# Digital Scholarly Editions as Interfaces

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## A Hybrid Focus Group for the Evaluation of Digital Scholarly Editions of Literary Authors

Federico Caria and Brigitte Mathiak

#### Abstract

Digital scholarly editions (DSEs) are becoming more and more important for the work of scholars in the humanities. Yet, little is known about how the end users benefit from DSEs in contrast to paper editions, which kinds of interfaces for digital editions are the most useful and how the user interface of digital editions can be improved systematically. In order to answer these questions, we collected qualitative and quantitative data through a user study with a hybrid focus group of humanities graduate students. Open task scenarios were designed to explore the usefulness of three DSEs. Our key result is that lack of usability can be a serious hurdle for users to effectively use the DSE. This leads the participants to prefer books over the DSE, although they do value the added benefits the DSE offers in terms of additional content.

#### 1 Introduction

The use of digital scholarly editions is, hitherto, an underrepresented research area. While there are many reports on user studies for a variety of digital and physical resources, for example library information systems and digital archives, we found only few studies matching our topic of DSEs. Yet, even cursory inspection of the subject matter reveals that not all digital editions are ideal in their usability, especially considering the high standard young users have, having grown up using professional websites from giants like Amazon and Google<sup>2</sup>, which have all undergone extensive user testing and subsequent changes to the user interface. From watching what users do while interacting with the resources, e.g. through screen capture, and asking them

Most of the studies focus on libraries (see Elina Leblanc's study on the usage of digital libraries fontegaia.hypotheses.org/1902/, which will is part of the same proceedings) and gather quantitative data, mainly through surveys (see Dot Porter, "What is an edition anyway?" and "Medievalists and the Scholarly Digital Edition.")

Our engineers have many ideas for ways to make your results more useful. But we don't go on a hunch or an expert opinion. We rely on extensive user testing and have a rigorous evaluation process to analyze metrics and decide whether to implement a proposed change. In 2016, we ran over 150,000 experiments, with trained external Search Evaluators and live user tests, resulting in more than 1600 improvements to Search." ("Focus on the user").

how they felt about the interaction, we can gain important information on how to improve a website, which helps us explain empirical data about user experiences with DSE gained through questionnaires. We are studying the use of digital scholarly editions by observing what users do whilst interacting with different editions. For this analysis, we chose three digital scholarly editions, designed tasks specific to these editions, confronted typical users with these tasks, and analysed the quality of use in relation to efficiency and effectiveness. The details of this experiment and its results are the main body of this paper.

## 2 Related literature

The literature behind this study encompasses different fields; in what follows, we condense the most relevant resources to the design of our test. Past user studies (on print and digital) were primary sources of information, together with the research on the information seeking and research behaviour of scientists in the Humanities and beyond. We reviewed user studies conducted on digital humanities resources (Warwick et al., The LAIRAH project), digital tools for historians (Gibbs and Owens) and digital editions (Porter, "Medievalists"; Kelly; Visconti; Santos), most of which provided us with precious quantitative insight. Despite the fact that the challenges that animate the digital librarian might significantly differ from those faced by users of digital scholarly editions, we have gained much insight by surveying user studies conducted on print and digital libraries. A further path of investigation was opened by Unsworth and the literature regarding the concept of primitives of the scholarly research (Palmer et al.). Building from this, we surveyed studies of information needs and information behaviour (Barrett; Belkin; Chu; Ellis), which are key to task analysis. Then, we moved from Drucker to adapt usability (Nielsen) in its extended version (Bevan), to the evaluation of DSEs as knowledge tools. Other authors have contributed to shape our approach, due to their previous engagement with the topic or the particular depth of their perspective. Among these are Ruecker et al., and Cooper et al.

## 3 Usability extended

Bevan provides the framework to "extend" usability from easiness to usefulness, measured as the extent to which a product can be used by specified users to achieve specified goals in a specified context of use. We used Bevan's definition of usability as "quality of use" measured as effectiveness, efficiency and satisfaction. *Effectiveness* is the completeness and accuracy with which users achieve specified goals. *Efficiency* can be described as the speed (with accuracy) with which users can complete the

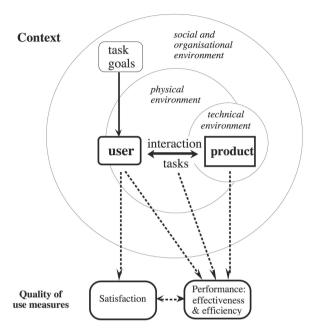


Figure 1: Extended Usability.

tasks for which they use the product. It is defined as the total resources expended in a task by ISO 9241<sup>3</sup>. *Satisfaction* is the comfort and acceptability of the work system for its users and other people affected by its use. An extended usability puts the usefulness of the website in the foreground where context, particular users, tasks and environments are all important variables of the assessment (see fig. 1).

