



## **Conservation of the Historical Documentary Heritage of Teziutlan, Puebla, Mexico**

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### **ABSTRACT**

At present, the history of the municipality of Teziutlan in the state of Puebla (Mexico) and in general of the Northeastern Region, is based on the oral tradition which is relevant, however, the protection and conservation of the Documentary Funds that strengthen and support regional and community research. The historical fact, its interpretation and contextualization are the result of the rescue, conservation, classification and deep analysis of documents that provide the raw material for the reconstruction of models that enrich the historical memory, and at the same time enforce the regional identity, in this case, the Northeastern Region of the State of Puebla, which is made up of 28 mountain municipalities. However, the City of Teziutlan (Teziuhyotépetl, which means hill where it hails from Nahuatl) is the most important in terms of historical documents. According to the Federal Law of Archives of Mexico (2012), a historical document: "is one that has secondary values of long-term conservation because it contains relevant information for the generating public or private institution, which integrates the collective memory of Mexico and it is fundamental for the knowledge of national history", in that sense, the Municipal Archive of Teziutlan has at least one hundred boxes of pages with documents from various areas of Public Administration, such as education, public works, culture, economy, to mention some.

**Keywords:** Mexico, historical heritage, document digitization, regional studies.

### **Introduction**

The Research Group CA-BUAP 354 Transdisciplinary Regional Studies has as its line of research the regional studies resulting from interdiscipline, keeping in mind the generation and application of knowledge for the benefit of the communities of the Northeastern Mountain Region of the State of Puebla in Mexico. This project contemplates the Northeastern Region of Puebla, especially the inhabitants of Teziutlan and its auxiliary boards, as well as the researchers who depend on the historical archive. It is also focused on the university community, not only of the Meritorious Autonomous University of Puebla (BUAP by its acronym in Spanish), or the Northeast Regional Complex, but of all interested researchers in regional history. It also focuses on the Municipal Council and refers to the value that it can mean for genealogical research and for research for legal and administrative purpose

### **Contextual framework**

The need that is intended to be addressed in this work is to respond to the latent danger of losing a Historical Documentary Heritage of the most important municipality in the Northeastern Region of Puebla and, at the same time, to have orderly and feasible access to a Municipal Historical Archive. of Teziutlan (AHMT by its acronym in Spanish) that is correctly classified, organized and even digitized for the easy reconstruction of episodes and historical processes of Teziutlan and the Region. The oral tradition of these communities has been a constant that has allowed the chroniclers of the city and the

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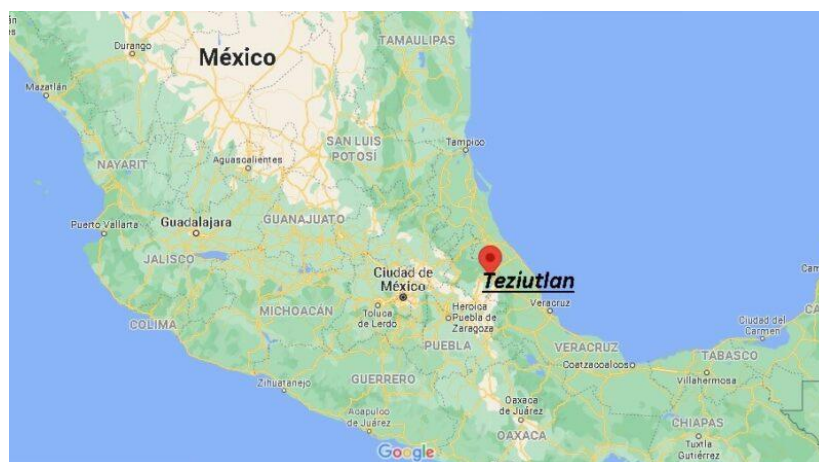
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region to produce a series of publications with an undeniable historical value and with an empirical and documentary remnant that allows corroborating and generating a solid framework of references. through the files that support it.

### The Experience in the Municipal Archive Project

modern economy is characterized by a high level of computerization, which implies the widespread and extensive use of electronic documents and services and modern means of communication and data exchange. This dynamic allows the creation of new types of products and services and is oriented towards a certain digital interaction of a wide range of actors. The main aspects of the application of the concept of "electronic administration" in municipalities is the transition to the management of electronic documents and electronic files, which guarantee the effective functioning of the organization in the period of formation of a cultural heritage (Tshering & Sharma, 2021) and, on the other hand, they allow the organization to increase the level of competitiveness (Casini, 2013).

