Final Report 'Segundo ciclo de talleres: Herramientas y procesos digitales para la investigación y creación en artes y humanidades' (I-2023)

Written by Maria José Afanador-Llach and Andrés Rivera

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Team names, affiliation, and e-mail:

- Maria José Afanador Llach, Universidad de los Andes, Programming Historian en español mj.afanador28@uniandes.edu.co
- Andrés Rivera, Universidad de los Andes, aa.riverap1@uniandes.edu.co
- Jennifer Isasi, Universidad Estatal de Pennsylvania, Programming Historian en español. j.isasi@psu.edu
- Anthony Picón Rodríguez, Universidad Nacional de Colombia. apiconrodriguez@gmail.com
- Miguel Cuadros, Universidad Industrial de Santander. mdcs87@gmail.com
- Nicolás Vaughan, Universidad de los Andes, Programming Historian en español. n.vaughan20@uniandes.edu.co
- Carolina Alzate, Universidad de los Andes, calzate@uniandes.edu.co
- Sandra Sánchez, Universidad de los Andes, ssanchez@uniandes.edu.co.
- Mónica Bonilla, Executiva Director Wikimedia Colombia, de@wikimediacolombia.org

1. Introduction

The *Segundo ciclo de talleres: Herramientas y procesos digitales para la investigación y creación en artes y humanidades* (Second Cycle of Workshops: Digital tools and Processes for Research and Creation in Arts and Humanities), is an initiative of the MA in Digital Humanities program of the Universidad de los Andes, in alliance with The Programming Historian in Spanish and Wikimedia Colombia, with the support of Experimental Humanities Collaborative Network (EHCN). This is a series of three free virtual workshops on digital tools for teachers, undergraduate, and graduate students

of the Universidad de los Andes and for anyone outside the academic, cultural and heritage sector took place in the first semester of 2023. The workshops were based on lessons in Spanish published on The Programming Historian en español, which contain "different peer-reviewed tutorials aimed at humanists who want to learn a wide range of digital tools, computational techniques and workflows useful for research and teaching" (https://programminghistorian.org/es/).

As of the writing of this report, three workshops in the series have been held with a total of 578 registrants and an average number of attendees per workshop day of 60 people. Attendees learned to work with three digital tools and/or open access methodological flows for research and outreach in the arts and humanities: CollectionBuilder, Map Warper and TEI markup. The last activity of the cycle will be a Wikipedia editathon on women writers in alliance with Wikimedia Colombia and with the support of expert professors Carolina Alzate and Sandra Sánchez.

2.   Description of the call for participants

The Communications Office of the School of Arts and Humanities of the Universidad de los Andes produced posters (Image 1, Image 2, and Image 3) and a microsite with the information of the workshops and registration forms (https://facartes.uniandes.edu.co/hd/segundo-ciclo-de-talleres-herramientas-y-procesos-digitales-para-la-investigacion-y-creacion-en-artes-y-humanidades/). The call was circulated through the School's social networks, Programming Historian's social networks, the email lists of the Colombian Network of Digital Humanities and the personal networks of the workshop organizers.

Those interested in participating in the workshops had to register using a form that requested the following information: first and last name, e-mail, institution, country, city, and field of discipline. In addition, we asked those interested to answer the following questions: why are you interested in learning about digital tools, did you already know about the Programming Historian project in Spanish, and if you already knew about the project, how did you learn about it? Finally, before completing the form, the participants answered whether they agreed with the policy of use of personal data of Uniandes.

Image 1. Poster for the workshop "Creating a minimal and interactive digital exhibition with CollectionBuilder".

Image 2. Poster of the workshop "Georeferencing historical maps with Map Warper".

Image 3. Workshop poster "Introduction to TEI marking".

3.   Timeline

Event	Date
Taller Crear una exhibición digital mínima e interactiva con CollectionBuilder, Jeniffer Isasi	9 y 10 de febrero, 2023
Taller Georeferenciación de mapas históricos con Map Warper, Miguel Cuadros y Anthony Picón	2 y 3 de marzo, 2023
Taller Introducción al marcado TEI con Nicolás Vaughan	13 y 14 de abril, 2023
Editatona sobre mujeres escritoras colombianas con apoyo de Wikimedia	A realizar el 6-7 de junio, 2023

4.   Workshops

5.1. Workshop 1: Crear una exhibición digital mínima e interactiva con CollectionBuilder

4.1.1. Description

The workshop was offered by Jennifer Isasi, Pennsylvania State University, faculty, and director of the Digital Liberal Arts Research Initiative at Pennsylvania State University (USA). The workshop was held on February 9 and 10, 2023 from 12:00 to 1:30pm via Zoom.