## 4 The design of the experiment

In the following sections, we will give an overview of the general experimental design, the setting, the editions we studied, and why we selected them as well as, finally, the demographics of our focus group participants.

<sup>&</sup>lt;sup>3</sup> ISO 9241 is a multi-part standard from the International Organization for Standardisation (ISO) covering ergonomics of human-computer interaction.

## 4.1 A hybrid focus group approach

In a focus group, a small group of test subjects discusses their experience with the product and shares opinions, beliefs, and attitudes, while the moderator keeps the discussion on track. In our hybrid approach, we also give the participants questionnaires before and after the tests, and screen capture the task-performance, to collect both qualitative and quantitative data. The experiment's design is inspired by Nielsen's discount usability and guerrilla techniques regarding the recruitment of a limited number of participants, and the low time/cost of realisation; it can be potentially replicated more or less in any research context. Tasks are designed to let the users explore the media, retrieve content, compare records and interrelate information. The task scenarios are meant to reproduce a goal-oriented context of interaction, hence they are left open.

## 4.2 The setting

The experiment setting consists of a usability lab<sup>4</sup>, personal computers equipped with an open source tool<sup>5</sup> to screen-record the performance of the tasks, an audio recorder to capture the final debriefing, paper and pen. We gathered 13 participants in a usability lab, asked them to perform research tasks in a given amount of time and give their feedback (Appendix I). An example task was to retrieve various kinds of information<sup>6</sup> and compare the records. The feedback collected was of different kinds: a) a usability questionnaire, filled in for each edition after completing a series of tasks; b) an audio-taped discussion of the focus group. These data were coded together with demographics, the screen capture of the performance of the tasks and the participants' answers to the tasks to provide insight into design, usability issues and behavioural information.

#### 4.3 Editions

We tested three DSEs: (1) *Saint Patrick's Confessio*, edited by Franz Fischer and Anthony Harvey, published in 2011; (2) *Walden: A Fluid Text Edition*, edited by Paul Schacht, published in 2014; and (3) *Emily Dickinson Archive*, edited by Leslie A. Morris, published in 2015. In developing a methodology to encompass the largest number of cases, we had to deal with sampling very different websites. After surveying the online catalogues of digital editions curated by Sahle (v 3.0, 2008–2011) and Franzini (2015), we took three resources among those which offered different solutions for

 $<sup>^4 \;\;</sup>$  Digi Lab, Università La Sapienza, Rome.

<sup>&</sup>lt;sup>5</sup> Cam studio – camstudio.org.

<sup>&</sup>lt;sup>6</sup> An example task for Saint Patrick's Confessio is to search for a word in the translation, open the passage in the editio princeps and justify the editor's choice.



## SAINT PATRICK'S CONFESSIO

Read what St Patrick actually wrote in his own words

Home | Confessio/Epistola | Manuscripts/Prints | Special Features

## Confession

My name is Patrick. I am a sinner, a simple country person, and the least of all believers. I am looked down upon by many. My father was Calpornius. He was a deacon; his father was Potitus, a priest, who lived at Bannavem Taburniae<sup>[Nota]</sup>. His home was near there, and that is where I was taken prisoner. I was about sixteen at the time. At that time, I did not know the true God. I was taken into captivity in Ireland, along with thousands of others. We deserved this, because we had gone away from God, and did not keep his commandments. We would not listen to our priests, who advised us about how we could be saved<sup>[Nota]</sup>. The Lord brought his strong anger upon us, and scattered us among many nations even to the ends of the earth. It was among foreigners that it was seen how little I was.

Figure 2: Saint Patrick's Confessio Homepage.

comparison tasks and stood out for their quality in terms of intuitiveness, interesting features and lack of obvious bugs.

