Horizontes de la GESTIÓN CULTURAL
Master's Degree in Cultural Management and Development • CUAAD • University of Guadalajara

ISSN: 3061-8029
Vol. 6. Issue 11. January-June 2026

The importance of digital art in Mexico.

La importancia del arte digital en México.

Received: 08/10/2025 **Reviewed:** 18/11/2025 **Approved:** 03/12/2025

DOI: 10.32870/rhgc.e0028

Iván Alejandro Zaragoza Montiel
University of Guadalajara. Mexico
alejandro.zaragoza.mon@gmail.com
https://orcid.org/0009-0007-2271-2956

Abstract:
This paper analyses the relevance of digital art in the contemporary Mexican context, focusing on the particularities of its development, its main exponents, the economic dynamics that sustain it, and its impact on the country's digital cultural scene. The study is based on the theory of generative art and information aesthetics, drawing on George Nees' contributions on the use of algorithms in artistic creation, as well as the perspective of Cynthia Patricia Villagómez Oviedo, whose analysis of digital art production processes in Mexico provides an understanding of both the creative dynamics and the specific challenges faced by artists in this field. From a descriptive approach, the article examines how digital tools have transformed artistic practices, enabling new forms of expression, collaboration and dissemination. It also addresses aspects such as the influence of technology on the construction of artistic identity, the dialogue between digital art and cultural traditions, and the role of digital platforms in its promotion and economy. Overall, the work highlights digital art as a growing field and a key agent in the consolidation of digital culture within the current Mexican art scene.

Keywords: Cultural centralisation. Cultural homogenisation. Independent bookshops. Independent publishing. Bibliodiversity. Periphery.

Resumen:
El presente trabajo analiza la relevancia del arte digital en el contexto mexicano contemporáneo, atendiendo a las particularidades de su desarrollo, a sus principales exponentes, a las dinámicas económicas que lo sustentan y a su impacto en la escena cultural digital del país. El estudio se apoya en la teoría del arte generativo y en la estética de la información, retomando las aportaciones de George Nees sobre el uso de algoritmos en la creación artística, así como la perspectiva de Cynthia Patricia Villagómez Oviedo, cuyo análisis de los procesos de producción del arte digital en México permite comprender tanto las dinámicas creativas como los desafíos específicos que enfrentan los artistas en este campo. Desde una aproximación descriptiva, el artículo examina la manera en que las herramientas digitales han transformado las prácticas artísticas, posibilitando nuevas formas de expresión, colaboración y difusión. Asimismo, se abordan aspectos como la influencia de la tecnología en la construcción de la identidad artística, el diálogo entre el arte digital y las tradiciones culturales, y el papel de las plataformas digitales en su promoción y economía. En conjunto, el trabajo destaca al arte digital como un campo en expansión y como un agente clave en la consolidación de la cultura digital dentro del panorama artístico mexicano actual.

Palabras clave: Centralización cultural. Homogeneización cultural. Librerías independientes. Edición independiente. Bibliodiversidad. Periferia.

ISSN: 3061-8029
Vol. 6. Issue 11. January-June 2026

Introduction

In the 21st century, technology is constantly evolving, causing art to undergo a constant convergence between human creativity and digital technology, bringing with it a new artistic paradigm called digital art.

To explore the technological-artistic phenomenon in Mexico's contemporary cultural landscape, it is essential to analyse the importance of digital art, examining its historical development, identifying its main exponents, understanding its economy, and evaluating its impact on the local and global cultural scene. Therefore, the question that will guide this analysis to generate ideas and arguments is: Why is digital art important in Mexico?

To contextualise this inquiry, we must return to the origins of digital art, where, tracing its genealogy, we realise that the origin of computational art began in the 1960s with the influence of figures such as George Ness, who plays an important role in understanding the concept and whose work in the application of algorithms to artistic creation laid the theoretical and practical foundations for further development.

In Mexico, the 1960s and 1970s were characterised by artistic growth with a strong component of social and political criticism, a context in which movements such as the "graphics of '68" established a national precedent for the link between art and technology. It is extremely important to review the trajectory of digital art in Mexico, from its beginnings to its current state, marked by the constant evolution of tools and digital platforms, in order to present a panoramic view of the development of digital art and identify the most significant stages and the most relevant artists.

It is important to understand the relationship between digital art and digital culture, which is why we analyse how this new form of artistic expression is inserted into and contributes to the configuration of practices, beliefs and knowledge in the digital and social environment.