During both days Jennifer Isasi demonstrated the tool to show participants how to set up Collection Builder to create a digital collection of primary sources. Collection Builder (CB) is an open-source digital tool for creating interactive digital collections, which allows digital libraries, archives and museums to create online collections to exhibit, present and make digital resources accessible to their audience.

The workshop leader explained that the design of CB makes it usable without the need for advanced technical skills, where metadata and static web page technology are relevant. It is possible to create collections of images, videos, documents, and other digital resources, through templates and with the option to customize the appearance and design of the collection. It also offers functions for searching, browsing, viewing, and downloading digital resources.

CB is useful for institutions or individuals who need to create and share digital collections online to disseminate their resources to a global audience. In addition, the tool is well suited to research projects that require the creation and organization of digital collections, as well as teaching projects that can use it to facilitate learning and resource discovery.

The workshop was based on Programming Historian's tutorial "Minimal and Interactive Digital Exhibits with CollectionBuilder:

https://programminghistorian.org/es/lecciones/exhibicion-con-collection-builder

Image 4. Screenshot of the start of the workshop "Minimal and interactive digital display with CollectionBuilder".

4.1.2. Enrolled and Participants

Registration for this workshop began on February 6, 2023, through a JotForms form. A total of 328 people registered for the workshop. The maximum number of participants connected on day 1 of the workshop was 179 and 91 on day 2. (Table 1) With the information of country and institutions of the participants, it can be concluded that most of the participants connected from Colombia and from the Universidad de los Andes. However, it is important to highlight that a significant number of participants connected from other universities in the country and from countries such as Mexico, Spain, United States, Peru, Chile and Argentina (Image 5 and Table 2).

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4.1.3. Discussion

During the session, participants actively shared their interests and projects in the Zoom chat and asked specific questions about the tool. From the participants we learned that there are quite a few people in Latin America with an interest in learning about cultural heritage management tools for academic and pedagogical purposes both in the classroom and for developing the missions of cultural institutions facing the challenge of putting their collections of digitized cultural objects online.

Table 1. Data on CollectionBuilder Workshop

Enrolled	328
Participants on day 1	179
Participants on day 2	91
Average (min) connection	75,79

Image 5. Location map of CollectionBuilder workshop participants, day 1

Table 2. Participants by institution, CollectionBuilder workshop

Participantes por institución

Institución	Inscritos
(en blanco)	121
Universidad de los Andes	30
Universidad Nacional	12
UNAM	12
Universidad del Valle	8
Universidad de Antioquia	7
Universidad Javeriana	6
Independiente	4
Universidad Nacional Autónoma de México	4
Universidad del Cauca	3
Universidad del Atlántico	3
Tecnológico Monterrey	3
Universidad de Costa Rica	3
Museo La Tertulia	3
Universidad EAFIT	2
Pontificia Universidad Católica de Chile	2
UCR	2
Universidad del Pacífico	2
PUCP	2
N/A	2
Universidad nacional de jujuy	2
Universidad del Tolima	1
Universidad de la Florida	1
Universidad Casa Grande	1
Fundación Universidad Autónoma de Colombia	1
Universidad de Sevilla	1
Gobernacion de Cundinamarca	1
Universidad ITESO	1
Ibero-Amerikanisches Institut	1
Universidad de Cartagena	1
Banco de la República	1
Universidad de Navarra	1
Instituto de Investigaciones Dr. José María Luis Mora	1
Corporación Universitaria Minuto de Dios	1
ma.música	1
Universidad Distrital Francisco José de Caldas y Secretaría de Educación de Bogotá	1
Ministerio de Relaciones Exteriores y Movilidad Humana. Archivo Histórico	1
FLACSO Ecuador	1
Biblioteca Pública Piloto	1
Universidad de Bergen	1
Biblored	1
Universidad de Guadalajara	1
Pontificia Universidad Catolica de Chile	1
Universidad de Miami	1
Ciidet	1
Universidad de Ottawa	1
Prueba	1
Universidad de Wageningen. Asociación Ambiente y Sociedad	1
CINEP / PPP	1
El Colegio de Michoacán	1

