Cyberspace Serves Culture: Experiences from Iran During the COVID-19 Crisis

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During the last two years, we have witnessed incredible advancement in the growth of research on E-culture. Because of the COVID-19 outbreak, this advancement was not only a Eurocentric development but could also be seen in non-European countries like Iran, which has accelerated rapidly towards digitalization. This paper is the first attempt to present a comprehensive review of Iranian digital cultural initiatives during the quarantine period of the COVID-19 outbreak (March 2020 to May 2020). This study uses VOSviewer software to analyze the digitalization trend in Iran from a thematic and geographic perspective. The results reveal that there was a significant ascending trend in the number of launched digital cultural projects in Tehran province during the quarantine period. Based on the data sourced from the General Directorate of Islamic Culture and Guidance of Tehran province "اداره کل فرهنگ و ارشاد اسلامی استان تهران", 30 digital projects with a socio-cultural scope were identified. This result is in line with the development of digital capabilities in the country. A key finding was the dominance of research related to social media platforms, as highlighted by the high number of digital cultural activities that were launched through Instagram, WhatsApp, and Telegram. This has clear implications for the improvement of E-culture in the country and the development of this domain by recognition of its social, economic, and environmental values. Moreover, the majority of cultural activities revolved around virtual festivals celebrating Iran's intangible cultural heritage, including prominent events like Nowruz (the Persian New Year). This has revealed the dominant role of cultural heritage in the progress of digitalization. These results enabled us to provide an initial framework of digital tendencies in Iran that could potentially contribute to E-culture promotion through the development of new digital tools and formats.

1. INTRODUCTION

Studies on E-culture have received much attention since the COVID-19 outbreak not only in European countries but also non-European countries. The pandemic has had a huge impact on both tangible and intangible cultural heritage [Gerami et al. 2022] and has, moreover, rapidly accelerated the digital transition of cultural and natural heritage assets around the world [Raimo et al. 2021; Gerami et al. 2022]. Italy, as a frontrunner in Europe with its early declaration of a national lockdown, witnessed an unprecedented shift in cultural behaviors and the utilization of spaces, diverging significantly from the pre-quarantine era [Tamborrino 2020]. In developing countries like Iran, a great movement

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toward digitalization has been implemented during the pandemic [Vahidi et al. 2021; Gerami et al. 2022]. However, a comprehensive overview of the digital formats and instruments utilized in Iran is not yet available. Having this information helps to investigate the opportunities and challenges in the process of digitalization in the country.

So far, many scholars have conducted in-depth research about COVID-19's impact on digitalization in Iran and obtained fruitful research results [Deldar and Fruotan 2022; Gerami et al. 2022; Askari and Chen 2021; Vahidi et al. 2021]. Vahidi et al. 2021 have reviewed all the digital citizen science projects created in the country in response to the pandemic. Moreover, they provided some solutions regarding the weaknesses and strengths of these projects. Another study has concentrated on the major dilemmas of online teaching in Iranian high schools [Askari and Chen 2021]. Gerami et al. 2022 implemented the research to discover the challenges and opportunities in the digitalization of heritage sites of Iran. The research conducted by Deldar and Fruotan 2022 analyzed patients' online education programs provided by nurses through augmented reality technology.

The previous studies investigated the digital response of various public and private cultural sectors in Iran during the quarantine period . In addition, most of these studies focused on the educational sector and analyzed the impacts of remote learning on students from various perspectives [Barjesteh et al. 2022; Khodaei et al. 2022; Asadpour 2021]. This highlights the lack of sufficient research investigating the digital actions of the cultural heritage sector in Iran. However, although a case study-based research on the Pasargadae World Heritage Site has been conducted by Gerami et al. 2022, less attention has been paid to supplying a review of all the digital projects, tools, and formats that have been produced and be used by the cultural heritage sector during the lockdown period.

The present paper is the first attempt to present a comprehensive review of digital cultural projects and tools deployed in Iran in response to the pandemic. The aim is to identify the existing digital tools, the digital gaps and divides, and the potential future paths in the digitalization of cultural heritage in Iran. This paper formed a novel classification of all the cultural initiatives which have been developed by the General Directorate of Islamic Culture and Guidance of Tehran Province in Iran. General Directorate of Islamic Culture and Guidance of Tehran Province is a governmental organization in Iran that is responsible for regulating and promoting cultural affairs in the country, including organizing cultural and social programs including events, festivals, exhibitions, conferences, seminars and other cultural and artistic events in Tehran province. Focusing on this data source offers valuable insights into general cultural trends in Iran as it represents the government's involvement and prioritization in cultural affairs within a significant and diverse region.

The rest of the paper is structured as follows: Section 2 illustrates the data collection procedure and the methodological framework. Section 3 presents the results, and it discusses the significance of the findings. Section 4 concludes the main remarks and highlights the necessary future developments.