It is also important to analyse the economics of digital art by exploring the business models and valuation mechanisms that contribute to the gross domestic product of the cultural sector, as well as the generation of jobs and the growing demand for this type of art by companies. However, the main motivation for carrying out this study lies in the need to document and analyse an artistic field that, although expanding, still requires greater academic attention in the Mexican context.

In an increasingly digitalised world, understanding the dynamics of art created and disseminated through digital media is essential to understanding cultural evolution and creativity. For this reason, we seek to spark the reader's interest by showing how digital art not only represents a new form of aesthetic expression, but also raises questions about authorship, originality and access to art in this constantly changing era, the digital age. Emphasising its potential for new generations of creators, technological innovation and cultural dialogue in Mexican society.

Digital art in Mexico

ISSN: 3061-8029
Vol. 6. Issue 11. January-June 2026

To understand digital art in Mexico, it is necessary to investigate its foundations and recognise the pioneers within the national artistic sphere. This discipline can be considered to be in an emerging stage of development, representing an evolution between creativity and technological innovation, both globally and specifically in Mexico.

Pioneers such as George Nees took computational art, whose origins date back to 1964, as a reference. This artistic movement is based on the avant-garde exploration of algorithms as a creative method, with computational aesthetics as its foundation, thus recognising itself as generative art and information aesthetics (Puig Mestres, 2004). George Nees' contribution to digital art will be discussed in more detail later.

In Mexico, the art of the 1960s and 1970s was characterised by its focus on political, economic, social and cultural issues. In this context, and with the intention of criticising the art that was predominant at the time, a movement known as "graphics of '68" emerged, which laid the foundations at the national level for the relationship between art and technology. Several artists expressed their support for this movement, including José Luis Cuevas, Roberto Donis, Francisco Icaza, Jorge Manuell, Benito Messeguer, Adolfo Mexiac, Mario Orozco Rivera, Ricardo Rocha, and Manuel Felguérez (the latter being one of the most important), most of whom were part of the so-called "Salón Independiente" (Villagómez, 2015, p. 62). With this, graphics became a tool for social subversion, as they could be quickly multiplied at low cost and mass-produced in series, making the image a phenomenon of communication rather than contemplation.

As can be seen, the pioneers and movements that drove the creation and growth of digital art were motivated by political, cultural, economic, and social factors, giving rise to what we now call digital art.

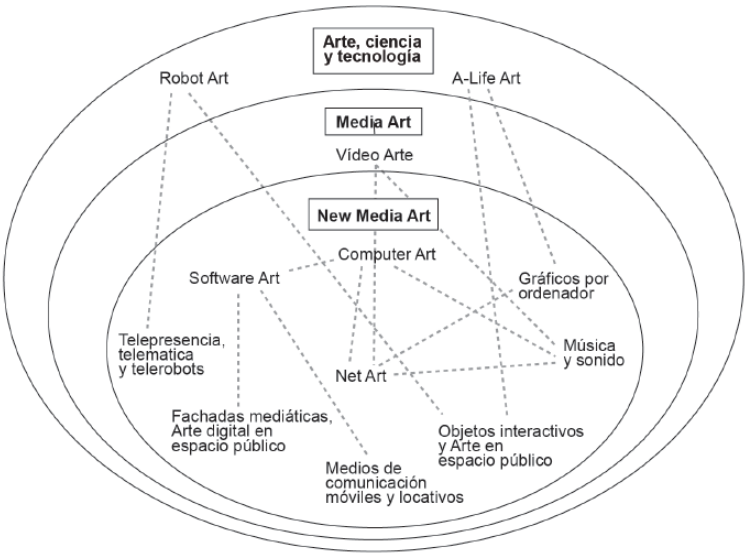
The concept of "digital art" has various connotations, descriptions, and meanings, depending on the author. However, for Villagómez (2015), it could be defined as media art, but, on the other hand, the theorist Lev Manovich (2001), who delves into the language of new media, argues that it is a more complex issue. This is because, in Manovich's opinion, we are immersed in a new media revolution whose impact exceeds that of the printing press in the 14th century or photography in the 19th century. For Manovich, the computer media revolution transforms all phases of communication.

More specifically, Villagómez (2015) provides a broader overview in order to better define this artistic expression, addressing three broad categories for its definition and evolution into what is known today as digital media art: 1) Art, science and technology, which is the general context in which art is classified and undergoes hybridisation with different disciplines; 2) Media Art, referring to the mass media as an artistic resource, for example: newspapers, television, posters, billboards, etc.; 3) New Media Art, which is the same as the previous one, but applied to electronic and digital media.

