

Accessibility and Aldus@SFU: Exploring Multiple Avenues of Access for Digital
Exhibits and Academic Research

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ABSTRACT

This report analyzes four different avenues of accessibility as they pertain to digital exhibits and academic research. Using Simon Fraser University's Aldus@SFU Digitized Collection as a case study, this report looks at accessibility through the avenues of digitization, openness, publicness, and functionality to break down the current and future needs of diverse audiences. While accessibility is a complex topic, this report breaks down the needs of several different user groups and outlines what can be done to fulfill those needs and create content that is universally available and accessible.

Keywords: accessibility; digitization; functionality; online exhibits; Aldus@SFU; accessible research; UDL; open access; assistive technologies; academic research

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INTRODUCTION

Accessibility is a complex term that encompasses a plethora of different issues. It has four different definitions: 1) the quality of being able to be reached or entered; 2) the quality of being easy to obtain or use; 3) the quality of being easily understood or appreciated; and 4) the quality of being easily reached, entered, or used by people who have a disability.¹ Each of these definitions pertain to one avenue of accessibility that this report will discuss to analyze digital exhibits and academic research. Institutions often provide a selection of curated material online, such as digital facsimiles, online exhibits, and articles, with varying degrees of accessibility (in all its definitions) for different audiences. For the purpose of this report, there are four ways of determining the extent to which certain materials are made available online, namely via: digitization, openness, publicness, and functional accessibility. If all avenues are implemented, digital materials will be universally available. To reach any audience at all, however, content must first be made available online, where users can reach it with relative ease and convenience.

Digitization is the first avenue of accessibility. With digitization, which is the process of converting something to digital form,² it is now possible for anyone with the internet and no additional functional accessibility needs to access digitized content from all over the world. The alternative, which is walking through the doors of a library, university, or museum to look at the physical copy or artifact, is sometimes not possible—and often means international travel—and

¹ Oxford Languages, “accessibility.”

² Merriam-Webster, “digitization.”

the disadvantages of this option became especially apparent during the Covid-19 pandemic.³ Without digitization, the material cannot be open, public, or functionally accessible. Only people who can visit in person can see non-digitized material, and, even then, visitors might have to prove their eligibility to view rare or fragile library materials. While digitization is the most basic step, and arguably the most crucial, towards making material available to a wider audience, one must also consider the question of who may have access to these materials once they are digitized.

The ability to access material goes far beyond digitization once it is achieved. There is a stark divide between those who have unrestricted access to academic content (affiliates) and those who face access restrictions (non-members). Under the dominant publishing model, pay to read, institutions provide access to specialized materials to those who are willing to pay for it.⁴ Access to most research materials, then, is limited by what the institution or individual can afford. Open access publishing, which is an alternative model that is gaining traction worldwide, means a crucial step towards equal access to knowledge and research, regardless of institution affiliation or budget. Open access research not only encourages knowledge sharing but also works to accelerate crucial research and innovation,⁵ which is extremely beneficial in dire

³ Penn Libraries, "Penn Libraries' OPenn Service, A Digital Platform for Viewing Ancient Manuscripts," *University of Pennsylvania Almanac* 67, no. 34 (April 2021), <https://almanac.upenn.edu/articles/penn-libraries-openn-service-a-digital-platform-for-viewing-ancient-manuscripts/>.

⁴ Kelly Crowe, "Why does it cost millions to access publicly funded research papers? Blame the paywall," *CBC*, March 9, 2019, <https://www.cbc.ca/news/health/research-public-funding-academic-journal-subscriptions-elsevier-librarians-university-of-california-1.5049597>.

⁵ Belk Library and Information Commons, "Scholarly Communication: Benefits of Open Access," accessed May 23, 2021, <https://guides.library.appstate.edu/c.php?g=220070&p=1456674>.

situations like the Covid-19 pandemic. Once open access is achieved, it is important to consider the audience of the digitized material.

The third avenue of accessibility pertains to the publicness of the content provided. After the material is both digitized and open access, it is important to consider the audience and ensure that non-specialist visitors are given the tools to interpret the content. For digital exhibits, one focus of this report, that could mean providing additional contextualizing materials that explain what exactly the visitor is looking at, why the content is important, and how it can be interpreted. For research materials, this report's other focus, that could mean using plain language. It is not enough that visitors can access the information freely; if it is available, it should also suit the audience.

The fourth avenue of accessibility, and the one that should be present from the beginning, is the avenue of functionality. When developing websites, the Web Accessibility Initiative (WAI) notes that “it is important to consider the broad diversity of functional needs.”⁶ A variety of barriers exist for internet users, and that is why it is so important to ensure the functionality of online material for anticipated audiences. This is achieved in any number of ways, from implementing standard design principles to ensuring web content is configured for assistive technologies. Web functionality benefits people with a wide range of diverse abilities, and it is important to consider functional needs more broadly when looking to design online content.⁷

⁶ Web Accessibility Initiative, “Diverse Abilities and Barriers,” accessed May 29, 2021, <https://www.w3.org/WAI/people-use-web/abilities-barriers/>.

⁷ Web Accessibility Initiative, “Diverse Abilities.”

As a case study to look at all four avenues of accessibility—digitization, openness, publicness, and functionality—this report will use Aldus@SFU, a library-based digital initiative hosted by Simon Fraser University (SFU). Aldus@SFU is an online collection that was launched in 2015 to mark the 500th anniversary of the death of Aldus Manutius (ca. 1451-1515), one of Renaissance Europe’s most influential publishers, and the 50th anniversary of SFU. The website currently houses twenty-one digitized books that were printed by the Aldine Press between the years 1501–1515. The aim of the website is to bring Aldus’ legacy—his contributions to printing and publishing—embodied by these centuries-old books, out of the SFU Special Collections so they are available to people everywhere.⁸ These books, which are an example of some of the earliest printing technology, showcase Aldus’ remarkable contributions to the development of the book as we know it today. Much like the success of Aldus’ octavos, an innovation “that allowed scholars to carry books around and read them anywhere, not just in a library,”⁹ Aldus@SFU strives to make these books “portable” to modern audiences via the web. This report uses Simon Fraser University’s Aldus@SFU website, the digital home of SFU’s Wosk–McDonald Aldine Collection, as a case study to explore the necessity of accessibility, through four distinct but intersecting uses of the concept, as it pertains to digital exhibits and academic research.

⁸ Aldus@SFU, “About the Project,” accessed May 30, 2021, <https://aldine.lib.sfu.ca/the-project>.

⁹ Elisa Modolo, “The Fellowship of the Book: Manutius & Bembo in Renaissance Venice,” Aldus@SFU, <https://aldine.lib.sfu.ca/modolo-manutius-and-bembo>.

Part 1: ACCESSIBILITY AND EXHIBITS: THE AVENUE OF DIGITIZATION

The Shift from Shelves to Screens

The first, and most basic step towards making library collections accessible is the digitization of that content. While this report focuses on the accessibility of digital exhibits and academic research, these avenues of accessibility may apply to other content created or offered by learning institutions. The Aldus@SFU digital initiative was established through a partnership between SFU's Publishing department and the SFU Library's Special Collections and Rare Books department. The website houses twenty-one digitized books, with the promise of more on the way as funding and time allow.¹⁰ Much as Aldus reintroduced Greek classics to Renaissance Italy by printing them—and subsequently getting them into circulation—the Aldus@SFU project reintroduced these books to modern audiences through digitizing SFU's Aldines. These books are fully digitized and housed on the Aldus@SFU website, which is open access.