- 1. Saint Patrick's Confessio (www.confessio.ie/) is a large project encompassing different layers of Patrick's tradition. The resource offers an edition of the leading Patrician scholar Ludwig Bieler, enriched with four different apparatuses, good quality facsimiles and palaeographical sources, translations, and additional information (see fig. 2).
- 2. Walden: A Fluid Text Edition<sup>7</sup> (digitalthoreau.org/fluid-text-toc/) displays and compares the seven revisions of Thoreau's most famous work "Walden" with the Princeton edition. The edition is built around the Versioning Machine<sup>8</sup> (Schreibman, 2002, 2010, 2016), redesigned for "Walden" by Leah Root, which allows uploading all the versions of the text on the one-page interface and comparing the text simultaneously (see fig. 3)
- 3. *Emily Dickinson Archive* [www.edickinson.org] is a digital archive containing Dickinson's manuscripts and a lexicon to explore the poet's imagery. The project, which offers high resolution scans of Dickinson's manuscripts alongside their best-known transcriptions, was produced by HUP in collaboration with Harvard's Houghton Library, the Berkman Center for Internet & Society, Amherst College, Bo-

The genetic edition of Thoreau's "Walden" Digital Thoreau is part of a larger web resource comprising three digital projects related to the work of Henry David Thoreau.

<sup>8</sup> v-machine.org.

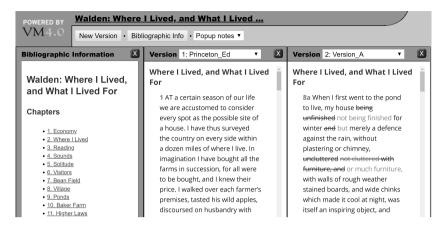


Figure 3: "Walden" Fluid Text Edition Homepage.

ston Public Library, and nearly a dozen other partners. The project shows manuscripts and transcriptions side-by-side (see fig. 4).

For *St. Patrick's Confessio* and *Walden: A Fluid Text Edition*, we were able to clear up some questions with the developers; unfortunately, that was not possible for the *Emily Dickinson Archive*, since the editors did not reply to our questions.

## 5 Participants

For this kind of quality test, university students are among the best participants that can be found. On the one hand, they are relatively easy to engage, on the other hand, being not involved in any DH projects they do not bias the evaluation. This is a key point since we are not interested in assessing the scientific quality of the projects, but their quality of use, which is only loosely connected to the user-perceived scholarly value. Since this kind of analysis involves some form of co-operative evaluation, requiring active intervention from an observer, in order to probe usability problems with the user we tried to minimise the noise emanating from having personal knowledge of the history of the DSE.

Our ideal tester, therefore, had only two requirements: (1) to be confident with the information tasks typical of scholarly research<sup>9</sup>, and (2) to be internet-savvy. Our

The information-seeking behavior of faculty members has "substantial areas of overlap" with graduate students, PhD candidates and researchers, according to Barrett (329). Similarly, Warwick (3) observes that the way scholars "use digital resources is, in fact, closer to the way that the average, nonacademic user interacts with digital or printed information. Most of us read for pleasure, may consult a wide

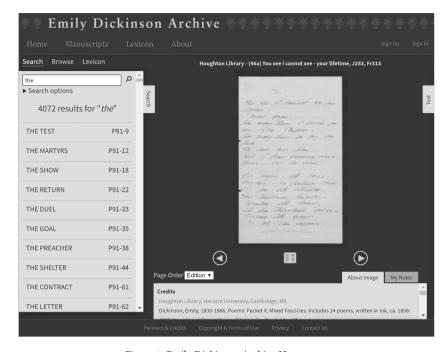


Figure 4: Emily Dickinson Archive Homepage.

participants ranged in age from 22–25, the majority of them were pursuing an MA in Philology and Literary Studies at the University of Rome, La Sapienza. Two were yet to receive their BA in Philology, but they were also experienced in scholarly research via their BA theses. Their computer skills ranged from medium to high, gauging from their self-evaluations on a scale from 1 to 7.

## 6 Results<sup>10</sup>

## 6.1 Satisfaction questionnaire

Participants were asked to fill in a satisfaction question naire for each DSE after completing the tasks (Appendix II). The question naire is adapted from WAMMI<sup>11</sup> and

range of information resources and don't conduct systematic keyword searches of recently published scientific literature; thus, a study of humanities user needs may also produce important results relevant to nonprofessional digital resource use."