Registro Aurora	1
ENAH	1
Taller La espiral	1
Universidad Finis Terrae	1
Colegio Artístico Salvador	1
Universidad La Gran Colombia	1
UAB	1
Fuac	1
Colegio Elisa Borrero de Pastrana	1
Comfenalco Antioquia	1
UDeM	1
Universidad de Buenos Aires. Facultad de Filosofía y Letras.Deparatmento de Bibliotecología y Ciencia de la Información	1
UDLA	1
Consejo Científico Nacional	1
UFBA	1
Universidad de Huelva	1
UFRGS	1
Cornell College	1
Ujed	1
Universidad de Nariño	1
UN	1
Universidad de Oriente	1
UNAB	1
Universidad de Salamanca	1
UNACH	1
Universidad de Sonora	1
Colmex	1
Universidad de Würzburg	1
Universidad Nacional de Ingeniería	1
Eafit	1
Universidad Nacional de Quilmes	1
Universidad del Rosario	1
Universidad Pablo de Olavide	1
Universidad del Vale	1
Universidad San Carlos de Guatemala	1
Universidad Distrital Francisco José de Caldas	1
Universidad Veracruzana	1
entre—ríos	1
Universidade Federal da Bahia	1
Universidad Iberoamericana	1
unmsm	1
Escuela Nacional de Antropología e Historia	1
UPO	1
Facultad de historia. Universidad Veracruzana	1
Universidad Nacional	1
Universidad Nacional Autónoma de México - Museo Universitario del Chopo	1
Universidad Autónoma del Estado de México	1
Universidad Autónoma Metropolitana - Unidad Cuajimalpa	1
UniCaen	1
Universidad Nacional Mayor de San Marcos	1
Unidad de Restitución de Tierras	1
Universidad pedagógica nacional de Colombia	1

UNIMINUTO	1
Universidad Torcuato Di Tella	1
Univ. de Liverpool	1
Universidade de Lisboa	1
Universidad Ana G. Méndez	1
University of Florida	1
Universidad Andrés Bello	1
UPC	1
Universidad Autónoma de Baja California	1
AGN - UBA - Universidad Popular de la Boca	1
Wageningen University and Research	1
Universidad autónoma de México	1
Adelphi University	1
Universidad Autónoma de Queretaro	1
Total general	**328**

Table 3. Participants by country

País	participantes	
Colombia	199	61%
Mexico	49	15%
Spain	11	3%
Peru	11	3%
United States	11	3%
Chile	8	2%
Argentina	8	2%
Costa Rica	6	2%
Ecuador	4	1%
Germany	3	1%
Brazil	3	1%
Portugal	2	1%
Bolivia	2	1%
United Kingdom	2	1%
Puerto Rico	1	0%
Switzerland	1	0%
France	1	0%
Canada	1	0%
Uruguay	1	0%
Guatemala	1	0%
Norway	1	0%
Panama	1	0%
Netherlands	1	0%
Total general	328	

5.2. Workshop 2: Georreferenciación de mapas históricos con Map Warper. Una introducción a los sistemas de información geográfica (SIG) para el análisis histórico

5.2.1. Description

The workshop was offered by Anthony Picón, researcher at the Digital Laboratory of Architecture and Urbanism of the National University of Colombia, librarian of the Digital Map Library at the National Library of Colombia and manager of the Razón Cartográfica network. The other workshop leader was Miguel Cuadros, historian from the Universidad Industrial de Santander and Master of Arts in History from the State University of New York (United States), as well as professor at the Universidad Industrial de Santander. The workshop was held on March 2 and 3, 2023 from 4:30 to 6:00pm via Zoom.

This workshop can also be found on The Programming Historian website, under the name Introduction to Map Warper

https://programminghistorian.org/es/lecciones/introduccion-map-warper

The objective of the workshop was for participants to learn how to use geographic information systems (GIS) to georeference a historical map and use it in spatial and historical analysis and story production, through the Map Warper tool, which is an open source digital tool for georeferencing scanned maps or historical images and overlaying them on a modern or current map.

The workshop leaders explained that georeferencing involves assigning geographic coordinates to images that originally did not have them, allowing users to overlay historical maps on current topography and compare them with geographic information. The tool is widely used in historical mapping, cultural heritage, archaeology, and preservation projects. Users can use either their own images or use georeferenced images previously uploaded by other users. It also provides functions to crop, rotate and adjust the opacity of images.