The development of digitization technologies—like 3D scanning and digital modeling, or, in the case of Aldus@SFU, JPEG-2000 photographic scans—has fundamentally changed the way scholars, students, and non-specialist audiences interact with manuscripts, books, records, and other analogue library materials. Materials that were once confined to libraries, museums, and other cultural heritage institutions are now increasingly making their way to the public via digitization.¹¹ Interacting with these materials no longer means a mandatory trip

¹⁰ In 2018, twenty-six new Aldines were digitized. This new set of books, and the associated metadata, will be added to the next version of the website.

¹¹ Peter B. Hirtle, "The Impact of Digitization on Special Collections in Libraries," *Libraries & Cultures* 37, no. 1 (January 2002): 51, <https://www.learntechlib.org/p/97356/>.

to the library or institution. Librarians and archivists are consistently making metadata available online for their collections, and are increasingly fully digitizing materials, thereby making the content available for select audiences to peruse from the comfort of their own home.

As a result of digitization, the once-solitary task of consulting rare books in the depths of an institution's library has now shifted to a more public, collaborative endeavour. Users can share ideas through website comments sections, online reading rooms, and other collaborative environments. These online spaces allow visitors to actively engage with digital exhibits, and other like-minded visitors, like never before.¹² Ideally, users are no longer limited by what they know or what they have read, but rather they have the opportunity to engage with the ideas and knowledge that others possess with relative ease, timeliness, and convenience.

With the ability to hyperlink, embed, and connect knowledge from many different sources and formats on the internet, there has also been a shift in how content is studied. Digital exhibits have metadata, which is “data that provides information about other data”¹³ and paratext, “material associated with but distinct from the main body of a book, movie, game, etc.”¹⁴ that can significantly change, add to, or influence the way a person interprets the content on a digital

¹² Liv Ingeborg Lied, “Digitization and Manuscripts as Visual Objects: Reflections from a Media Studies Perspective,” *Ancient Manuscripts in Digital Culture* 3 (May 2019): 15-16, https://doi.org/10.1163/9789004399297_003.

¹³ Merriam-Webster, “Metadata,” accessed June 14, 2021, <https://www.merriam-webster.com/dictionary/metadata>.

¹⁴ Oxford Languages, “Paratext,” accessed June 14, 2021, <https://www.google.com/search?q=paratext+definition&oq=paratext+definition+&aqs=chrome.o.69i59jol2joi22i30l4j69i60.13997j1j4&sourceid=chrome&ie=UTF-8>.

exhibit.¹⁵ Those consulting digital exhibits benefit significantly from the inclusion of metadata and paratextual elements. Digital exhibits are on display for a wider audience, and users can easily pull information they require from the extra data provided online. Key metadata such as title, place, date, creator, and other important details such as the location of the resource are often readily available alongside content on the digital exhibit. These details, some of which might not be apparent when handling the object in person, are summoned easily in an online space and create a more thorough picture of the material in question.

Benefits of Digitization

One benefit of digitization is how much the online presence of digitized materials, particularly when accompanied by robust metadata, assists with discoverability. Even though a relatively small proportion of library holdings are usually digitized, libraries and institutions often provide a selection of fully digitized works and basic metadata—which archivists consider an “essential phenomenon for electronic cataloguing”¹⁶—for the digitized, and sometimes even non-digitized material in the institution’s stacks. The online presence of these materials, no matter how basic, means that browsing library collections can happen almost exclusively online and increases the discoverability of content, with only a key word or two needed to bring it to the researcher’s attention.¹⁷ Whether a digital

¹⁵ Roswitha Skare, “The paratext of digital documents,” *Journal of Documentation* 77, no. 2 (February 2021): 456, <https://doi-org.proxy.lib.sfu.ca/10.1108/JD-06-2020-0106>.

¹⁶ Jiban K. Pal, “Metadata initiatives and emerging technologies to improve resource discovery,” *Annals of Library and Information Studies* 57 (March 2010): 44, https://www.researchgate.net/publication/256484108_Metadata_Initiatives_and_Emerging_Technologies_to_Improve_Resource_Discovery.

¹⁷ IFLA Rare Book and Special Collections, “Guidelines for Planning the Digitization of Rare Books and Manuscript collections,” (September 2014): 4, <https://www.ifla.org/files/assets/rare-books-and-manuscripts/rbms-guidelines/guidelines-for-planning-digitization.pdf>.

facsimile is informative enough for the researcher or not, having digital access to the material offers, at the very least, a preliminary look at it.

The possibility of protecting rare and/or vulnerable materials from unnecessary handling is another benefit of digitization.¹⁸ Though the digitized version cannot be a complete substitution for the real item in many cases, it is possible that having the material available online can be a step towards preventing unnecessary handling.¹⁹ Digitization can make rare materials available to more people. Both specialists and non-specialists—many of whom may not have access to the physical copy under any circumstances—have an opportunity to view the digitized items, even if it is through a screen. Depending on the nature of their research, scholars may benefit considerably less from digital exhibits—and the very presence of the material online could be used as an excuse to increase restrictions to physical copies²⁰—however, it is certainly beneficial to non-specialists, students, and other interested parties who may never have seen the material otherwise.

Limitations of Digitization

One of the main limitations of digitizing library collections is the loss of physical context when the material is viewed digitally. For books and manuscripts, the written text is just one of many elements studied. Equally important is what physical features can tell historians about societies, customs, and people of the past. With digitization, a lot of contextual features that appeal to the other senses are lost, or misinterpreted because the viewer is entirely removed from the

¹⁸ Lied, “Digitization and Manuscripts,” 25.

¹⁹ Lied, “Digitization and Manuscripts,” 25.

²⁰ Lied, “Digitization and Manuscripts,” 25.

physical object.²¹ There are some features of library materials that digital versions cannot convey, like the weight, smell, texture, and minute details like drops of ink.²² These features are almost impossible to discern or identify unless the object is physically inspected,²³ making the absolute reliance on digitized collections problematic, and practically impossible for some areas of study.

The cost of digitization is another significant limitation. Collections must not only undergo the digitization process, which involves creating high resolution images or scans, but the archivists must also consider the costs of integrating viewing technologies, creating metadata,²⁴ storing the large digital files, and decisions about which items have priority for digitization.²⁵ Some archivists choose to digitize certain materials to form curated online exhibits, much like SFU did with the Aldine collection,²⁶ and some will often accept digitization requests from scholars, who usually have to pay a fee (generally by securing a grant) to have the requested material digitized. No matter the avenue, however, the cost and time of digitization are certainly factors for institutions to consider when choosing what material, and how much of it, is digitized.²⁷ Digitizing everything in a library's collection is an ideal scenario, but it is not currently possible for institutions due to lack of funding, capacity, or both.²⁸ Rather,

²¹ Lied, "Digitization and Manuscripts," 26.

²² Lied, "Digitization and Manuscripts," 26.

²³ Lied, "Digitization and Manuscripts," 26.

²⁴ Penn Libraries, "Penn Libraries' OPenn Service."

²⁵ Northeast Document Conservation Center, "6.6 Preservation and Selection for Digitization," accessed May 29, 2021, <https://www.nedcc.org/free-resources/preservation-leaflets/6.-reformatting/6.6-preservation-and-selection-for-digitization>.

²⁶ Aldus@SFU, "About the Project."

²⁷ Penn Libraries, "Penn Libraries' OPenn Service."

²⁸ Penn Libraries, "Penn Libraries' OPenn Service."

archivists must be selective and digitize materials for specific exhibits or projects as funding and resources allow.