An important point is the solution of the problem of the collection, it is necessary to constantly carry out various training seminars to master the modern document digitization technologies. In this regard, there is an objective need for archival organizations and their archival sources to transfer them into digital electronic format, which provides modern methods of interaction between consumers of archival information and the sources themselves (Corti & Marcon, 2003).



**Fig. 1 -Location of the city of Teziutlan on the map of Mexico(Dondeesta, 2022).**

### Methodology

The digitization of archival sources creates global opportunities for the development of various research, cultural, educational, and other projects based on the use of ancient documents. Digitized archival documents represent today the most convenient way to preserve and use information. This activity creates the conditions for the safe storage and use of archival documents, facilitates their recovery and use for research and even economic and legal purposes. Access to funds from municipal archives increases with the digitization of documents, because the conditions are created for their use by a wide range of people in a convenient electronic format, the processes of providing public services are accelerated, and the key problem of the entire archives sector of the country and its regions, which is a deep gap between the volume of physically accumulated archive documents and the degree of use of the same by users because they are not in digital format, is abated(Molina, 2013).

Let us consider the main organizational and methodological, as well as technical, aspects of the process of digitizing archival documents and their promotion for practical use in the external environment. Five documents define the modern standards for the digitization of archival documents: methodological recommendations for the electronic copying of archival documents and the management of the resulting information, set standards for making digital copies of the use fund from microforms of documents archive, methodological recommendations for the creation, storage, accounting and use of photographic and documentary forms on digital media, methodological recommendations for the organization of work and the technological equipment of electronic document repositories and, finally, the recommendations methodologies for software evaluation.

The recommendations made in the documents are based on the study of national experience in executing records digitization projects and on the use of widely recognized standards and recommendations developed and applied in other states.

A fundamental point is the formation of an electronic inventory of digitized archival documents. An electronic inventory makes it possible to systematize archival documents and create convenient conditions for subsequent search for documents and user work with them. Likewise, the elaboration of the electronic inventory allows creating the conditions for the subsequent classification and ordering of the archive documents in the corresponding sections. All of this makes it possible to simplify the digitization of archive documents and the subsequent work with them.

Regarding digitization technology, the choice of the method of digitization of archival documents must be made based on the peculiarities of a specific document, as well as the method intended for its use. For example, it is important that the format chosen for the digital materials presented represents the information contained in the document as accurately as possible.

When digitizing it is necessary to guarantee security measures when working with original documents, it is important to pay special attention to the preservation of documents, so the choice of digitization method: scanner, simple copy, printer, other methods used by specialists must all comply with the peculiarities of the document itself.

In the process of making a digital copy of a document, at least two copies of the archival document must be made: a master copy and a working copy. Both must be marked and registered in a special register. This registration system for scanned copies of archival documents allows quick and easy location of the digital copy in the electronic filing system and makes working with the archive document more convenient for potential users.

Currently, the most common formats for storing digital copies of archival documents are TIFF and JPEG. TIFF images are popular for their ability to preserve image quality due to lossless data compression algorithms. JPEG images have a high compression rate, but at the same time the images lose quality. The changes may not be visible to the naked eye, but the compressed image will show sharp and blurred contrasts. At the same time, no normative document has clearly defined the quality requirements of digitized documents in municipal archives.



**Fig. 2 - Old photograph of the Chapel of Our Lady of Carmen - Teziutlan (Archive, 1936).**

There are no criteria for evaluating the quality of scanned copies of paper documents: image parameters, brightness, sharpness, tonal reproduction, contrast, noise, color accuracy, resolution, geometric distortions, and other issues. Once digitization is complete, the original is returned to the archive for storage, and the copies made are incorporated into the electronic collection for users and are available to researchers.

An electronic file base is being realized using cloud technology. An electronic archive based on a set of documents used in a town hall can be implemented as a data storage on the organization's own hard drives or as an archive in the cloud, in many ways much more convenient and functional.

The main advantage of archives in the cloud is its rapid scalability, its low cost of ownership and the possibility of making documents available to anyone, wherever they are. You must know exactly the size of the file and how many users will have access to it.

The estimation of use and adaptability to the electronic ecosystem is carried out by experts in digital archives and according to their predictions, based on extensive experience with conventional paper and electronic archives, they are very precise. The server is rented, which is much cheaper than buying your own servers and developing the infrastructure for them.