To further clarify this definition, Villagómez (2015) presents the following conceptual map:

Figure 1. Conceptual Map of the Classifications of Art, science and technology and some possible relationships.

ISSN: 3061-8029
Vol. 6. Issue 11. January-June 2026



Source: Villagómez Oviedo, C. P. (2015).

The conceptual map offered by Villagómez is a clear example of the categorisation of digital arts. However, services related to digital art can be classified into branches of production according to the materials and technologies they use, as well as the needs they satisfy.

In contrast, for Estrada (2012), the criteria for classifying digital art are: 1) Type of material, mainly immaterial or digital, although it can sometimes have a physical medium; 2) Technology based on human skills (artistic and digital), computer science or mechanics, applied to people or objects, with production occurring simultaneously or not in time and space; 3) Need addressed to end consumers (buyers, galleries, collectors, the artistic community itself) or social sectors (museums, festivals, public institutions and non-profit organisations), maintaining a continuous supplier-user relationship.

Although there is no single agreement between these two authors and between authors who attempt to define what digital art is, organisations such as UNESCO and UNCTAD propose a model with eight creative industries to try to categorise digital art, which are: Design, Creative Services, Publishing and Print Media, Heritage Goods and Services, Visual Arts, Audiovisual Arts, Performing Arts and New Media.

In contrast, for Estrada (2012), digital art is not limited to just one of these industries, but is part of several: 1) Design, which includes computer-aided design of various objects and graphics, with graphic designers focusing more on aesthetics; 2) Creative services, encompassing computer design applied to architecture and engineering; 3) Publications and print media: This refers to the electronic publication of various materials such as newspapers, books, and magazines. 4) Heritage goods and services: This includes the cultural and recreational services of museums and events such as festivals and exhibitions. 5) Visual

ISSN: 3061-8029
Vol. 6. Issue 11. January-June 2026

arts: Although traditionally focused on physical works, digital art considers digital photography, digital image processing, and digital sculpture. 6) Audiovisuals, which include the production of radio, television, film and video programmes, post-production and the creation of music and sound recordings. 7) Performing arts, which refers to live performances for cultural, educational or entertainment purposes, where digital technology is a creative tool, and 8) New media, which includes software design for artistic creation and the sale of digitised creative content (audio, image, video and games).

As can be seen, digital art is characterised by its constant evolution in terms of technology, innovation, but above all in terms of concept. With its origins dating back to the field of computer art and hybridising art, science and technology, it manifests itself in various categories such as Media Art and New Media Art, each with distinctive approaches and characteristics. Furthermore, digital art is not only present in the aesthetic dimension, which ranges from graphic design and audiovisual arts to new media, but also in dimensions that nourish Mexican society with changes in perspectives and new approaches to what art is.

Generative art, information aesthetics and digital artistic production in Mexico

George Nees marked a turning point in art in 1964 with the creation of his first digital graphic, a work that not only used algorithms and computers, but also incorporated random parameters as a central element. This introduction of chance into his aesthetic structure programmes broke with traditional ideas of artistic control and opened the door to new forms of creation.

Nees experimented with chance in works such as *Eight Corners and Twenty-Three Corners,* which consist of selecting random points within a rectangle and connecting them with lines, generating new compositions. In *Axis-Parallel Maze,* he used a plotter to draw vertical or horizontal lines of random lengths, while in *Random Writing* he restricted random movements within defined limits (García, 1972). This use of randomness not only transforms the final result of each work, but also redefines the role of the artist. Instead of being a direct creator, Nees became a system designer, establishing rules and parameters that algorithms followed to generate art. Thus, generative art was born: a practice where instructions or "prompts" programmed by the artist give life to unique works, thereby exploring what can be called the aesthetics of information.

This innovation represents a partial shift away from traditional authorship and begins to raise questions about the relationship between the artist, technology and the work. Generative art not only expanded the possibilities available to creators, but also laid the foundations for the subsequent development of new technologies in this field, influencing artists around the world, including Mexicans.

However, in the Mexican context, digital and generative art has followed a path conditioned by the country's technological dynamics. As Villagómez (2015) points out, Mexico has not been a leader in technological development, but

ISSN: 3061-8029
Vol. 6. Issue 11. January-June 2026

rather a consumer of tools and systems created elsewhere. This position as a "customer" has influenced how digital art has been adopted and adapted locally. However, despite these limitations, Mexico has produced its own pioneers, among whom Manuel Felguérez stands out.