 $<sup>^{10}\,</sup>$  The full dataset can be found at doi.org/10.5281/zenodo.803634.

<sup>11</sup> WAMMI is a professional website analysis service for measuring user experience - www.wammi.com.

Koohang, focusing on the need to capture participants' immediate felt experience right after performing the tasks. The main results of the study are that (a) the *Walden:* A Fluid Text Edition was deemed most satisfactory among users; (b) the perceived usefulness of the three editions is nearly 100%, as the questionnaire results show (see Appendix II).

#### Results

The *Walden* edition gained the highest score. Among the features that seem to distinguish *Walden* from the other websites are learnability, ease of use, and navigation. As Appendix II shows 10/13 said they felt efficient while using it; 9/13 felt they were in control. On the whole, our testers expressed an overwhelming preference for the *Walden* edition, due to meeting their expectations (11/13) and better supporting research (10/13), in particular through navigation (11/13).

#### Perceived usefulness

The perceived usefulness of all three digital scholarly editions was 12/13 or 13/13 (see Appendix II/8). All participants stated that the three websites were valuable academic resources, and that they would become proficient in their use, although the learnability of the websites was sometimes sub-optimal.

## 6.2 Best features and suggestions

During the focus group discussion, participants were asked to verbalise which function they thought was the best, and to suggest improvements. We compared their responses in order to gain deeper insight into what is desirable in a DSE as well as the major problems that our testers had to face.

St. Patrick's Confessio: the critical apparatus, the presence of translations, and the quality of the facsimiles were among the best features listed by the participants. Improvements were mostly related to accessing the content (to guidelines, the stemma, the key, etc.). Another recurring theme is the "search function" which "should be made more visible", or "included in the research flow". As for the apparatus, participants very much liked the structure, but would prefer it to be linked to the movement of the cursor over the text.

Walden: A Fluid Text Edition: The most important characteristics that we have found were "simultaneous comparison", "colours", and "clear"; the first two refer to the multi-version display and the colour coding, the last to guidelines and content. None of the participants understood the difference between pop up notes and inline notes. Among the suggested improvements were the need to add facsimiles, and the visibility of the button to open a new version window.

*Emily Dickinson Archive*: The best features mentioned were the ability to access materials from different perspectives, the presence of high quality facsimiles, and the lexicon. Participants suggested adding more guidelines, and the ability to compare between different versions of the text.

## 6.3 Retrospective probing

The final group discussions<sup>12</sup> of the panel were audio taped, transcribed and coded. Their aim is to expand issues relating to usefulness based on a set of open questions, where participants were asked to draw on their experience in navigating, retrieving, searching, and collecting information from the websites and to assess their efficiency in doing so.

The Walden edition offers the experience in terms of easiness, navigability, and control; it "is the most intuitive thing ever seen" (P1); "I felt less [like an] idiot" (P12); it offers the "most efficient way to compare" (P8); "it is definitely a resource that I would need" for my research (P5); if one needs to compare different versions "it is super useful" (P6); "no doubt it" is a good tool for research (P2). Participants found the colour-coding helpful as it allowed them to spot parallels across several columns or provided additional palaeographic information. The Walden edition was also preferred when it came to quickly accessing the texts and understanding their content. We should point out that only a few testers could correctly open a new window - this task is in some ways fundamental to explore the functionality of the comparison tool, which is one example of a multiple-version display that allows for simultaneous comparisons of up to 8 versions on the screen. Most participants did not find the button so that the moderator had to help, suggesting where to click while the task was going on (instead of opening a new browser window as many participants did). Apparently, this issue did not influence participants' opinions as to which was the best website.

The *St. Patrick* edition was mainly perceived as a complex tool. Our data show that participants did not feel that navigating the large hypertext, or accessing or retrieving information, was efficient. Phrases such as "[i]t was difficult to find" or "I could not find" occurred far more often in relation to the *Patrick* edition and the *Dickinson Archive*. While most participants "did not feel to find what I wanted", over half reported problems in navigating: "I did not understand how to move" or "didn't know where to go". "I had the impression of moving back and forward", "I could never get back to the stemma" (after finding it by chance) were also recurring expressions of frustration (see fig. 5).

We ran four groups with a maximum 4 participants each. The four discussions were audio taped, translated into English and analysed together, using atlas.ti - .