The “offline penumbra,” coined by Patrick Leary, is an extension of the problem of selective digitization. Leary suggests that there is an “increasingly remote and unvisited shadowland into which even quite important texts fall if they cannot yet be explored, or perhaps even identified, by any electronic means.”²⁹ The vast amount of information on the internet, and the ease and convenience it offers, had led to an increasing reliance on the internet as the main source for this information. Leary goes a step further, however, to suggest that this reliance will ultimately lead to disregarding or forgetting about material that does not exist, at least in some capacity, online.³⁰ Librarians and archivists, in Leary’s view, hold the key to a text’s very existence.³¹ It is up to their discretion, and the institution’s budget, to decide what texts get digitized and visibility online, and what texts are, essentially, rendered obsolete in their purely analogue form. While digitization makes a fraction of the world’s texts available to a wider audience than ever before, according to Leary, most of the material that is not digitized may fall obsolete as a direct result of the increased visibility of those texts chosen for digitization.³²

Despite the inevitable limitations, library material is more discoverable, more readily identifiable, and more widely available if digitized. This basic step provides the foundation upon which the other three avenues of accessibility are

²⁹ Patrick Leary, “Googling the Victorians,” *Journal of Victorian Culture* 10, no. 1 (Spring 2005): 13, <http://victorianresearch.org/googling.pdf>.

³⁰ Patrick Leary, “Googling the Victorians,” 13.

³¹ Patrick Leary, “Googling the Victorians,” 13.

³² Patrick Leary, “Googling the Victorians,” 13.

built. Once digitization is achieved, then, one can consider the openness of the digital material.

PART 2: ACCESSIBILITY AND ACADEMIC RESEARCH: THE AVENUE OF OPENNESS

Paywalls and Passwords

While the digitization of analogue library material is certainly the first step in providing access to a larger audience, one must also consider the openness of that material after digitization. Aside from the twenty-one digitized Aldines, the Aldus@SFU website also includes a selection of essays, written by scholars and experts, that are available open access on the website. These essays provide an overview of Aldus' publishing endeavour, the history of the Aldine Press, and the mission of the Aldus@SFU project. Without open access contributions such as these, the Aldus@SFU website would be missing a component that is crucial to unlocking, and ultimately understanding, the material housed on it.

When accessing digital material, there is a divide between those who can bypass restrictions like paywalls or password protected websites (such as university affiliates) and those for whom access restrictions remain an insurmountable barrier. According to UNESCO, open access is defined as “free access to information and unrestricted use of electronic resources for everyone.”³³ One dominant business model for academic journals is the “pay-to-read” model, which requires institutions to pay for subscriptions to academic journals so that their members can access the material.³⁴ Many institutions are limited by what they can afford when looking to provide students and scholars

³³ UNESCO, “What is Open Access?” Accessed May 22, 2021, <https://en.unesco.org/open-access/what-open-access>.

³⁴ Gregory Barber, “Universities Step Up the Fight for Open-Access Research,” *Wired*, June 16, 2020, <https://www.wired.com/story/universities-step-up-the-fight-for-open-access-research/>.

with access to a wide range of up-to-date research. There is also a “pay to publish” model that centers around charging researchers and/or institutions a hefty open access publishing fee.³⁵ The “pay-to-read” and “pay-to-publish” models, coupled with the prestige associated with journals that adhere to these models, make it difficult for researchers and institutions to transition to open access publishing.³⁶

Benefits of Open Access

There are numerous benefits to open access for those looking to access scholarly content and digital exhibits. For researchers, the benefits of an open access model are overwhelming. If academic journals are completely open access, knowledge sharing is encouraged; researchers are free to use whatever literature they need without restriction, and in turn their own work is more visible to other scholars.³⁷ Most importantly, unrestricted knowledge sharing means acceleration in research and innovation overall.³⁸

There are also direct benefits for institutions and their students. Under an open access model, institutions are no longer limited by the quantity of research they can afford. Rather, a universally open access model provides equal opportunities to researchers and students across different institutions as the latest data and information is available unrestricted.³⁹

³⁵ Barber, “Universities Step Up.”

³⁶ Barber, “Universities Step Up.”

³⁷ Belk Library, “Scholarly Communication.”

³⁸ Belk Library, “Scholarly Communication.”

³⁹ Belk Library, “Scholarly Communication.”

People who are not affiliated with learning institutions also benefit from an open access publishing model.⁴⁰ From external businesses conducting related research to interested hobbyists, open access means that paywalls no longer stand between them and the latest information. This openness establishes an even wider audience for the material by allowing knowledge sharing with the public.⁴¹ The adoption of an open access publishing model, then, is extremely beneficial for researchers, students, learning institutions, and the public.

Limitations of Open Access

One main limitation of open access, however, is the cost and added responsibility placed on researchers during the transition from pay-to-read to open access.

Depending on the discipline, it could be up to the researcher to cover the costs of publishing their work with an open access journal.⁴² Once open access is more widely adopted, institutions could allocate funds for open access publishing, thereby alleviating the burden on researchers, but that is less likely during the early stages of the transition from the pay-to-read model to open access.⁴³

Another option some open access publishers offer is a one-time membership fee to researchers who, in exchange for paying for their membership, are then able to publish their work for free for life with that publisher.⁴⁴ Similarly, some open access publishers charge libraries a fee, which in turn allows affiliated scholars to

⁴⁰ Open Access.np, "Pros and cons," accessed May 23, 2021, <https://www.openaccess.nl/en/what-is-open-access/pros-and-cons>.

⁴¹ Open Access.np, "Pros and cons."

⁴² Open Access.np, "Pros and cons."

⁴³ Open Access.np, "Pros and cons."

⁴⁴ Jonathan P Tennant, et. al. "The academic, economic and societal impacts of Open Access: an evidence-based review," (*F1000Research* 2016): 10. <https://doi.org/10.12688/f1000research.8460.3>.

publish with them for free.⁴⁵ While the benefits of open access are numerous, the cost disadvantages of the model are not an encouraging factor.

There are two different ways of publishing open access: gold open access, which is “where an author publishes their article in an online open access journal”⁴⁶ and green open access, “where an author publishes their article in any journal and then self-archives a copy in a freely accessible institutional or specialist online archive.”⁴⁷ Gold open access ensures that publications are available completely open access immediately upon publication. The cost of publication for gold open access, however, is significant as many open access journal publishers charge hefty publishing fees up front.⁴⁸ Green open access articles have some access limitations based on copyright and legal restrictions.⁴⁹ Since green open access articles are works that were previously published by non-open access journals, these journals will typically allow authors to make their articles available around twelve months after the material is initially published.⁵⁰ The cost for green open access is next to nothing as it usually falls upon the researcher to self-archive their work on an open access repository online.⁵¹ Both gold and green open access publishing models have pros and cons: gold offers a high cost but publishes research open access immediately, and green offers little-to-no cost with a lengthy wait time to make research open access.

⁴⁵ Tennant, “The academic, economic and societal impacts,” 10.

⁴⁶ Publisso, “Gold open access and green open access: what’s the difference?” Accessed June 27, 2021, https://www.publisso.de/en/no_cache/advice/publishing-advice-faqs/difference-between-gold-and-green-open-access/.

⁴⁷ Publisso, “Gold open access.”

⁴⁸ Royal Veterinary College, “‘Gold’ vs. ‘Green’ OA,” accessed June 27, 2021, <https://www.rvc.ac.uk/research/about/open-access-publishing/gold-open-access#panel-green-open-access>.

⁴⁹ Publisso, “Gold open access.”

⁵⁰ Royal Veterinary College, “‘Gold.’”

⁵¹ Publisso, “Gold open access.”