Felguérez began exploring the possibilities of computers in art in the early 1970s. His most notable project, the *Máquina Estética (Aesthetic Machine),* developed in 1975 during his stay at Harvard University alongside engineer Mayer Sasson, is an example of Mexican generative art. This programme generated new works every eleven seconds, using geometric figures that varied randomly in position, size and orientation according to a set of predefined instructions (Villagómez, 2018). The *Aesthetic Machine* not only demonstrated the potential of technology as a creative tool, but also reflected how generative art could produce an infinite diversity of results from finite rules.

After these years, in the 1990s, digital art in Mexico took a major leap forward with the opening of the Multimedia Centre of the National Centre for the Arts (CENART) in 1994, which marked an important moment by offering a space dedicated to experimentation, research and training in technological artistic practices, including generative art (Miranda, n.d.). This environment allowed artists such as Andrea di Castro, Cecilio Balthazar, and Luis Fernando Camino to develop their projects and consolidate a local scene. Since then, digital and generative art has gained ground in Mexican galleries, museums, and cultural institutions.

The trajectory of generative digital art, from George Ness's revolutionary experiments to its development in Mexico, reveals a history committed to innovation and adaptation. Randomness and algorithms have transformed the way we approach creativity, challenging conventional notions of audience and opening up new aesthetic possibilities . In Mexico, despite the challenges this country presents in terms of technology, artists such as Felguerez have shown that it is possible to contribute to this field, enriching the global landscape of generative art with their own voices.

Impact on culture

The impact of this artistic expression has shown that there are increasingly more cultural trends and creations that advocate for technology, as digital culture is defined as the set of practices, beliefs, behaviours, and knowledge that arise in relation to digital technologies, which have their fundamental codes, as Michel Foucault calls them, and "are those that govern its language, its perceptual schemes, its changes, its techniques, its values, the hierarchy of its practices that fix in advance for each man the empirical orders with which he will have something to do and within which he will recognise himself". (Foucault, 1991, cited by Leyva, 2012, p. 48).

This new form of culture is characterised by elements such as interactivity, constant connectivity, accessibility to information and the integration of multimedia resources. According to Adolfo Mir (1974), the components of any culture can

ISSN: 3061-8029
Vol. 6. Issue 11. January-June 2026

be grouped into three broad categories, which are: 1) institutions, made up of structures and functions to regulate and control the normative guidelines of all aspects of social life, 2) Ideas, beliefs, and values that constitute theories, knowledge, observations, traditions, or experiences that individuals have about themselves and their biological and social world, 3) The technological aspect, consisting of the objects and tools that humans create and use. The social uses of cultural objects are related to the attitudes, values, and beliefs assigned to them, as well as the knowledge and skills they imply. Digital art is undoubtedly involved with these three components of culture, where the artistic institution, as a normative body of preservation, promotes and is governed by social representations, values, theories, and precepts about the uses of objects or artefacts.

These conditions pointed out by Mir are manifested in the digital culture that is beginning to influence today's society, even though most of the world's citizens still belong to the culture of traditional art, which dates back to the origins of art and was formed and consolidated 40,000 years ago. In this regard, Jesús Galindo Cáceres (2006) states:

> Even digital culture can be considered part of an evolutionary process of techniques and artefacts developed by human beings and applied to the social system of language, which dates back several centuries and is tangible in the transformation of media, textuality and practices (p. 48).

This digital evolution opens up an unprecedented constructive virtual environment where it is possible to visualise possible worlds that social actors create and transform into networks. Not only does technology foster these cultural changes, as Christine Hine (2004) points out, but the internet is also a space in which a culture is developed; and it is important to highlight the author's observation, in agreement with Grint and Woolgar, regarding the formation of digital culture, which emphasises that in every culture, without exception, the agent of change is not technology itself, but rather the uses and construction of meaning around it.

Thus, in Mexico, digital culture is transforming various aspects of society, including communication, learning and social interactions, which underlines its impact on everyday life.

Within this context, digital art is not only a product, but also an active contributor to its formation and evolution, as digital art uses and reflects the tools and platforms of digital culture, such as design software, social networks and virtual galleries (Villagómez, 2018). It also provides a means of addressing social, cultural and political issues within the digital sphere. Finally, it contributes to the democratisation of art and cultural expression in Mexico, as it offers platforms for emerging artists to share their work with a global audience, setting aside the traditional norms of the art and culture world.