Creating a cloud file involves several steps, such as the following. 1) the first stage is the evaluation of the conditions and the selection of a server and an operator that offer acceptable rental conditions; 2) the second stage is a standard procedure for the creation of any electronic file: scanning and digitization; 3) the third stage is the cataloging of the archive, the creation of the case structure and the document search system; 4) the fourth stage is ready to work, the cloud file is placed on a remote server, and all documents are distributed on the server.

In the fourth stage: the cloud file is ready to go, it is hosted on a remote server and rights and access levels are distributed. The advantage of cloud archiving is that cloud archiving is not only an affordable solution, but also incredibly convenient. Using standard means of identification, be it a certificate or passwords, any employee can work with electronic file documents remotely.

Scaling the archive in the cloud also does not cause difficulties: even at the stage of selecting a server, the need to expand or increase the number of users is determined by the power and volume requirements of the server. In summary, it should be noted that document digitization is a necessary modern measure to organize online access to archival documents. The presence of a variety of historical electronic documents makes it possible to create a new user-friendly and scientifically useful information resource and, more importantly, to increase the level of demand for the services of archive organizations, to guarantee more efficient use extensive of files documents at your disposal.

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## Discussion

Today, online archives and online archive projects as a way of aggregating and presenting historical information have become widespread. They can be classified according to the type of published data. Furthermore, one can distinguish network storages created based on state archives and those created by the efforts of committed academics, as in this case.

Being essentially one of the manifestations of media convergence, online archives are of professional interest to historians and the public. The former thoroughly study the archive materials to reproduce the image of the historical past as completely as possible (Bharadwaj, 2022). The latter examine them more superficially, mainly in search of references to the events that take place, in many cases for personal or genealogical interests.

Historians can devote a certain amount of time to the study of documents, journalists, in most cases, do not have such an opportunity: their work must be operational, short-term. However, online archives can serve as a good tool for investigative journalism, since their materials, as a rule, undergo selection and verification procedures, which, of course, does not eliminate the need to be critical with them, and only access to the base requires the Internet to obtain information.

The ability to access documents remotely is a definite advantage of network storage over conventional archives. Equally, the presence of an effective search mechanism is important: in the online archive, all data is structured, collected in electronic catalogs, so that you can find the information you need without much difficulty.

The creation of online archives makes it possible not only to preserve valuable historical evidence, but also to make it technically convenient to search and make the information available to researchers of all levels, professional journalists, and historians.

Alongside online archives, there are various historical media projects, which, perhaps, are inferior in objectivity to the traditional historical document, but are no less interesting evidence of the past. One of the clearest examples is the Inventory of the El Sagrario Parish Archive, in Teziutlan, which was created by volunteers with the aim of collecting Parish documents and manuscripts in a single online library. Instead of historical facts and analysis, you can find microhistory evidence that is necessary for an objective historical narrative.

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## Conclusion

The information infrastructure that supports our lives is rapidly evolving. Many people think of information infrastructure as information devices such as networks and mobile terminals, but without usable content, it cannot be called an information infrastructure. In addition, the information infrastructure is required to have not only the content distribution function but also the storage function.

The digital archive described in this document, the Municipal Historical Archive of Teziutlan, is an important element of the information infrastructure's storage and preservation function and, by accumulating and providing cultural and academic resources, supports various intellectual activities and, at the same time, has an important role in transmitting and preserving the past.

The basic value of digital archives is easy access to valuable materials anytime, anywhere. The value of the digital archive that we are developing will be recognized by the continuous efforts made up to this moment, the first half of 2022. The accumulation of many materials and the fact that by uploading it to the Internet it can be used at any time and in any place. It seems that the main factor is that we can now realize the value that comes from having access to content that was previously in boxes and is now in the process of going digital. Traditional digital archives have a strong image of cultural and historical heritage assets. However, the tools that we usually use, such as digital cameras, word processors and the server, they continue to constitute the historical memory of past and future generations. We believe that in this way the need to address the danger of losing a Documentary Historical Heritage of Teziutlan and, at the same time, have orderly and feasible access to the Municipal Historical Archive will soon be possible.

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## Acknowledgements

The authors would like to thank the Program for the Development of Higher-Level Teaching Personnel (PRODEP for its acronym in Spanish) for the support granted to carry out the project "Conservation of the Historical Documentary Heritage of Teziutlan". As well as the Vice-Rector for Teaching, through the Department of Institutional Development for its support and accompaniment for the consolidation of the research group BUAP-CA-354 "Transdisciplinary Regional Studies".

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