Open Access Progress in Canada

Although it is not yet fully implemented, change towards open access for research materials is already underway in Canada via the Tri-Agency Open Access Policy on Publications.⁵² As of 2015, the Canadian Institutes of Health Research (CIHR), the Natural Sciences and Engineering Research Council of Canada (NSERC), and the Social Sciences and Humanities Research Council of Canada (SSHRC) are “working to facilitate research partnerships by harmonizing domestic policies and aligning with the global movement to open access.”⁵³ Under this policy, grant recipients from any of the aforementioned research agencies must make their publications—specifically those derived from agency-supported research—“freely accessible within 12 months of publication.”⁵⁴

In February 2020 the Government of Canada released a roadmap that “outlines next steps that should be taken to make federal science open to all.”⁵⁵ The Roadmap for Open Science, which builds on the Tri-Agency Open Access Policy on Publications from 2015, recommends that Canada should “adopt an Open Science approach to federally funded scientific and research outputs.”⁵⁶ The deadline for the development of action plans for Open Science was June 2021 and suggested that Canada should see a phased approach focused on making federal science open and available to Canadians.⁵⁷ This roadmap not only applies to research funded by government grants, but it also recommends that federal

⁵² Government of Canada, “Tri-Agency Open Access Policy on Publications,” accessed May 30, 2021, https://www.ic.gc.ca/eic/site/063.nsf/eng/h_F6765465.html.

⁵³ Government of Canada, “Tri-Agency Open Access.”

⁵⁴ Government of Canada, “Tri-Agency Open Access.”

⁵⁵ Government of Canada, “Roadmap for Open Science,” accessed May 30, 2021, https://www.ic.gc.ca/eic/site/063.nsf/eng/h_97992.html.

⁵⁶ Government of Canada, “Roadmap for Open Science,” 1.

⁵⁷ Government of Canada, “Roadmap for Open Science,” 3.

science publications become open access by January 2023.⁵⁸ While these policies and recommendations only address a fraction of the research materials produced in Canada, it is a large step towards a universally open access publishing model.

Open access publishing models not only benefit researchers and students, but they also benefit visitors to websites like Aldus@SFU. If research is made open access, curators of digital exhibits can provide a variety of interpretive information and scholarly research alongside the primary material. This interpretive material, if provided open access, can help bridge the gap between specialists and non-specialists and can be crucial to interpreting the digital exhibit and the primary material housed on it.

⁵⁸ Government of Canada, “Roadmap for Open Science,” 4.

PART 3: ACCESSIBILITY AND DIGITAL EXHIBITS: THE AVENUE OF PUBLICNESS

Contextualizing Aldus@SFU

The next avenue of accessibility is publicness—the extent to which specialized content is presented or contextualized for non-specialist audiences like students, hobbyists, and scholars from other fields of study. Many institutions, museums, and libraries have a selection of analogue material and/or items of historical significance digitized and available without paywall restrictions. The extent to which curators consider how the public might engage with these materials, however, varies significantly. Aldus@SFU is an extensive resource and is therefore a perfect example to demonstrate the necessity of providing contextualizing content that deals directly with the primary source material—in this case, the thousands of digitized pages from the twenty-one Aldines that were added to the website. While this content is useful, unique, and of interest to many different audiences, visitors with little-to-no knowledge of Aldus Manutius, the works he printed, or book/material history have no way to know where to begin. The current website organizes the collection primarily in three groups based on language (Greek, Latin, and Italian). While generally intuitive and user-friendly, this categorization represents only one way into the texts. While some would not mind flipping through thousands of pages that showcase various aspects of Aldus’ legacy, it is beneficial for many visitors to have clear points of entry and contextualizing information within their grasp.

While contextualizing information is present on Aldus@SFU, with more to come, there remains some obvious barriers regarding language that have not yet

been addressed. The texts that make up the digitized books on Aldus@SFU are written in Greek, Latin, and Italian. While the English titles for most of the classic works are now identified, and will be included in the metadata, the bulk of the primary content will not be translated. Although the textual content inside the books is not the main focus of the Aldus@SFU digital collection, the absence of a translation for the Greek, Latin, and Italian texts remains an obvious barrier for visitors looking to engage with the texts themselves. Additionally, the interpretive materials are only available in English, which also limits the audience for that content.

Non-specialist visitors to Aldus@SFU, and similar websites, need to know what exactly they are looking at, where inside the books they can find examples, and why those details are important. This kind of multi-layered information helps to bridge the gap between specialists and non-specialists and forms the basis for the publicness avenue of accessibility. It is crucial to unlock this typically specialized content for non-specialists so that knowledge is shared and discussed more widely. To provide useful context for non-specialists, a more specific understanding of the audience is needed. If specific audiences are identified through segmentation, the “practice of dividing your target market into approachable groups,”⁵⁹ then digital platforms like Aldus@SFU can provide the appropriate type and level of information based on those identified potential users.

⁵⁹ Qualtrics, “Market segmentation: Types, benefits and best practices,” accessed July 1, 2021, <https://www.qualtrics.com/experience-management/brand/what-is-market-segmentation/>.

Contextualizing Specialized Content

Regardless of the level of detail included in virtual exhibits and online collections, the right kind of information, which varies depending on the type of material presented and the target audience(s), should always be available to allow for greater accessibility. Students and non-specialist audiences should be able to consult an abundance of relevant resources, which are conveniently located and unrestricted, that offer a way into the digitized content beyond general historical overviews and basic descriptions. While it is not possible to contextualize material for every potential user, those audiences identified through market segmentation can more easily venture as far into the information as they choose. It is also possible that non-specialists who are not affiliated with an institution could undertake their own research projects if allowed to consult an institution's resources and exhibits.⁶⁰

It stands to reason, as Kathleen Fitzpatrick outlines in her book *Generous Thinking*, that scholars can also benefit from the public's engagement with, and subsequent contribution to, their work.⁶¹ Public scholarship, which includes practices like open peer review⁶² and citizen science,⁶³ involves the public more actively in the research, interpretative, and peer review stages.⁶⁴ The public can take on any number of roles when it comes to scholarly research, whether passively or actively, with the potential for "engagement that requires those with

⁶⁰ Kathleen Fitzpatrick, *Generous Thinking: A Radical Approach to Saving the University*, (Baltimore: John Hopkins University Press, 2019), 179.

⁶¹ Fitzpatrick, *Generous Thinking*, 175.

⁶² Fitzpatrick, *Generous Thinking*, 178.

⁶³ Fitzpatrick, *Generous Thinking*, 173.

⁶⁴ Fitzpatrick, *Generous Thinking*, 179.

different forms of expertise to recognize one another as potential peers,”⁶⁵ provided that research is open and considers the public as a target audience and potential partner.

The Implementing New Knowledge Environments (INKE) Partnership is one group actively works towards public inclusion in scholarly research. The INKE Partnership is a “research network with the goal of fostering *open social scholarship*: [an] academic practice that enables the creation, dissemination, and engagement of open research by specialists and non-specialists in accessible and significant ways.”⁶⁶ One main objective for the INKE Partnership is to collaborate “with communities to build interactive archival and storytelling experiences relating to lesser-known cultural heritage periods and people.”⁶⁷ The INKE Partnership, then, makes their scholarly research open access, and actively engages and collaborates with the public and communities on projects they undertake. The public then becomes an active part of project creation and development, as opposed to passive consumers of the projects, data, and research.

When consulting digital exhibits, there is a significant difference between reading an historical overview of the content and consulting in-depth contextualizing material—a difference between the degree to which material is understood and interpreted. While some exhibits go into great detail about the history of the items and the highlights of virtual displays, contextualizing information may not be added to the online exhibit. That extra layer of

⁶⁵ Fitzpatrick, *Generous Thinking*, 178.

⁶⁶ INKE, “About INKE,” accessed June 15, 2021, <https://inke.ca/about-inke/>.

⁶⁷ INKE, “Community Projects,” accessed June 15, 2021, <https://inke.ca/community-projects/>.

interpretation, which is particularly valuable for students and non-specialists, is often not included along with the primary material as “the prevailing belief of curators of exhibitions is that the educational purpose of an exhibition is secondary.”⁶⁸ In essence, the material provided may not venture deep enough; not all visitors to online exhibits have the tools to interpret the primary material. This secondary material provides crucial context and gives the reader access to scholarly interpretations, and therefore the tools to interpret the material for themselves.