The economy of digital art in Mexico

ISSN: 3061-8029
Vol. 6. Issue 11. January-June 2026

The study of the economic valuation of digital art falls within the field of cultural economics, as well as creative economics, as it shares with other areas and even cuts across them, such as the performing arts, heritage and cultural industries.

To understand the business model of digital art, we must recognise that a digital artist has two ways to market their work. The first is to sell it in physical format, which gives them initial control over the rights, but cannot prevent buyers from making copies for personal use without fully respecting copyright. The second option is to participate in a community of practice. Here, recognition comes from other artists in the community, who, by sharing their work, obtain a monetary reward: the validation of the originality and creativity of their work. This requires a global community with good communication. In this process, the distribution between producer and consumer becomes blurred, creating a *prosumer*[1] , where the artist creates, distributes and recreates their content (Estrada, 2012).

There are several business models for distributing digital works. The first is online sales, which requires technology to protect against illegal copying. Another option is *streaming*, which reproduces content in real time without the need to save it. The latter allows for internet broadcasting, where the creator offers the material without interaction with the public and income can come from sponsorships or advertising.

The economic importance of the cultural sector in Mexico, which of course includes digital art, is evident in its considerable contribution to the national Gross Domestic Product (GDP), where in 2022, the cultural sector showed remarkable growth.

To provide some context on the importance of the economy in digital art globally, we can look at the case of the Government of the Republic of Korea, which, through its Trust Fund (FIT), has allocated extra-budgetary funds to the Secretariat since the 2005 Convention came into force in 2007. The support provided is intended to promote the emergence of cultural and creative industries in developing countries, where a digital creativity laboratory is being implemented.

Although this fund is not implemented in Mexico, we can note the global increase in this cultural expression, where, according to UNESCO, with annual global revenues of more than two trillion dollars, the cultural and creative sectors provide almost 30 million jobs worldwide and employ more people between the ages of 15 and 29 than any other sector.

In Mexico, in terms of culture, audiovisual media such as the internet, cinema and video games generated 35.0% of GDP in this sector, making it the largest contributor to GDP in terms of culture, leaving behind crafts with 20.8%, cultural production in households with 20.6%, performing arts and shows with 4.2%, books, printing and press with 2.4%, material and natural heritage with 1.5%, music and concerts with 1.2%, and visual and plastic arts with 0.9%. (National Institute of Statistics and Geography INEGI, 2022).

[1] A person who consumes and produces goods or services, i.e. who acts as both a consumer and a producer at the same time.

ISSN: 3061-8029
Vol. 6. Issue 11. January-June 2026

As can be seen, digital culture is an important element for the growth of the national economy. Mexican digital artists face many difficulties in making themselves known and selling their works, which is why they use digital tools and platforms to promote, distribute and add value to their art. Social media platforms such as Facebook, X, YouTube, LinkedIn, and Instagram serve as initial avenues for visibility, community building, and direct interaction with potential art lovers or collectors. At the same time, websites such as Mercado Libre and Amazon facilitate the direct sale of digital art and related products, expanding distribution channels beyond traditional structures and helping artists generate resources and money from what they create. However, these large companies are not the only ones supporting digital art for sale. There are also companies that specialise more in the sale of digital art, such as Artsy, which is an example of a platform that connects Mexican galleries and artists and represents a global network of collectors interested in art.

In the national context, there are virtual spaces such as Galería Sala Marte and Galería de Arte MX, which are dedicated to the Mexican market, where works can be exhibited and sold in the same place, including, of course, digital art.

With the technological boom come new ways of marketing works, but it is also important to highlight and analyse the new business models being implemented with digital art, where NFTs have transformed the landscape in Mexico by allowing artists to tokenise their works using blockchain to guarantee unique ownership. This facilitates direct sales to collectors, ensuring royalties for future resales through smart contracts. For this reason, there are different platforms such as OpenSea, Rarible and Foundation that advocate compliance with these measures to maintain the unique ownership of digital works, as well as to facilitate sales.

The value of digital art lies in its uniqueness, originality, and creativity. However, its life cycle can be short, so it must be promoted quickly to potential buyers. Marketing expenses in this industry are often high and considered "costly" because they are necessary regardless of the final success of the work.

