal Point, CODOH and the Zundelsite all utilised Liberal Ethos.

- *Hyper Ethos:* the denial sites' use of hypertext in a persuasive manner by promoting links with reputable websites and referencing other denial sites as authorities when making contentious knowledge claims. In the latter instance, internet users may become trapped in a circular world where the denier's truth claims are the only ones heard. IHR, and Zundelsite utilised Hyper Ethos.

- *Search Engine Ethos*: the denier's exploitation of the popular assumption that search engines are impartial indexes, and that ranking relates to reliability (Fallows, 2005). They actively engage in search engine optimisation so that their pages will be listed within the first few pages of a search. All denial sites utilised Search Engine Ethos.

- *Multimedia Ethos*: the denial sites' use of brightly coloured images, maps, audio, video and games to promote positive associations with the subject matter. Gary Lauck's site and Airphoto both utilised Multimedia Ethos.

In each case, Ethos is not concerned with technical aspects of online information such as the function of a search engine or hyperlink, or the colour of a page; it is concerned with how these features are used to persuade. As a tool for History students, Ethos is suitable for supporting the process of historical inquiry. Being concerned primarily with the critical evaluation of online source material, it aligns with the historical thinking heuristics Wineburg (1991) describes as sourcing and corroboration. Importantly, the function of Ethos in supporting historical inquiry is not analysing the primary sources embedded within the websites in isolation, but analysing the website holistically, including how sources relate to other elements on the page. In this way the Ethos model has not been developed to replace classical models of analysis, but to function as an additional lens that formalises the previously informal web-based strategies used by students. It was these six types of Ethos – Academic, Techno, Liberal, Hyper, Search Engine, and Multimedia – that were trialled with the participants of this study.

Study Design

The aim of this research is to examine the impact of formalising students' analysis of online historical sources using the Ethos framework articulated above. This was achieved by comparing student responses to Holocaust denial websites before and after an intervention in which the students were taught to identify different forms of Ethos. The study was conducted with 41 students from three senior Modern History classes located in Sydney, Australia (students in senior high school are typically aged 16-18). The school selection process was designed to accommodate a measure of socio-economic, ethnic, and academic diversity. No students had formally studied the Holocaust, though student responses indicated that they had all encountered information about the Holocaust in popular media, especially in film. The research was undertaken in one double period lesson.

The study consisted of two phases separated by a brief researcher directed presentation (the intervention). The first phase was designed to shed light on how students approached the evaluation of historical websites prior to intervention, and consisted of a class discussion where students were asked to write down the criteria they thought were important in online source evaluation. This was followed by a student evaluation of the Holocaust denial websites. Students were asked to locate some of these sites using a search engine. Of interest was the extent to which student analysis correlated with checklist models, and whether they deployed any web-based criteria in their analysis.

The intervention introduced students to the web-based Ethos model of analysis. This presentation considered Ethos broadly and in abstract, and did not apply the model to any of the Holocaust denial websites.

The second phase involved students re-evaluating the Holocaust denial websites. This data was compared with that of phase one. Of interest was the impact the presentation had on

student analysis, with the inference being that their informal approach to online analysis had may have begun to be formalised. Indicators included students' ability to critically deconstruct the various element of the website. Data was collected via an activity sheet in which students were asked to write comments relating to their views during the initial discussion, and their assessments during the first and second phases. Students were also asked to identify the types of Ethos they saw being deployed during the second phase.

The ethical requirements of the NSW Department of Education (then the Department of Education and Training), stipulated that all students who participated in the study were to be informed in the Participant Information Statement (PIS) that the websites being used contained Holocaust denial material. The nature of Holocaust denial, broadly including the false and deceptive claims made by deniers, was explained to students in the PIS. The methods of persuasion used by the websites were not discussed until the conclusion. In this particular research context some prior knowledge was a necessary precondition. However, despite the forewarning, the majority of students were still unable to detect denial material in three of the six sites viewed in phase one, which is a testimony to the effectiveness of the strategies used by denial websites. In addition, a key focus was on the way students critiqued the sites, and which approach produced the *most critical* engagement. This finding was not dependent on whether a student decided a site was reliable or unreliable, but stemmed from the reasons they gave for their decision.

Research Questions

A number of questions guided this study. The first was how students approached the analysis of online historical sources prior to the intervention. The second was how effective these initial approaches were in equipping students to engage with websites that contain false and misleading information. The third was whether formalising students' online analysis through Ethos produced a *more critical* engagement with the online sources.

Results and Discussion

One of the aims of this pilot research was to determine how students approached the analysis of online historical sources prior to the intervention. When asked to write down criteria important for evaluating online sources, many of the responses correlated with the traditional checklist models considered earlier. In two out of three schools, the highest rating reliability factor recorded was authorship. The other top rating factors included the sources used in websites, the use of objective language, the number of references cited, and the students' own prior knowledge. Also evident within the responses were a number of informal web-based criteria, including site appearance, consensus and layout. Most students did not list features such as search engines or hyperlinks. Based on the brief survey, students initially appeared to be deploying a formal-traditional approach combined with informal web-based models of online source analysis.