The workshop leaders also demonstrated how georeferencing images can be used in historical research projects, to compare changes in the landscape over time, map archaeological sites, and explore historical land use patterns, among other uses. During the workshop, the workshop facilitators shared a folder with a collection of maps from the National Library's map library for participants to test the tool with a particular map (Image 6).
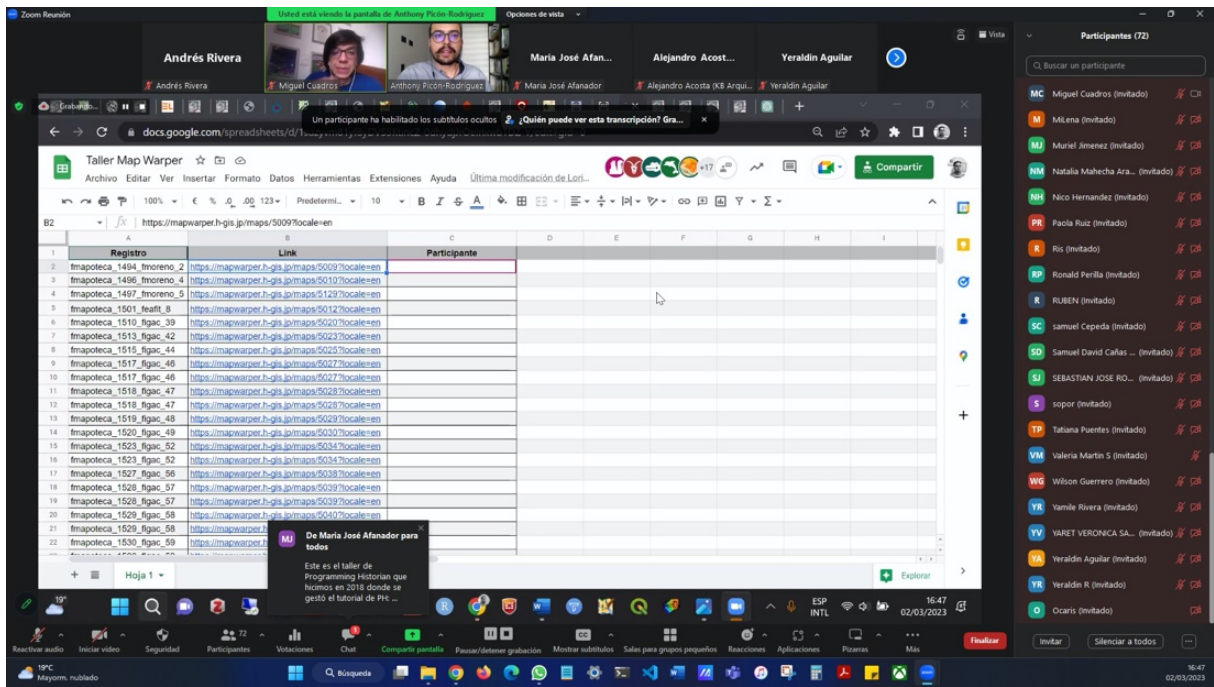
Image 6. Screenshot during the Map Warper Workshop

5.2.3. Enrolled and participants

Registration for this workshop began on February 26, 2023, through a JotForms form. A total of 167 people registered for the workshop. The maximum number of participants connected on day 1 of the workshop was 95 and 38 on day 2 (Image 7 and Image 8) (Table 1). With the information of country and institutions of the participants, it can be concluded that the majority of the participants connected from Colombia, both from the Universidad de los Andes and the Universidad del Atlántico, in greater proportion. However, it is important to highlight that a significant number of participants connected from other universities in the country and from countries such as Mexico, Spain, United States, Peru, Chile and Argentina (Table 4 and Table 5).