2. METHODOLOGY

The current investigation involved collecting and analyzing the digital cultural projects launched by Iranian public and private cultural sectors during the quarantine period to determine the digital

cultural trends and gaps in the country. The study conducted a scoping review methodology as suggested by Micah Peters [Peters et al. 2015]. The review process was implemented in three main phases of (i) planning the review by defining eligibility criteria; (ii) identifying suitable projects through search, screening, and selection; and (iii) carrying out the review and analyzing the findings. In this regard, a total of 151 projects from an available and accessible database sourced from the General Directorate of Islamic Culture and Guidance of Tehran Province were collected for analysis. Then, the following criteria were considered to identify the suitable projects that specifically launched with a cultural scope during the quarantine period (March- May 2020) and disseminated through digital means (See Table 1). Then, important attributes (such as name, description, start date, dissemination modality, and scope) were recorded for each project.
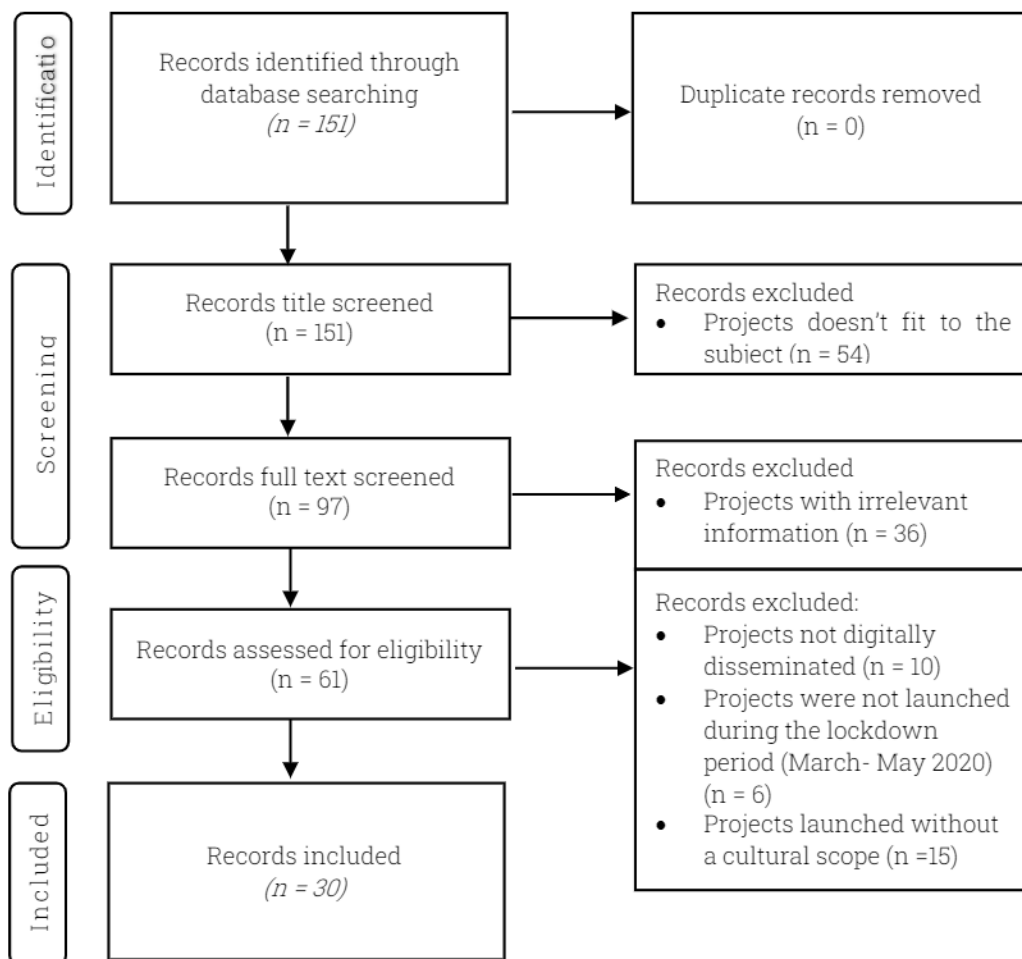
Figure 1. PRISMA flow diagram for the scoping review process

After the definition of eligibility criteria, the PRISMA method (See Figure 1) was used to choose and include projects in a methodical, transparent, and objective manner [Peters et al. 2015].

Table.1 Project selection criteria

Parameters	Eligibility criteria
Data Source	Available and accessible database of the General Directorate of Islamic Culture and Guidance of Tehran Province
Searching Period	March- May 2020
Dissemination Modality	Digital
Dissemination Scope	Cultural scope