To contextualize their material, museums, for example, sometimes “offer high-quality educational programs, animations, exhibitions, and displays that are resourceful, interesting, interactive, and engage all the senses.”⁶⁹ When choosing to offer this information, museums sometimes consider learning styles and visitor segmentation to ensure that their supplementary material will reach diverse audiences.⁷⁰ This kind of information, which includes anything from interpretive academic research to contextualizing definitions and explanations, contributes to the overall publicness of the material and takes into consideration specific audiences who might visit the website.

Reaching Diverse User Groups

To bridge the gap between specialists and non-specialists, academics have turned to the use of plain language. Plain language works in conjunction with open access to ensure that a variety of audiences (particularly non-specialists) can not

⁶⁸ Marek Šobáň, and Petra Šobánková, “Teaching Tools in the Olomouc Museum of Art: A Case Study,” *The Journal of Museum Education* 38, no. 1 (March 2013): 105. <https://www.jstor.org/stable/43305775>.

⁶⁹ Šobáň, Teaching Tools,” 115.

⁷⁰ Wolfgang Leister, et. al., “An Evaluation-Driven Design Process for Exhibitions,” *Multimodal Technologies and Interactions* 1, no. 4:25 (October 2017): 3-4, <https://www.mdpi.com/2414-4088/1/4/25>.

only read material without paywalls, but also access the written content itself—the combination of open access and plain language, then, contributes to the open and public avenues of accessibility. There are several characteristics of plain language that academic writers keep in mind to ensure their writing is readable by non-specialist audiences.⁷¹ Some of these characteristics include identifying the audience of the material and using design features like bullet points to highlight important content.⁷²

With a shift towards increasing openness and publicness, there has also been a change in how academic content is shared. To reach new audiences, researchers have increasingly started sharing their content with the broader public through their personal blogs or social media accounts.⁷³ As social media platforms like Twitter are public in nature, they also encourage collaboration and discussion among diverse user groups.⁷⁴ Viewers of the content can engage directly with it through comments and retweets, which offer a more informal platform for discussion between users. Not only do social media platforms like Twitter have the potential to increase the discoverability of a scholar’s work, but they also completely change the method through which that content is found, switching “from a ‘pull’ model to a ‘push’ model.”⁷⁵ Rather than passively waiting for other researchers or students to come upon their work in online repositories,

⁷¹ FDA, “Plain Language Principles,” accessed May 31, 2021, <https://www.fda.gov/about-fda/plain-writing-its-law/plain-language-principles>.

⁷² FDA, “Plain Language Principles.”

⁷³ Victoria Clayton, “The Needless Complexity of Academic Writing,” *The Atlantic*, October 26, 2015, <https://www.theatlantic.com/education/archive/2015/10/complex-academic-writing/412255/>.

⁷⁴ Louisa Shepard, “Tweeting the Medieval: Emily Steiner, Professor of English, uses new technology to illuminate age-old manuscripts,” *Omnia*, October 10, 2017, <https://omnia.sas.upenn.edu/story/tweeting-medieval>.

⁷⁵ Samara Klar, et. al., “Using social media to promote academic research: Identifying the benefits of twitter for sharing academic work,” *Plos One* 15, no. 4 (April 2020), <https://doi.org/10.1371/journal.pone.0229446>.

scholars can actively share their work through social media. Scholars can forego the formality of research papers and show off their findings in a way that conforms to the informal constructs social media platforms provide.

The three avenues of accessibility previously mentioned all work to broaden the audience significantly for scholarly research and analogue library materials. To make this content more widely accessible, however, the avenue of functional accessibility, and the diverse abilities of internet users, must be addressed from the beginning.

PART 4: ACCESSIBILITY: THE AVENUE OF FUNCTIONALITY

Integrating Assistive Technologies and Universal Design

How a website functions, and for whom it is functional, is a crucial avenue of accessibility. Website functionality concerns includes anything from missing web links to the inability to use assistive technologies and can therefore impact a wide variety of web users. All users benefit from web functionality, and it is most easily—and most effectively—integrated during the website development stage. If integrated at the beginning, websites can be tested and modified to accommodate diverse user groups.

One of the main functional concerns surrounds content that is configured for assistive technologies. The design of the current prototype website for Aldus@SFU addresses some accessibility concerns, such as the placement of the essays and other descriptions. For example, the supplementary content on the Aldus@SFU website, except for one essay, is placed directly onto the webpage, which allows screen readers to convert the on-screen text to speech.

As the current version of Aldus@SFU is a prototype, there is an opportunity to address other functional concerns, which is one of the top priorities for the next version of the website. There are several ways the next iteration of the Aldus@SFU website can accommodate accessibility concerns. Considering colour choices (so that meaning is not solely conveyed by, or reliant on, colour combinations that may not be visible to people with colour deficient vision) or applying alt-text to images are clear starting points for addressing

accessibility.⁷⁶ The use of distinct headings and having a clear organizational structure are other ways Aldus@SFU can address accessibility concerns.⁷⁷ Some aspects of the website are more challenging to make functionally accessible—the image viewer embedded on the website, for example, must be screen reader friendly or include alt-text that describes not only the image but also the additional details (like evidence of use) on every page to get a thorough understanding of it. While this is not impossible, it would require significant design and developmental changes to the current prototype.

Providing content online and making it available without restrictions is essential, but digitized library materials are not truly available to everyone without addressing accessibility for “a broad diversity of functional needs.”⁷⁸ Adding descriptive alt-text for images, configuring material for text-to-speech software, or avoiding certain colour combinations can help accommodate people with diverse abilities. Now that it is possible to create accessible websites and digital exhibits from the beginning, it is important that this avenue is addressed and integrated at the beginning of the digitization process.

The term “born accessible” refers to content that is “made accessible from the outset, as an integral part of the publishing process.”⁷⁹ Instead of revisiting published books, for instance, and integrating accessible technology into them, publishers and content creators can publish born accessible material. In October

⁷⁶ Yale University, “Usability & Web Accessibility: Color.” accessed May 24, 2021, <https://usability.yale.edu/web-accessibility/articles/color>.

⁷⁷ Yale University, “Usability & Web Accessibility: Headings,” accessed May 24, 2021, <https://usability.yale.edu/web-accessibility/articles/headings>.

⁷⁸ (WAI), “Diverse Abilities.”

⁷⁹ Benetech, “Born Accessible and the New Golden Age of Inclusive Education,” accessed May 24, 2021, <https://benetech.org/blog/born-accessible-and-the-new-golden-age-of-inclusive-education/>.

2020, House of Anansi Press announced that they had officially become the first Canadian publisher to be GCA (Global Certified Accessible) certified.⁸⁰ House of Anansi Press now makes their ebooks screen-reader compatible,⁸¹ and produces physical and digital braille editions for select titles.⁸² While born accessible technology has yet to be adopted widely across Canada, it has certainly entered the conversation and is recognized as a necessity for new content.

Another way to make content functionally accessible is to integrate Universal Design (UD) principles. UD takes into consideration both user-aware design and customizable design.⁸³ User-aware design constitutes “pushing the boundaries of ‘mainstream’ products, services and environments to include as many people as possible,”⁸⁴ and customizable design constitutes implementing “design to minimise the difficulties of adaptation to particular users.”⁸⁵ These UD designs pay particular attention to the reality of diverse users online and work to make sure users with a variety of different abilities are considered during the design phase.

UD also offers seven principles, developed in 1997, to “guide the design of environments, products and communications.”⁸⁶ These seven principles are:

⁸⁰ House of Anansi Blog, “House of Anansi Press Becomes First Canadian Publisher to be GCA Certified,” accessed May 24, 2021, <https://houseofanansi.com/blogs/anansi/house-of-anansi-press-becomes-first-canadian-publisher-to-be-gca-certified>.