Table 4. Data on MapWarper Workshop

Enrolled	167
Participants day 1	95
Participants day 2	38
Average (min) connection	82,36

Table 5. Participants by country, Map Warper Workshop

Participantes por país	
Pais	Participantes

12

Colombia	125	75%
Mexico	16	10%
Peru	5	3%
Spain	5	3%
Chile	4	2%
United States	3	2%
Argentina	2	1%
Guatemala	2	1%
Ecuador	1	1%
El Salvador	1	1%
Honduras	1	1%
France	1	1%
Puerto Rico	1	1%
Total general	167	

Table 6. Participants by institution, Map Warper workshop

Participantes por institución

Institución	Inscritos
(en blanco)	68
Universidad de los Andes	15
Universidad del Atlántico	15
UNAM	5
Universidad La Gran Colombia	3
Universidad Nacional	3
Universidad del Atlantico	2
Pontificia Universidad Javeriana	2
Universidad de Huelva	2
UIS	2
Universidad de Nariño	1
UNMSM	1
El Colegio de Michoacán	1
Howard University	1
Centro de Investigaciones y Docencia Económicas	1
IGAC	1
Universidad del pais vasco	1
IMMAP	1
Universidad Nacional Mayor de San Marcos	1
Inst. Multidisciplinario de Biología Vegetal - CONICET	1
Universidad de Caldas	1
Javeriana	1
Universidad de las Américas	1
Museo La Tertulia	1
Conicet	1
n/a	1
Universidad Iberoamericana	1
No aplica	1

Universidad Nacional de Colombia, Sede Medellín	1
NYU	1
Universidad Veracruzana	1
ONIC	1
Universidad de antioquia	1
Universidad de Guadalajara	1
catholic Relief Services	1
Universidad de La Frontera	1
PUCP	1
COLMICH	1
Purdue University	1
Universidad de Puerto Rico - Recinto de Rio Piedras	1
SED Bogotá	1
Corporación Universitaria Minuto de Dios	1
Sergio Arboleda	1
Universidad del Valle	1
U Complutense de Madrid	1
Universidad Javeriana	1
Uptc	1
Fuac	1
Centro de Estudios Históricos, Universidad Bernardo O'Higgins	1
Universidad Nacional de la Plata	1
Centro de Investigaciones en Geografía Ambiental - UNAM	1
Universidad Pablo de Olavide	1
Unimagdalena	1
Universitario del Atlántico	1
Univalle	1
Fundación Red La Minga	1
Universidad Autónoma de Colombia	1
Archivo General de la Nacion	1
UNACH-UNICACH	1
Total general	**167**