It is concluded that creative industries, including digital art, differ from other economic activities in terms of their production methods and the particular characteristics of their markets. From an economic point of view, they present market failures and important cultural considerations. Furthermore, their structure, management and location make them a distinct field within the general economy.

The risks in this activity are related to the intangible nature of the product, the recognition of originality by other artists, the preparedness of the public, and the speed with which the market recognises and values the work. The ability of intermediaries to create popularity lists and the constant need for new products are also important factors.

It can be noted that in Mexico, the situation of digital artists is similar to that of other artists globally: the need for a second job, low income, the need for financial aid, self-employment, project-based work, and direct sales. However, digital art, by emphasising the technological form, encourages more people to access the sale and purchase of works more quickly

ISSN: 3061-8029
Vol. 6. Issue 11. January-June 2026

and easily, which helps to promote art, as the market for digital artists is broad due to the growth of the creative industries and their impact on other economic areas.

Technical skills, easy access to technology, and its cross-cutting nature allow digital artists to participate in various stages of the creative industries' value chain, generating local wealth. In Mexico, it is estimated that creative industries associated with digital art generate between 0.8% and 1% of wealth and employment.

An increase in demand for publications, audiovisuals, and new industrialised media drives digital art activities across all creative industries. If the increase in demand occurs in design or creative services, the impact on the demand for digital goods will be more localised, mainly affecting creation and other business sectors such as finance and commerce. An increase in demand for heritage services and performing arts will have a greater impact on government demand (through subsidies) and on digital activity within those same industries.

Conclusion:

The importance of digital art in the contemporary Mexican art scene has been highlighted as a field with cultural and economic implications. Its development, although influenced by the adoption of global technologies, has been marked by the contribution of national pioneers such as Manuel Felguérez, whose work in the field of generative art laid the foundations for what is now known as Mexican digital art, but with roots in computer art and social and political movements such as the "graphics of '68," it manifests itself through various categories that hybridise art, science, and technology.

Digital art in Mexico not only represents an evolution in artistic practices, but also contributes to innovation, technology and cultural dialogue, which is relevant in shaping the country's artistic and cultural landscape.

Digital culture is growing with the creation of more digital artworks, so it is important to promote this artistic expression in order to contribute to a culture that is constantly evolving and that, with the participation of this sector, could increase the global reach of digital art, thus enhancing digital culture worldwide.

References

Estrada. S. (2012) Economic aspects of digital art. University of Guanajuato

Foucault. M. (1991), The Order of Things: An Archaeology of the Human Sciences / trans. E.C. Frost, 21st ed. Siglo XXI, p. 5.

Galindo Cáceres, J. (2006), Cyberculture, cybercity, cybersociety. Towards the construction of possible worlds in new conceptual metaphors, in cyberculture. An emerging world and a new perspective, Mexico: National Council for Culture and the Arts, pp. 48-49.

Hine, C. (2004), Virtual Ethnography, Barcelona: Editorial UOC, p. 13, (New Technologies and Society).

National Institute of Statistics and Geography. INEGI. (2022). Press room. https://en.www.inegi.org.mx/app/saladeprensa/noticia/7750#:~:text=Based%20on%20the%20cl

ISSN: 3061-8029
Vol. 6. Issue 11. January-June 2026

assification,households%20contributed%2020.6%20per%20cent.
20classification, households contributed 20.6 per cent

Leyva, E. M. R. (2012). The incorporation of digital culture into the reading practices of high school students at UNAM. *Library Science Research, Archival Science, Library Science and Information, 26*(56), 43.

Manovich, L. (2001). The Language of New Media. Barcelona, Spain: Paidós.

Mir, A. (1974), Culture and society. The social sciences. ANUIES, pp. 20-27.

Miranda, M. (n.d.). Digital art in Mexico. Pinto mi Raya. https://www.pintomiraya.com/pmr/15-textos-pmr/textos-de-monica/61-arte-digital-en-mexico

Puig Mestres, L. E. (2004). ALEAR: Processual-random art. Randomness in computer art (Doctoral thesis). University of Barcelona.

Villagómez Oviedo, C. P. (2015). Analysis of digital artistic production processes in Mexico: Mexican digital artists and their work (Doctoral thesis). Polytechnic University of Valencia.

Villagómez Oviedo, C. P. (2021). Digital art production in Mexico from a complex environment. *Inventio, the genesis of university culture in Morelos, 14*(34), 57–64. https://doi.org/10.30973/inventio/2018.14.34/7