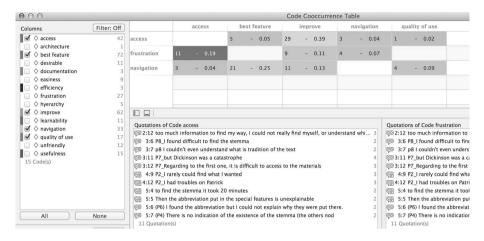


Figure 5: Coding - frustration and retrieval.

Among the closest matches between the terms "best features" and "access" were the *Dickinson* edition's multiple access feature (searching facsimiles for title and location of originals), and the lexicon, which is "useful to study the poet's style." On the whole, we got fewer comments on the *Dickinson Archive*. Participants mentioned the digital archive when talking about their research habits. In essence, according to them, the *Dickinson Archive* should rather be considered "the outsider, due to not being an [sic] scholarly edition": according to our testers, "resources like *Dickinson Archive* are something that we already have, big libraries are doing this!" which "is a nice approach! They make available things without interpreting so that philologists can use them". On more than one occasion, the group demonstrated their awareness of the added value that digitizing facsimiles and making them available represents to scholarly research, although "personally going to check manuscripts in the library is what a specialist would and should do". "Editors do not build digital archives, archives are 'only a preliminary activity' (on which philologists build editions)".

## 6.4 Comparison to printed editions

Participant's information-seeking and research habits were very much rooted in the print tradition. From this point of view, expressions like "digital editions are not the only instruments, they must be integrated with printed resources", or "I would go to a library to personally check manuscripts, not on a website!" or "tools like *Patrick* edition and *Walden* edition are absolutely marginal instruments" may perhaps be explainable. "We prefer to see texts like in *Dickinson Archive*", said one to stress the

important role facsimiles play in their research practice, where digital resources play only a small part. "Perhaps, putting facsimiles on the second (*Walden* edition) would completely change the website, it would become an extremely valid resource" said another. "So what if *Walden* edition would have facsimiles?" asked the moderator, "Then it could be very, very useful... although I would not entirely rely on it".

#### 6.5 Effectiveness

According to the extended usability definition, the quality of use is measured as efficiency, effectiveness and satisfaction. Thus far, we have focused on (1) data from the satisfaction questionnaire; (2) our testers' perceived experience recorded in the final discussion, where the moderator tried to further expand the testers' opinions through asking about their research habits and information seeking.

What has been said corresponds just to one measure of usability, or the tester's perception of the websites' usability, which should be contrasted with the record of what the participants had actually done. For this reason, we compared the data mentioned above with the answers to the tasks and the screen capture.

The tasks were designed to be open and to encourage the exploration of the websites' content and features. They obviously varied from website to website, which can introduce a bias, but this was the only way to carry out a comparative analysis of such different resources. Tasks were explorative or comparative and always involved extracting information; only one task per edition was interpretative. For example, our testers were asked to explore the website to find content, or navigate through different versions of a text to find differences and correspondences. The interpretative task involved, for example, justifying the editorial decision, or reconstructing a lost passage.

We noticed that effectiveness was considerably influenced by low usability in specific cases. Task effectiveness was generally higher on *Walden* than in the other websites. The interpretative task had an unexpectedly low task completion for all the editions except for the *Walden* edition. The screen captures showed the reasons for the low task completion, when specific information retrieval or comparisons were involved. The *Patrick* edition and the *Dickinson Archive* challenged the testers in retrieving information and comparing them. Participants had to manually retrieve portions of text in transcription and facsimiles, and they could not access (or re-read) the key when it was needed to figure out the relationship between the witness and the tradition. The *St. Patrick* edition's search function and the *Dickinson Archive*'s lexicon do not redirect to the exact passage but to the item, so that the screen captures are stuck on the transcription or facsimile, with the cursor constantly scanning the whole text in search of the result.

#### 7 Discussion

In our study, we have concentrated on the philologist's perspective, choosing participants with a background in philology, and setting tasks typical for philologists' work, such as comparing versions. In this regard, it might not be surprising that the participants preferred the *Walden* edition to the other websites, precisely because it offered valuable support to the painstaking and time-consuming process of finding answers. The *Walden* edition allowed testers to solve problems arising from comparing different versions of texts quickly. From this point of view, our testers were more satisfied with the edition that fit their goal, minimised the effort in achieving it, and had significantly fewer bugs than the others. We believe that this is a general lesson learned from the study: in order to be relevant to the user, the interface of the DSE must support the work process *better* than the book does, or it will not be relevant.