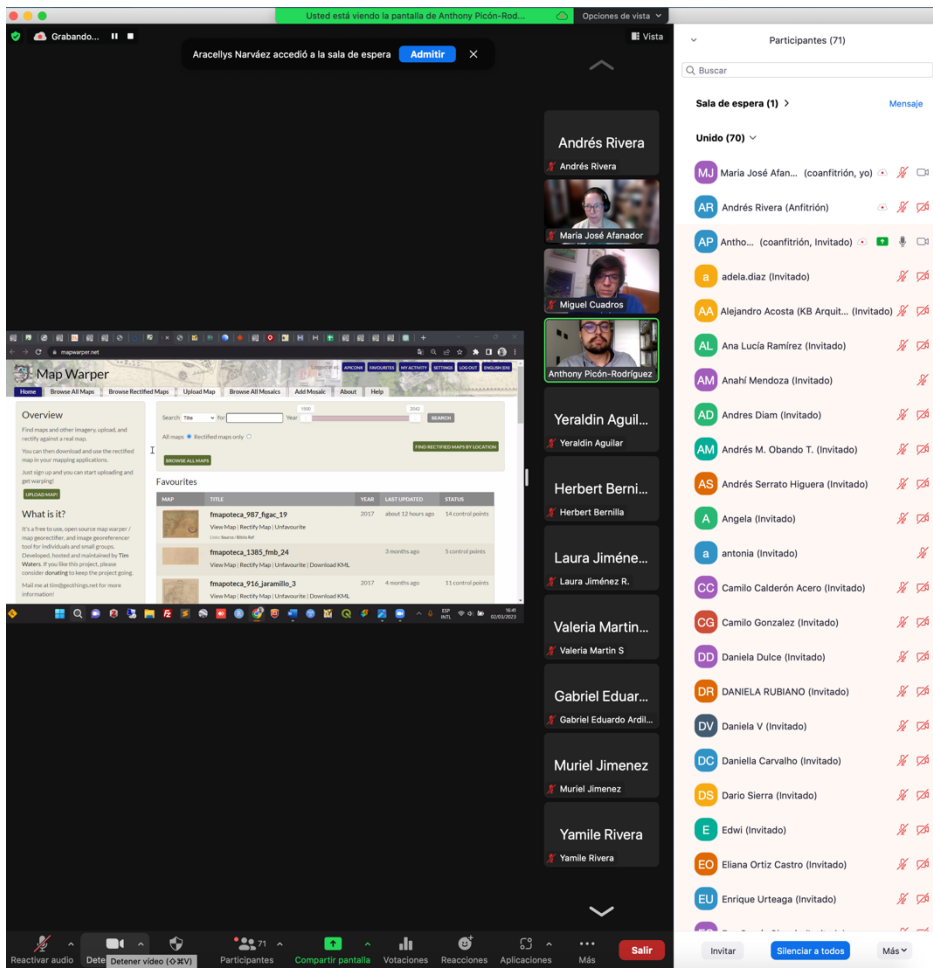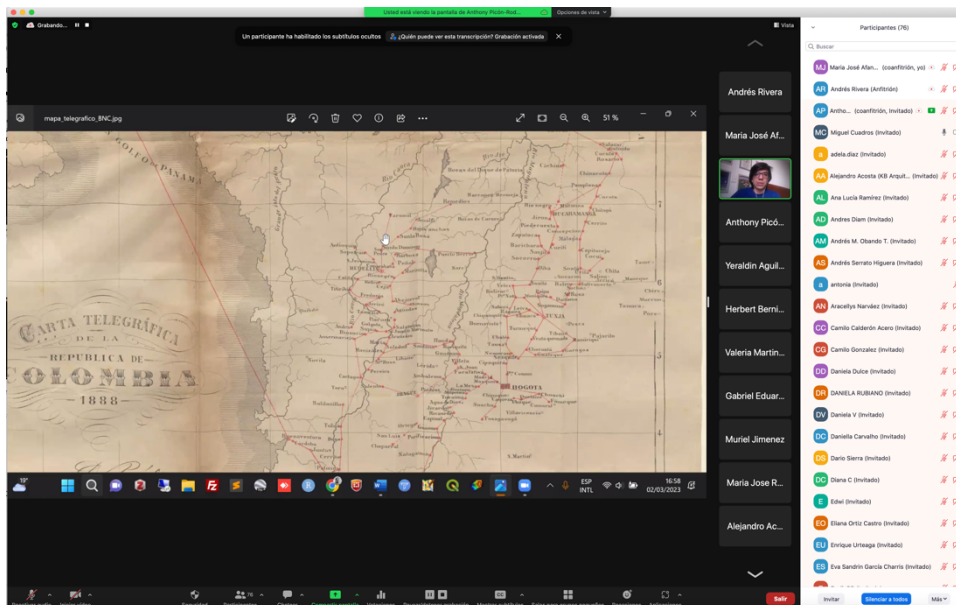Image 9. Screenshot during Map Warper workshop

Image 10.Screenshot during Map Warper

5.2.4. Discussion

During the session, participants followed step-by-step instructions for georeferencing historical maps. For this purpose, they used maps from the Mapoteca of the Bibloteca Nacional de Colombia previously curated by the workshop facilitators. https://bibliotecanacional.gov.co/es-co/colecciones/biblioteca-digital/mapoteca

Participants asked specific questions about the use of the tool. Finally, at the end of both sessions, participants offered some feedback on the usefulness and clarity of the workshop.

5.3. Workshop 3: Viewing metadata from image collections with ImagePlot- Cancelled

The lesson-based workshop, "Introduction to ImagePlot and visualization of image collection metadata", was cancelled due to the tool's incompatibility with recent operating systems. Workshop instructor Joshua Ortiz explained to us that although ImagePlot is still considered one of the few open access tools for large-scale data visualization, the last update to ImagePlot occurred in 2014 and the team that developed it does not offer support to users as of 2017. The instructor was unsuccessful running the tool on various versions of operating systems that continue to receive updates. Windows 10-11 and MacOS 11-13 were used as versions without updates compromise the security and operation of users' computers. The instructor also failed to adapt the various versions of the Java programming language used by ImagePlot (Java SE 6-8). Although the Programming Historian editorial team reviews and updates the lessons periodically, in this case the lesson will be withdrawn because it is not possible to replace the ImagePlot-related parts and maintain the same learning goals. ImagePlot is another example of the challenges of tool sustainability, which are even more complex with open access tools, since developers have no obligation to provide support or update their products.

5.4. Workshop 4: Introduction to TEI Markup

5.4.1. Description

Text markup with TEI/XML encoding refers to the process of applying tags and structuring text using the standards and conventions defined by the Text Encoding Initiative (TEI) and Extensible Markup Language (XML). TEI is a standard widely used in the digital humanities to represent and describe text in a structured and semantic way. XML, on the other hand, is a markup language that allows defining custom tags to encode and represent data in a human-readable and machine-readable way.