⁸¹ House of Anansi Blog, “An Ode to Ebooks,” accessed June 16, 2021, <https://houseofanansi.com/blogs/anansi/stories-for-everyone-on-the-braille-edition-of-the-speed-of-mercy>.

⁸² House of Anansi Blog, “Stories for Everyone: on the Braille Edition of The Speed of Mercy,” accessed May 24, 2021, <https://houseofanansi.com/blogs/anansi/stories-for-everyone-on-the-braille-edition-of-the-speed-of-mercy>.

⁸³ National Disability Authority, “What is Universal Design,” accessed May 31, 2021, <http://universaldesign.ie/what-is-universal-design/definition-and-overview/>.

⁸⁴ National Disability Authority, “What is Universal Design.”

⁸⁵ National Disability Authority, “What is Universal Design.”

⁸⁶ National Disability Authority, “The 7 Principles,” accessed May 31, 2021, <http://universaldesign.ie/what-is-universal-design/the-7-principles/>.

equitable use, flexibility in use, simple and intuitive use, perceptible information, tolerance for error, low physical effort, and size and space approach and use.⁸⁷ They ensure that those using UD standards consider a wide range of users, that design and content is easy to use and understand, and that information provided is necessary and clear.⁸⁸ With the flexibility of implementation at any stage, these design principles ensure that there is a foundation upon which online designs are built. They also give institutions, businesses, and other web creators a place to start and specific characteristics to consider when looking to implement accessible design.

Adjusting Learning Approaches

Learning institutions continuously work to adapt teaching methods to include students with diverse abilities. Although it is up to individual instructors to adapt their methods accordingly, there are guiding principles like the Universal Design for Learning principles. Universal Design for Learning is “a way of thinking about teaching and learning that helps give all students an equal opportunity to succeed.”⁸⁹ Implementing UDL means making content more accessible to students who are deaf, hard of hearing blind, or low vision, and that the foundation for a variety of different ways of learning is always present. If it is always present, then it is always at the disposal of whomever might need it, whether that reason is a disability, a learning disorder, or otherwise. One huge

⁸⁷ National Disability Authority, “The 7 Principles.”

⁸⁸ National Disability Authority, “The 7 Principles.”

⁸⁹ Understood, “What is Universal Design for Learning (UDL)?” Accessed May 24, 2021, <https://www.understood.org/en/learning-thinking-differences/treatments-approaches/educational-strategies/universal-design-for-learning-what-it-is-and-how-it-works>.

benefit of implementing UDL in the classroom is that it “reduces stigma [by] giving a variety of options to all students.”⁹⁰

In addition to the UDL principles, the Web Content Accessibility Guidelines (WCAG) also outline accessibility standards. As per the WCAG, there are four accessibility principles. In order for web content to be considered accessible, it must be: “perceivable (information must be presented to users in ways they can perceive), operable (user interface and navigation must be usable), understandable (information and the user interface must be understandable), and robust (content must be robust enough that it can be interpreted reliably by a wide variety of users, including people using assistive technologies).”⁹¹ In light of the shift to predominantly online teaching in 2020 due to the Covid-19 pandemic, the need for accessible web content is clearer than ever.⁹²

Achieving Accessibility

The time needed to make online materials accessible (including websites, digital exhibits, and journal articles) depends on how and at what point accessibility is addressed. For the most efficient and effective results, it is best, according to the Web Accessibility Initiative (WAI), to “incorporate accessibility from the very beginning.”⁹³ It is less time-consuming, and less costly, to create and test a

⁹⁰ Understood, “What is Universal Design for Learning (UDL)?”

⁹¹ Simon Fraser University, “SFU Communicators Toolkit: Accessibility,” accessed May 24, 2021, <https://www.sfu.ca/communicators-toolkit/guides/website-content-guide/accessibility.html>.

⁹² Campus Technology, “COVID-19 Intensifies Need to Tackle Digital Accessibility,” accessed May 24, 2021, <https://campustechnology.com/articles/2020/06/17/covid-19-intensifies-need-to-tackle-digital-accessibility.aspx>

⁹³ Web Accessibility Initiative, “Introduction to Web Accessibility,” accessed June 17, 2021, <https://www.w3.org/WAI/fundamentals/accessibility-intro/#context>.

working design than it is to evaluate and re-design an entire website, possibly several times over, depending on the outcomes of user trials.⁹⁴

It is a longer process, and more costly, to implement accessibility into pre-existing websites. After the website is assessed, often with the help of accessibility evaluation tools that identify accessibility problems, developers can address accessibility concerns, and user tests can determine whether the changes are effective.⁹⁵ User tests can be done by people with diverse abilities, or internally by qualified personnel. If done internally, it is often recommended that assistive technologies are purchased and used on the website to gain an appropriate and thorough understanding of the quality of the website's usability.⁹⁶ With the costs of the steps previously mentioned, and possible maintenance after the process is complete, it is clear that implementing accessibility from the beginning is the ideal choice for both developers and users. The reality of this, however, is much different: developers often choose to ignore accessibility concerns if addressing it is not mandated.

⁹⁴ Web Accessibility Initiative, "Financial Factors in Developing a Web Accessibility Business Case for Your Organization," accessed June 17, 2021, <https://www.w3.org/WAI/business-case/archive/fin#direct>.

⁹⁵ Web Accessibility Initiative, "Financial Factors."

⁹⁶ Web Accessibility Initiative, "Financial Factors."

PART 5: ACCESSIBILITY AND ALDUS: THE ALDUS@SFU PROJECT

The Project

Aldus Manutius started his publishing venture with the goal of printing ancient Greek texts to make them more widely available. This ambitious goal, coupled with the success of the octavo—or the “portable book”—led to an increase in the circulation and consumption of these texts. The great majority of these texts had never been printed before and could have otherwise been lost without Aldus’ intervention. Aldus@SFU follows in the footsteps of Aldus Manutius—who brought Greek, Latin, and Italian classics into circulation, many for the first time—and brings his beautiful and innovative editions to a wider audience via the open web. The website as it stands already considers two avenues of accessibility—digitization and openness—as it contains fully digitized sixteenth-century books and is completely open access.

Following what the initial project team had in mind for the website, I was tasked with conducting research for a new learning resource that is aimed at furthering the publicness of Aldus@SFU. During my four-month research assistantship for the Aldus@SFU project, my main role was to lay the foundation for an additional avenue of accessibility, publicness, as it relates to the context for the books on the website. First, it was important to identify what might be of interest in the books. For the purpose of this report, the term “element” refers to the particular features of interest, such as marginalia, the Aldine Press printer’s mark (the famous anchor and dolphin), colophons, Aldus’ prefaces, illumination, etc. Once those elements were identified and subsequently categorized, it was equally important to explain their significance to the study of book history, how

they relate to Aldus Manutius' legacy (if applicable), and provide the location within the digitized collection, including hyperlinks to the page images, that present real examples from the Aldus@SFU site. These components—the element, its summary, and the hyperlinked examples—work in unison to contextualize the digitized books on the Aldus@SFU website.

Overall, I wanted to identify some highlights of the collection to give both specialist and non-specialist visitors an easy and direct way to access each of the books. Once the information is integrated into the website, visitors will be able to find a description of a topic or element and consult a list of examples.

Phase one of the project included conducting research and analyzing every page inside all twenty-one books currently on the website. The research I conducted significantly informed my search through the books as I was able to discover elements of which I had no previous knowledge. The main objectives of phase one were to both identify the English titles for the texts each book contained and identify interesting elements and every place they could be found. This phase took much more time than anticipated as it required several passes through each of the books, and several subsequent rounds of research, to identify more elements.