In our focus group discussion, it became clear that the participants' habits and conception of research are still very much rooted in print. For them, viewing original sources is fundamental. Yet, almost all of them preferred the only edition without facsimiles. This is quite contradictory. A superficial answer is that the *Walden* edition was user-tested, as we learned from the editor Paul Schacht. This means that all the minor inconsistencies that characterise the design of any application were presumably already resolved for *Walden*. Another answer might concern the balance between website objectives and user needs, which is something that characterises the *Walden* edition in particular, compared with other competitors. In being essentially geared towards improving efficiency in comparison, the *Walden* design cuts away almost all the other functions to focus on one, a one-page interface, where navigation and the "feeling of getting lost" that characterised the research experience of our testers on *St. Patrick Confessio* and the *Dickinson Archive* is reduced to minimum.

It is worth emphasising that the three editions studied are already of relatively high quality and usefulness compared to many of the other DSEs that we looked at. Yet, two of them fell short of the paper edition, despite offering additional features and content. How is that possible? We assume that there is a threshold of quality, both in usability and content, below which a DSE is no longer more useful than a paper edition – and may, in fact, fall short of it altogether. If this is the case, it may well be that users not only get frustrated and return to paper editions, but they also "learn" that DSEs are not useful for them.

For example, even though the *Patrick* edition "includes high-quality facsimiles", they are hard to use, and the website does not support any user interaction crucial for context, reading, retrieval, etc. Interaction is a fundamental part of how the brain

For instance, the editors would have probably fixed the linking on hover from apparatus to text, instead of the more natural from text to apparatus, which most participants disliked so much in St. Patrick's Confessio.

comprehends, learns, and represents, and if certain kinds of digital resources do not improve interaction, digitization might not surpass the threshold of usefulness required by specialists interacting with their texts. In particular, we face the challenge of building a larger information environment than ever, where users are supposed to acquire entirely new cognitive maps (different from system to system) without being able to rely on the basic methodologies of reading (e.g., page turning, footnote identification, index usage and so forth) and writing. In general, the solution so far has been to provide metaphors, the most common of all is, of course, the printed book (what Sahle defines "the page paradigm" 14). However, an interface that resembles a book and shows searchable facsimiles is what Google books already offers, good for lay users.

For scholarly resources to meet the needs of specialists, they should consider taking user interface development more seriously. As Dillon et al. expressed some decades ago, "if that [a book emulator] was all such a system offered it would be unlikely to succeed. It would just be a second-rate book." The transposition of the book into a digital medium must be critically reconsidered, starting with the user experience. Taking user-goals, -needs, and -processes into account leads to better interfaces, and better interfaces are needed to attract more users. Improvements in usability are not expensive and do not require arcane knowledge. Talking to actual users instead of editors when designing the interface (even before starting wire-framing or regular sessions to test the interface design) is easy and can make a big difference in how many people will be willing to use the DSE, rather than alternatives.

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"One will have to state of traditional editors, even in case they will become aware of the fundamental methodological issues of concern to them, they hardly ever had a chance to think of their editions without constantly having a printed page layout before their eyes. They will always have been conscious of the only possible end point (the printed book) - maybe even more than of the starting point (the documents of the transmission)." (Sahle Digitale Editionsformen 270, translated in Pierazzo 9).

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## 8 Appendix - The tasks

#### **Patrick**

A good part of your Latin language and medieval culture course is centered on the figure of St. Patrick's and his production. Thanks to a variety of online searches, you learn about a digital edition that could help you deepen various aspects of the subject. Enter the site and evaluate. What does the site offer? What is the edition? List some materials that seem useful for writing a short essay on St. Patrick's figure.

So go open the editio princeps

Open the Confessio text in Latin to read the text.

Who is the publisher? Also indicate the year of publication.

What kind of apparatuses does it present?

Check the stemma to keep in mind the succession of witnesses.

At this point you want to check the witnesses.

Go to paragraph 19 of the Latin text of Confessio (canonical version), where you read "Conuertimini ex fide ex toto strings to Dominum Deum meum, which nihil est impossible illi" and compare the transcription to witness C. Does it correspond?