The workshop was offered by Nicolás Vaughan, associate professor in the Department of Humanities and Literature at the Universidad de los Andes and professor in the

Master's program in Digital Humanities. The workshop was held on April 13 and 14, 2023 from 3:00 to 5:00 pm via Zoom.
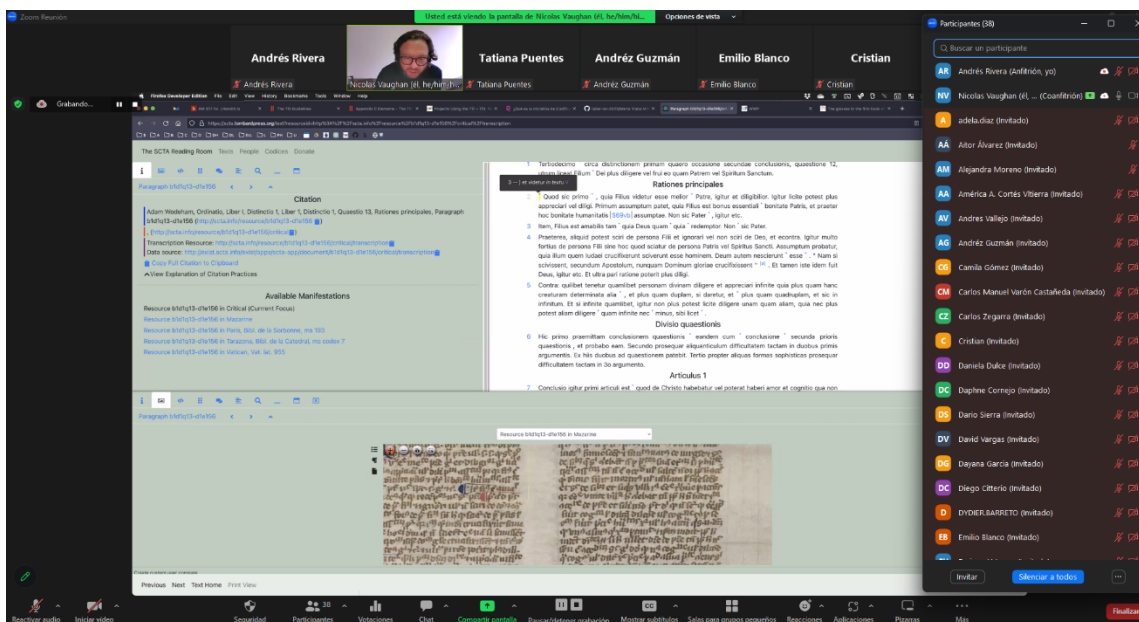

Image 11: Screenshot during TEI Markup Workshop

This virtual workshop provided participants with a comprehensive and practical introduction to the use of TEI and XML coding for the creation and management of digital documents. During it, students learned the fundamental concepts of these technologies, as well as best practices for applying them to text markup.

First, the workshop provided an in-depth understanding of the structure and operation of TEI/XML. Participants learned how to tag and structure different elements of a text, such as paragraphs, headings, quotations and footnotes, using the conventions defined by TEI and the Visual Studio Code editor. The exercises carried out allowed for an accurate and detailed digital representation of the texts, which facilitates their preservation, analysis and retrieval in digital humanities projects.

Secondly, participants gained practical skills in coding in TEI/XML, through various examples and case studies, encouraging the active application of the knowledge acquired. Participants learned to use specialized TEI/XML markup tools and software to create high quality digital documents and projects efficiently.

The benefits of this workshop extend beyond academia. The ability to use TEI/XML in the creation of digital documents provides humanities professionals with a skill in demand in libraries, archives, museums, and research projects engaged in the digitization and preservation of historical and literary texts. In addition, TEI/XML

markup is also relevant to digital publishing, critical editing, and linguistic corpus creation, thus expanding the career opportunities for workshop participants.

5.4.2. Enrolled and Participants

Registration for this workshop began on March 30, 2023, through a JotForms form. A total of 83 people registered for the workshop. The maximum number of participants connected on day 1 of the workshop was 26 and 29 on day 2 (Table 7). As with the previous workshops, from the information on the country and institutions of the participants, it can be concluded that most of the participants connected from Colombia and from the Universidad de los Andes. However, it is important to note that a significant number of participants connected from other universities in the country and from countries such as Mexico, Spain, the United States, Peru, Chile and Argentina (Table 7).