During the element identification process, I recorded features that interested me personally. My initial list, which was compiled without any additional research, included elements like marginalia, initial illumination, bookplates, and fingerprints. These features are all evidence of use and I noted them specifically because they are visually interesting and familiar to me. Additionally, these particular elements interest me because they provide insight

into the people who once interacted with the book, and they shed light on the customs of Renaissance readers.

After I conducted research about the book-making process in the sixteenth century, and the Aldine Press specifically, I identified many more elements like colophons, binding details, typefaces, and several of Aldus' innovations that are still in use today. After collecting the elements, I put them into categories (a complete list of elements and categories is shown in the table below).

Table of elements and categories

Book Details	The Aldine Reader	Printer Characteristics	Post-Printing Characteristics	Punctuation	Type
Editio Princeps	Fingerprints	Aldus' Prefaces	Binding	Accented Characters	Bembo
Folios	Initial Illumination	Binder Instructions & Colophon	Bookplate	Ampersand	Greek Type
Octavo	Marginalia	Errata Slip	Vellum Covers	Apostrophe	Italics (Cursive)
Paper	Ruling	Index		Comma	Roman
Quarto	Rubrication	Margins		Quotation Marks	
		Missing Initial Illumination		Semicolon	
		Pagination			
		Paragraph Indentation			
		Printer's Mark			
		Table of Contents			
		Woodcut Device			

Much of what I identified pertains to evidence of use and publishing history as I am particularly interested in how books are used as objects. The Aldine Reader category, for example, offers a glimpse into how the book was handled and/or altered in the past by previous readers. As a result of some collaboration with the Aldus@SFU team, I was also able to identify some of Aldus' innovations and several printing firsts like the ampersand, semicolon, table of contents, paragraph indentation, and indexes. There were also some elements that were specific to the Aldine Press like Aldus' fascinating prefaces, the Aldine Press printer's mark, Aldine roman type, and the Aldine Greek typefaces (one of which was based off Aldus' own hand). I then grouped the elements into suitable categories.

I only identified a fraction of the interesting features that are present in the books. Visitors from different perspectives and other fields of study will surely identify other elements of interest, thereby contributing to a larger discussion of the books, which is one main objective the Aldus@SFU team had from the beginning.

Phase two consisted of formatting the elements into a categorized index and adding the accompanying examples in the form of hyperlinked page numbers. The categorized index will allow visitors to navigate the extensive list of elements easily and efficiently. While collecting the list of elements, I also made sure to keep track of the page numbers on which every example of the elements is found. It was particularly important to record all instances of each element (where applicable) to ensure that visitors have access to every example, and that

they are not limited in their exploration of the site to only a few select examples of each element, and therefore only a few books.

The third and final phase of the project consisted of composing several element write-ups and creating InDesign mock-ups for the new web pages (examples of these sample webpages can be found in Appendix A). The write-ups define the identified element, explain its significance to the Aldine Press (if applicable) and book/publishing history, and offer other relevant contextualizing information when necessary.

I created the InDesign mock-ups primarily to show how the new information could be displayed and structured. One of our main concerns was ensuring the focus was always brought back to the Aldines themselves, as they are the central component of the website that we most want to highlight. The mock-ups demonstrate several different ways that this goal can be achieved within the design of the current prototype. To make the content on Aldus@SFU accessible to both specialists and non-specialists, it was important to provide context in a convenient location and to make sure that the books were as integrated into, and connected with, that information as possible.

A New Audience

One main objective of Aldus@SFU is to provide a point of access to the material to help bridge the gap between targeted specialist and non-specialist audiences. To optimize the website's content, it is essential to identify specific potential visitors and determine their needs and interests. After doing so, the relevant information can be added to give our potential users the tools needed to interpret the content for themselves. To get a better understanding of the contextual

information needed, I created a user profile of an MA student. I used this profile as an example of an audience segment for Aldus@SFU to gain an understanding of what information I should include in the element write-ups. The current version of the Aldus@SFU website, while rich in contextualizing commentary, still holds a vast amount of information that is difficult to navigate without previous knowledge of the material. Even with specialized knowledge, there are no navigational aids that allow direct access to specific information/elements inside the books, and the only way for the users to locate them is to flip through each digitized page. This new information, once integrated, will help users find and interpret content in a way that is fast and convenient.

The Future of Aldus@SFU

The new research is an essential step towards the end goal for the project. This end goal, according to the project's mission, is that the digitized collection "will become the basis for a range of downstream projects and possibilities for subsequent scholarship: from close readings and textual analysis of the books to gathering layers of additional metadata, commentary, annotation, and criticism."⁹⁷ This new content, once integrated, will contribute to achieving several of these ambitions.

Another goal of the initiative, which is sure to come to fruition in future website iterations, is to create a space where specialists and non-specialists can collaborate and engage in fruitful scholarly exchanges across disciplinary and institutional boundaries. This collaborative forum will encourage discussion

⁹⁷ Aldus@SFU, "About the Project."

between diverse user groups, build knowledge, and significantly extend the reach and impact of the project.⁹⁸

During my research assistantship, I conducted research about the books currently housed on the Aldus@SFU website. I identified some interesting elements inside the books, researched these elements, and identified (in English) the Greek, Latin, and Italian texts inside the books. This research will contribute to the website's future goals by laying the foundation for a learning resource, which will make the material accessible to its identified audiences, and foster discussion and collaboration among diverse user groups.

⁹⁸ Alessandra Bordini, "From the Aldine Press to Aldus@SFU: Showcasing Simon Fraser University Library's Aldines Online," MPub Project Report, Simon Fraser University, 2017, 36.

CONCLUSION

A Summary of Accessibility Avenues

For the purposes of this report, it was necessary to break down the concept of accessibility into four distinct but intersecting avenues—digitization, openness, publicness, and functional accessibility—and all were used to explore how digital and digitized content is available to a wider audience in vastly different ways. If all four avenues of accessibility are implemented, digital material will be widely available.

The first avenue of accessibility, digitization, lays the foundation for the other three avenues. Content must first appear online before openness, publicness, and functional accessibility are addressed. Digitization paves the way for the disassembling of numerous other barriers to knowledge, and its implementation is crucial for resource and data sharing among a wider population. The Covid-19 pandemic made apparent the need for digitized materials, as accessing them in person became largely impossible when the global pandemic was declared. Global affairs cause unprecedented disruptions in daily life, and it is becoming increasingly important for library collections and scholarly research to be accessible in digital form.

The second avenue of accessibility is openness. Paywalls and password protected websites are barriers that are difficult to overcome. Research and digitized library collections generate revenue when they exist behind a paywall. Increasing the openness of materials means giving up that revenue stream entirely without the hope of monetizing it again. Shifting from a pay-to-read publishing model to an open access model is a significant change. Although it is a

slow process, the widespread shift to providing research, and by extension digitized content like library and archival holdings, freely to the public is becoming more of a reality.

The third avenue of accessibility is publicness. If content is open access, it should be contextualized for a wider audience. Whether that means using plain language to summarize research or providing contextualizing essays on digital exhibits, it is important that the audience is identified and considered. Knowledge sharing and discussion among diverse user groups can occur if specialists and non-specialists engage with the same material—this is only possible if visitors have the tools to interpret the material themselves regardless of speciality.

Finally, the fourth avenue of accessibility is functionality. Functional accessibility is far from the fourth step in the process; rather, it is most effective when implemented from the very beginning, at the initial digital/digitization stage, and then carried through each avenue. With a relatively slow shift in focus towards accessible design, however, functionality remains a later step—a process of re-design and improvements—for many organizations and individuals. Considering the functional aspects of digital material can benefit everyone and is therefore a crucial step in making online content accessible.

As a case study for this report, the prototype website Aldus@SFU, served as a practical example to which each avenue of accessibility was applied and explored. The foundation of Aldus@SFU is built upon the first avenue of accessibility, digitization. Openness also formed part of the foundation as its mission is to put Aldus' innovations on display for the public—that has certainly

been achieved, as Aldus did in his own way with the popularization of the octavo format, and publication of the classical canon over 500 years ago.