Then you have to judge if code C is a major witness for text reconstruction, you have to check the year, bibliographic information, writing and other features (as specified below):

Where is "Bannaventa di Bernia"?

Open the canonical edition at the corresponding passage and justify the publisher's choice. The site offers images of manuscripts and print editions, then open the J. Ware edition and transcribe the name of the site as t is written there.

Reopen the canonical edition and check the apparatus. In the apparatus, you read the Greek *Phi* letter, which is an abbreviation. What does it represent?

#### Walden

You have been given the task of identifying some examples of critical apparatus alternative to Lachmann. One of these is adopted by geneticists, who study the writing process and the composition of the work. You get acquainted with a digital edition of an American philosopher, writer and poet named Henry Thoreau, mainly known for the autobiographical script Walden, where he investigates the relationship between man and nature.

Enter the site and evaluate. What does the site offer? What is the edition for? What is a fluid edition?

Now try to list the content of the site.

Open Chapter 5. Solitude. Then open the G version and version E.

Select "This is a delicious evening when the whole body is" in the Princeton edition and find out the differences between the versions. In version A, the text presents a variant: 'seems to be' which is coloured in gray. Why publishers use this color? Open the "pop up notes". In which versions does the author change from "looks to be" to "is"?

Return to the 'Table of Contents' and open Chapter 15 "Winter Animals". Select the sentence in version A: "with the most harsh and tremendous voice I heard of any inhabitant" and note the differences with the Princeton edition. Can you explain what happened in the composition process?

In what of the versions does this variation occur for the first time?

#### Dickinson

You have to write an essay about Emily Dickinson and manuscript culture. Dickinson's print editions are all posthumous and interpolated by publishers since Dickinson did not spread any of her writings (at least on her own behalf) when she was alive. According to some, there are various reasons that would lead to the hypothesis that the poet believed his work was completely "finished" in manuscript form.

Enter the site and evaluate. What does the site offer? What is the edition for? Who is the publisher? Also indicate the year of publication.

What kind of apparatuses does it present?

Check the stemma to keep in mind the succession of witnesses.

Find the manuscript corresponding to "Her Sovreign People". How many witnesses can you list?

Click the link to the manuscript, open the transcript, search for the year of the first publication in the box dedicated to the bibliographic information (specify below).

How many print editions are contained in this archive (specify the name)

Something curious about the first line, open the page containing the manuscript text of "Her Sovereign People" in full screen. Go back and check the transcript. Does it match perfectly?

Look for the meaning of the word "Sovreign". Note that the "sovereign" form is the equivalent of the term "sovereign". Look how many times the correct word "sovereign" is used throughout the corpus and indicate the number.

# 9 Appendix II - Results from the survey

	Patrick		Walden		Dickinson	
	agree	disagree	agree	disagree	agree	disagree
1. Everything on this website is easy to understand	4	9	7	6	3	10
2. This website looks professional	10	2	11	2	9	4
3. This website needs more introductory explanations	12	1	4	9	11	2
4. Remembering where I am on this website is difficult	5	8	1	12	5	8
5. I believe I could become productive quickly using the system	10	3	11	2	9	4
6. Using this website for the first time is easy	4	9	10	3	5	6
7. Overall, I am satisfied with the system	9	4	9	4	9	4
8. This website is a precious resource	12	0	13	0	12	1
9. This website helps me find what I am looking for	6	7	11	2	5	8
10. I can quickly find what I want on this website	5	8	9	4	5	8
11. I get what I expect when I click on things on this website	8	5	11	2	5	8
12. This website has much that is of interest to me	11	2	10	3	10	3
13. I trust this website	13	0	12	1	9	4
14. It is difficult to tell if this website has what I want	7	6	5	8	7	6

	Patrick		Walden		Dickinson	
	agree	disagree	agree	disagree	agree	disagree
15. I feel in control when I am using this website	5	8	9	4	2	11
16. This website seems logical to me	8	5	13	0	6	7
17. I can't find what I want on this website	8	5	4	9	6	7
18. The pages on this website are very attractive	9	4	10	3	9	4
19. I feel efficient when I am using this website	6	7	10	3	4	9
20. Learning to find my way around this website is a problem	7	6	2	11	6	7
21. This website has some annoying features	0	13	0	13	3	10