5.4.3 Discussion

During the session, participants actively shared their interests and projects in the Zoom chat and asked specific questions about the tool. This workshop was attended by participants from Argentina, Ivory Coast, Germany, Mexico, Peru, Puerto Rico and Spain. Finally, at the end of both sessions, the participants expressed their appreciation for the workshop.

Table 7. Data on TEI Markup Workshop

Enrolled	83
Participants day 1	29
Participants day 2	25
Average (min) connection	93,66

Table 8. Participants by country TEI Markup workshop

País	Participantes
Colombia	59
España	10
México	6
Perú	6
Puerto Rico	1
Cote d'Ivoire	1

Total general	83

Table 9. Participants by institution TEI Markup Workshop

Participantes por institución

Institución
Academia Colombiana de la Lengua
Archivo General de la Nación
EAFIT
Externado
Instituto de Física, UNAM
Museodata
Pontificia Universidad Católica del Perú
Pontificia Universidad Javeriana
Proyecto Estudios Indianos - Universidad del Pacífico
Tecnológico de Monterrey
UAM
Uaslp
Uni Andes
Uniquindío
Universidad de Granada
Universidad de Huelva
Universidad de Los Andes
Universidad de Santiago de Compostela
Universidad de Sevilla
Universidad del Atlantico
Universidad del Rosario
Universidad Distrital F.J.C.
Universidad Externado de Colombia
Universidad Michoacana de San Nicolás de Hidalgo
Universidad Nacional Autónoma de México
Universidad Nacional de Colombia
Universidad Pablo de Olavide
Universidad Pontificia Bolivariana
NYU
Universidad Veracruzana
ONIC
Universidad de antioquia
Universidad de Guadalajara
catholic Relief Services
Universidad de La Frontera
PUCP
COLMICH

Purdue University
Universidad de Puerto Rico - Recinto de Rio Piedras
SED Bogotá
Corporación Universitaria Minuto de Dios
Sergio Arboleda
Universidad del Valle
U Complutense de Madrid
Universidad Javeriana
Uptc
Fuac
Centro de Estudios Históricos, Universidad Bernardo O'Higgins
Universidad Nacional de la Plata
Centro de Investigaciones en Geografía Ambiental - UNAM
Unimagdalena
Univalle
Fundación Red La Minga
Universidad Autónoma de Colombia
UNACH-UNICACH

5.   Conclusions

This series of virtual workshops on digital tools for humanists marks the end of an enriching and transformative experience for all participants. Throughout these workshops, various tools and technologies have been explored that allow humanists to make the most of digital potential in their research and projects. From creating minimal and interactive digital exhibits with CollectionBuilder, to geo-referencing historical maps with Map Warper and TEI/XML markup for text representation and analysis, knowledge and skills have been acquired that are fundamental in the world of digital humanities.

These workshops have demonstrated the importance of embracing digital tools as an integral part of the work of humanists. The creation of digital exhibits offers an innovative way to present and share knowledge, reaching wider audiences and generating greater interaction with the content. Georeferencing historical maps provides a spatial perspective that enriches understanding of historical and cultural contexts. Finally, TEI/XML markup opens up new possibilities for text analysis and exploration, enabling structured and detailed representation that facilitates research and preservation.

Participants take with them an invaluable digital toolbox that will enable them to address future challenges in their projects and careers. These digital skills will give

them a competitive edge in an increasingly digital-oriented world. In addition, these workshops have fostered collaboration and knowledge sharing among participants, creating a support network and a community of practice in the field of digital humanities in Colombia and abroad.

In summary, this cycle of virtual workshops was able to provide humanists with the skills necessary to leverage some digital tools in their work. The creation of digital exhibits, georeferencing of historical maps and TEI/XML markup represent just a sample of the many possibilities offered by the digital world. As we close this cycle, it opens the door to an exciting future where humanists will be able to merge their knowledge and passion with digital tools and technologies to generate even greater impact on society and research. We thank the Experimental Humanities Collaborative Network for funding this initiative, the Center for Research and Creation of the Faculty of Arts and Humanities of the Universidad de los Andes, Programming Historian and Wikimedia Colombia for their support.