Another initial aim was to examine whether traditional print-based models and informal web-based models equipped students to critically engage with online sources that contained false and misleading material. The results indicated that for these particular cohorts, traditional models were not particularly effective. Despite being forewarned that the websites being used in the study contained Holocaust denial material, a significant number of students were still unable to identify Holocaust denial activities in three of the websites evaluated in phase one, and many rated IHR, CODOH and Focal Point as credible. CODOH for example, by arguing the need for open debate and freedom of speech, counteracted the appearance of

bias, with students commenting that the website was partially reliable because "the author writes that they are 'willing to be convinced I'm wrong about any or all of this'"; "CODOH stands for Committee for Open Debate Of the Holocaust and committees are professional and seem reliable"; and "there is an old man in the background and he looks smart." The same student, noticing that CODOH had a webmaster, commented: "[the] webmaster's merits have been accredited." The IHR achieved a similar result by including articles on legitimate 'liberal' topics, which gave a sense of balance. One student commented: "[IHR] communicate[s] anti-war views regarding Iraq" and "it is a fairly reliable website to show a differing perspective on past events." Another commented that IHR: "Looks professional, reliable, simple, easy, down to the point." By deploying objective language and academic formatting, IHR managed to convince the majority of students in the study that the information was factual. Other responses acknowledged the bias, but still rated it as reliable because the website drew upon sources and speeches for its information. Even the more extreme Zundelsite was tentatively rated as reliable by some students because of the nature of the content, with a student commenting that: "it appears to use factual evidence such as times and dates and it has a slogan and logo so it looks official." In this particular case the student's prior knowledge was accessed, commenting: "its content contradicts historical records regarding the Holocaust and I'd therefore say its unreliable." The results suggest that the classical models initially deployed by students were not entirely effective. It was clear from student comments that traditional criteria such as authorship, detection of bias, searching for primary sources, examining links, and searching for references were manipulated by the denial sites. Distinguishing fact from opinion was equally fraught, as in many cases what students were searching for was not facts or opinions, but rather forms of language *used* for denoting facts or opinions. Traditional criteria, as we have seen, were subverted.

The denial sites also manipulated participants' use of informal, web-based criteria. Every participant listed search engines, and Google in particular, as the primary means by which they conducted historical research online. One student, when asked how and where they searched for information online, wrote: "Type in keywords on Google and pick the most relevant site - usually the first or second." Another wrote "I use various sites from Google that are relevant to the topic and believe anything that is written." Through the use of meta-tags and other search engine optimisation strategies, denial websites are continuously attempting to improve their search ratings. Given student reliance on search engine results, this has proven a valuable strategy. Another common strategy was using the consensus of information on a particular topic as an indicator of its reliability. This strategy was also manipulated by the denial sites, which tended to link to other sites with the same point of view or ideas, giving the student the impression that these ideas are commonly held and, as a result, reliable. 'Consensus' featured prominently in participants' initial reliability assessments. In two out of three classes, the consensus created by hyperlinks was one of the highest rated reliability factors. More traditional uses of hyperlinks was also an important strategy, as a number of denial websites (IHR in particular) use links to reputable websites as a form of credibility by association. It was the IHR's link to antiwar.com (not a particularly credible website in and of itself) that prompted a student to describe the IHR as "balanced".

An interesting feature of the results obtained from phase one was that most students tended to use a mixture of traditional and web-based criteria for analysing online sources - the traditional criteria tended to be formal and had presumably been taught to them in school; while it is possible that the web-based criteria had been learned by students through their activities in non-educational contexts. It was also interesting that the lack of critical engagement with the web-based criteria (understanding how search engines work, how graphics and links can be used persuasively) undermined student attempts to use traditional criteria in a formal and critical manner. For example, denial sites that were well written,

correctly referenced, and linked to corroborating information, were rated as reliable because students were not aware of how hyperlinks and formatting can be used to manipulate a user's trust in the credibility of a website. An important finding from phase one was that if traditional and web-based models were to be deployed, they needed to be deployed in concert to be most effective.

This brings us to the second question that this paper set out explore: Did formalising students' web-based analysis with the Ethos model make any difference? In terms of reliability, some websites (in particular the more extreme site Nazi-Lauck and the amateurish site Air-photo.com, which appears to no longer exist) were rated poorly by students before and after intervention. However, the processes involved in their evaluation did change. Whilst the initial evaluation may have consisted of a gut reaction to particular types of language or symbols, the second evaluation revealed a greater depth of appreciation. For example, with respect to Air-photo.com students in phase one commented that the site: "Doesn't look reliable because it's so 'cartoonish' and so it looks fake and unreliable", "too colourful, doesn't look professional", "looks like children's story telling website", and "writing is too colourful and uncoordinated, layout is unprofessional, there is no major heading, ugly colours, no borders, boring site-all the above reasons make it seem unreliable to me." This informal analysis contrasts markedly with the formal analysis that occurred during phase two: "[techno Ethos has been employed through] visual appeal-images of green grass and bright blue day" and "blue skies, green grass, bright colours-evoking idea of the place being pleasant" in order to "reel in children/younger audiences." When considering Nazi-Lauck, students upheld their initial rejection of the content, but displayed a greater awareness of the purpose and target audience, with some students commenting that the use of Ethos was effective for a number of reasons including the free interactive games that would appeal to children, the "masochistic" "gung ho" appeal for young males, the drawings and pictures, and the multilingual component that would appeal to different audiences. In both cases, the Ethos model formalised student analysis of the online sources, and promoted significantly more critical engagement.