The publicness of Aldus@SFU, which is still in the development phase, will be addressed by providing additional layers of contextualizing material. Once implemented, target audiences will know what they are looking at, why it is important, and how it can be interpreted. More practically, they will also have the tools to navigate the vast amount of information on the website. Providing this research for visitors is a huge step towards bridging the gap between specialists and non-specialists, disseminating knowledge more widely, and fostering discussion among diverse communities of users.

Recommendations

This section will provide a summary of best practices for digital exhibits and scholarly research, which were the focus of this report. Three important takeaways have become apparent during both my research assistantship for Aldus@SFU and the research conducted for this project report. These takeaways have to do with the openness, publicness, and functional avenues of accessibility.

Addressing the openness of digital exhibits in the future is a fundamental step towards universal access. Knowledge sharing and collaboration are encouraged among diverse user groups in an open access model. Increased knowledge sharing ultimately results in a “better educated populace,”⁹⁹ and positions scientists to respond faster to global crises like Covid-19, for example,

⁹⁹ Belk Library, “Scholarly Communication.”

in the future thanks to the acceleration of research and innovation an open access publishing model allows.¹⁰⁰

In future, it is beneficial for institutions to consider the audience for whom their material is intended. While historical overviews and other foundational information is important, it is not enough if the goal is to provide multiple points of entry into the material. Visitors can explore the content if given specific access points, and they can interpret it provided they are given the tools to do so. This more active approach to learning can result in community engagement—which certainly is a future goal of Aldus@SFU—via collaboration and discussion between diverse user groups.¹⁰¹

The third and final takeaway is the importance of addressing functional accessibility from the beginning—or creating born accessible digital content. A Universal Design for Learning approach gives “everyone an equal opportunity to succeed.”¹⁰² Most importantly, normalizing approaches suggested by UDL reduces the stigma and “doesn’t single out the few who receive formal accommodations for a disability.”¹⁰³

Final Thoughts

Accessibility is a complex, multifaceted concept. When broken down into specific avenues, however, accessibility is more easily addressed. As each avenue is incorporated into online content, an increasing number of users will be satisfied by their ability to access and interpret the information available. The four

¹⁰⁰ Maggie Koerth, “How Science Moved Beyond Peer Review During the Pandemic,” *FiveThirtyEight*, July 8, 2021, <https://fivethirtyeight.com/features/how-science-moved-beyond-peer-review-during-the-pandemic/>.

¹⁰¹ Bordini, “From the Aldine Press,” 36.

¹⁰² Understood, “What is Universal Design for Learning (UDL).”

¹⁰³ Understood, “What is Universal Design for Learning (UDL).”

definitions of accessibility intersect and outline exactly what is needed to make digitized content widely accessible. Accessibility begins with digitization—and developing accessible web infrastructure to house the digitized content—and endures throughout the shift to open access and the ever-changing needs of the audience.

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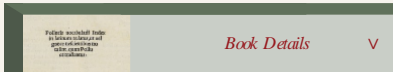
APPENDIX

The following images show InDesign mock-ups of possible new website pages on Aldus@SFU. They also show page navigation.



Sample Introduction web page for new "Highlights" tab.

Collection Highlights



Collection Highlights sample web page. This shows how the categories could be listed.

The Aldine Reader

About The Aldine Reader

Otat odi ut ex es et lit, omnihillore voluptatur? Dende delis ex evelis autet ut ape quaturi atustem fuga. Ut ape minia atem is rest aut maiorunt auda nihillore non ent lant. Feriore ipienim rerum resti consendam aut equi abo. Moluptisedi ut qui aliqua epedio. Btitionsed utemo quam, tem sinte voluptam iur autempores est, veliat maxime as enis sentia nobit volut ipis aditiis volupta quantio bearum es incti omnihil luptatem quis mi, sum dolupta tionectus. Optatur sincia autatec totati occatemporum faci consequia eium aut

Fingerprints

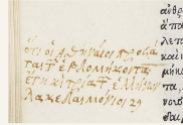
Initial Illumination

Marginalia

Red Ruling

Sample web page that shows how elements within a category could be displayed.

Marginalia



Readers left behind traces of their presence through notes and drawings in the margins of manuscripts and books. Marginalia can tell modern viewers a variety of things from the reader's response to the text, to insight into both the mundane and complex aspects of their society. Readers marked up the margins of a book for any number of reasons, both related and unrelated to the text. Sometimes readers flagged a particular passage with a simple or elaborate drawing. Some drew unrelated

images or wrote commentary or notes in the margins.

One notable example of the use of marginalia is Johnathan Swift. As Paddy Bullard suggested, Swift annotated his books and passed them on to others, thereby making reading and annotation a more social practice. Bullard also suggested that Swift used the margins as a forum for political protest, as a place to record ideas that were only safe to express in the confines of one's library. These are just a few examples of what readers chose to do in the margins of their books, but the possibilities are endless. Every text with accompanying marginalia is unique and has the potential to unlock a little bit more information about the people who left the evidence behind and the society in which they lived.

To discover what the Aldine readers left in the margins, see the list below.

1501 Philostratus ▾

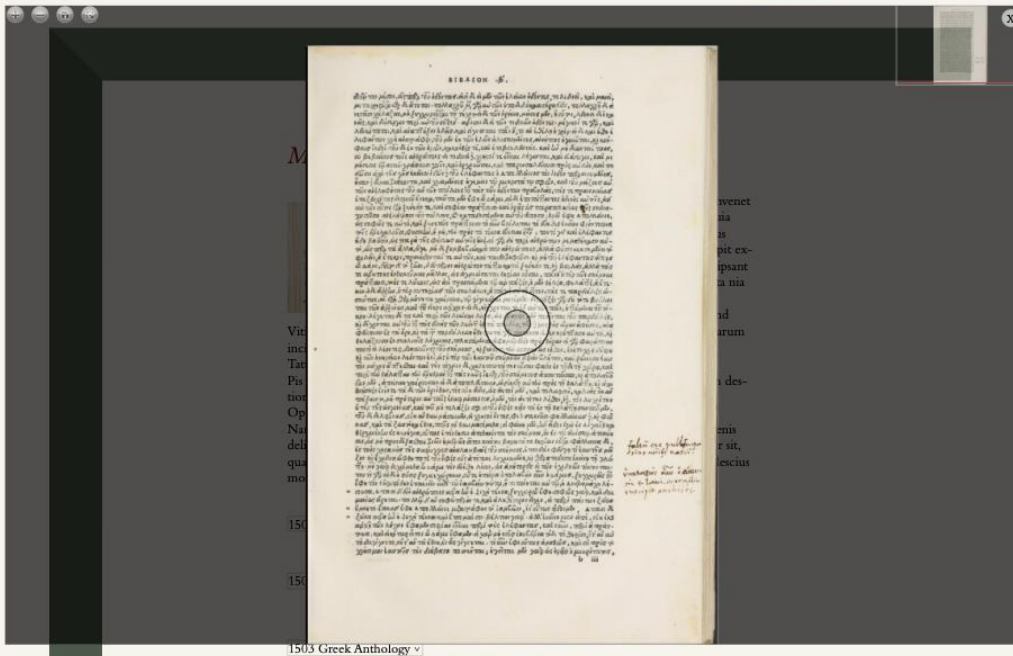
- [Page 29](#)
- [Page 31](#)

1502 Sophocles ▾

- [Page 124](#)
- [Page 129](#)
- [Page 131](#)

1503 Greek Anthology ▾

Sample web page that shows how element information could be displayed.



This page shows one way the book images could be displayed when a hyperlink is clicked.