When considering student responses to the sites that received positive reviews in phase one the shift is more significant. Student responses to IHR in phase two shifted away from the positive accounts of phase one to reveal a more profoundly critical understanding. Students commented that IHR "appears to offer differing perspectives and general liberal ideals regarding anti-war movements", but in reality "have used them [the different modes of Ethos] to make IHR appear to be unbiased and offer differing perspectives" and "to appear qualified to give this information." When asked why the IHR had deployed particular modes of Ethos, student responses included "to subtly persuade people into being anti-Semitic, anti-Zionist and anti-Israel. To make people believe their interpretation of the news is the 'truth'", "to affiliate themselves with a popular anti-war movement, to support their argument both academically and liberally e.g freedom of speech on political issues" and "to present an intellectual argument for Holocaust denial." When asked about the effectiveness of the Ethos deployed by IHR, students responded that: "the speaker lists, journal, conferences [and] 'pamphlets' all make the site appear to be a reliable source of info"; "It is hard to see from first look that IHR is a Holocaust denial website. It appears to be neutral, with an unbiased perspective, where as some of the other sites [were] blatantly obvious that [they] supported Holocaust denial" and "[the] way [the] website is structured makes it appear as though it is a reliable source of information-[therefore the] information it provides is 'fact'." When compared with the responses from phase one, not only were students able to identify IHR as a Holocaust denial website, they also displayed considerable skill in unpacking both the strategies used by the site as well as the target audience. These responses also highlight a limitation of traditional models, which tend to privilege the critical analysis of website content over structure and format. In the case of IHR, structure and format is one of the primary

mechanisms of persuasion, a point well made by the student responses considered above. Similar responses were obtained for CODOH and Focal Point; students not only indicated that they now viewed these sites as unreliable, but also displayed a critical awareness of the methods of persuasion being deployed, and the intended audience of the sites. One student commented that CODOH was attempting: "to appeal to people who are 'liberal minded' e.g students, people who support a cause merely because it is under-supported" and "[to] make it seem intellectual, and therefore reliable", and that with Focal Point: "Liberal [Ethos] was used to gain the readers empathy as if to say this person's views have been held back by governments" and its purpose was: "to build sympathy with the audience in order to make revisionism appear okay". When asked, all students indicated that Ethos had been deployed effectively by IHR, CODOH and Focal Point.

Comparing the findings from phases one and two associated with IHR and CODOH is perhaps the clearest example of the disconnection between traditional models of online source analysis and the way individuals are informally evaluating information. Using traditional print-based and informal web-based models of analysis half the students who participated in the study were deceived. The denial sites consciously manipulated traditional criteria for establishing authenticity, such as the appearance of bias, clear authorship, and academic formatting and language. Having satisfied the traditional criteria, students were left to rely on informal web-based strategies, including appearance, consensus amongst websites, and search engines results. The denial sites also satisfied these informal criteria, and many students were left convinced. It was only after many students' informal web-based strategies were formalised that they were able to critically and thoroughly dissect these sources.

Conclusion

This study proposed that there is disconnect between print-based traditional models of online source analysis and the way students analyse online information. It was argued that this disconnect made it difficult for students to effectively evaluate online sources containing false and misleading information. Confirming this, it was found that traditional models, in the absence of formalised web-based models, did not sufficiently prepare a significant proportion of students for engaging critically with the websites presented to them. In some cases the informal web-based strategies deployed by students actually undermined the effectiveness of traditional approaches. After the intervention, when students' web-based models of analysis had been formalised using the Ethos framework, participants' responses were more critical and nuanced, and they became much more effective at analysing and dissecting the sources.

Although the empirical nature of this research was limited, the results suggest that relying on traditional models of source analysis, such as those found in Australian curriculum support documentation, may not be sufficient for preparing students to critique websites that contain false and misleading information. This small scale study suggests that formalising students' online source analysis with Ethos can increase the criticality of their engagement. It was also seen that formalising online analysis dovetailed well with the use of traditional models. The findings highlight an important aspect of History education that needs more critical attention, and points to the need for more research with blended models that combine print-based and web-based criteria with different types of historical websites and content.

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About the Author

James Goulding is a PhD-candidate in the Faculty of Education and Social Work at the University of Sydney. His doctoral research involves exploring how people read, understand and evaluate historical sources in different online contexts. James has worked on a number of research projects investigating teaching, learning and assessment in higher education and teacher professional experience.

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Endnotes

[1] This website has since been removed.