Figure 2. Project analysis framework

Following this, an analytic framework for the projects review was formulated to analyze them from a thematic and technical perspective adapting the method suggested by Rosa Tamborrino[Tamborrino et al. 2022]. Within this framework (see Figure 2), all the projects were analyzed according to several variables focused on the digital aspects of the launched initiatives by cultural sectors in Iran.
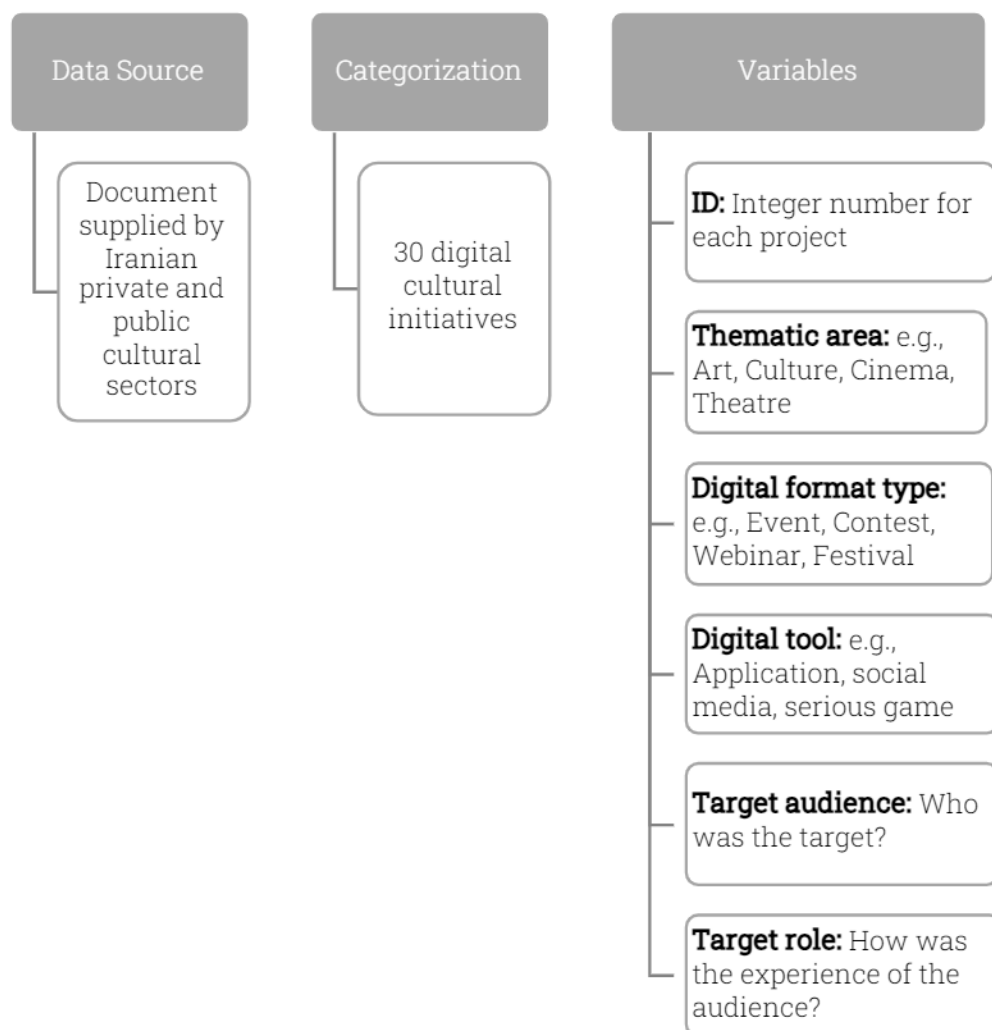
In this regard, the Project ID serves as a unique identifier for each initiative. The thematic area categorizes projects based on their focus and content. It distinguishes whether the project falls under the domain of art, theater, cinema, and some other thematic areas. This classification helps identify the diversity and breadth of cultural initiatives undertaken. The type of digital format indicates how the project was presented or conducted in the digital realm. It distinguishes between projects launched, for example, as festivals from those considered online workshops. This distinction highlights the diverse ways in which cultural experiences were delivered to the audience. The digital tool variable identifies the specific tools used to launch the project.

For instance, it helps determine whether an application played a central role in delivering the initiative. Understanding the launch tool is crucial for assessing the technological infrastructure supporting the project. The target audience classifies projects based on the age groups they aim to engage in. It distinguishes whether the initiative was designed for children, adults, or elderly individuals. The level of audience engagement assesses the degree of interaction and participation of the audience in the project. It distinguishes between projects where the audience actively participated in festivals and contests versus those where participation was more passive, such as in an online webinar format. This analysis gauges the level of involvement and the extent to which the audience was actively involved in the cultural experience.

Finally, based on the collected data a term-occurrence map was created employing VOSviewer software. VOSviewer is a powerful and complementary science mapping analysis tool that pays special attention to the graphical representation of bibliometric maps [Van Eck and Waltman 2010].

3.   RESULTS

The study adopted a review of digital cultural projects launched by public and private cultural sectors in Iran starting from March 2020. Based on the availability and access to the data, . a total of 151 projects were retrieved across the database of the General Directorate of Islamic Culture and Guidance of Tehran Province. Subsequently, the eligibility criteria for the screening process were considered in order to identify the relevant projects. A key aspect of the review was on projects disseminated during the quarantine period in Iran through digital means with a cultural scope. This helped to ensure that the projects selected were directly relevant to the main research objective. Thus, projects using digital tools such as Telegram [General Directorate of Islamic Culture and Guidance of Tehran Province 2020w] as well as initiatives that used digital tools for cultural heritage purposes like "Hope, Peace of Life" Culture and Art Festival [General Directorate of Islamic Culture and Guidance of Tehran Province 2020j] were selected for analysis. Ultimately, 30 out of 151 projects remained for data extraction, analysis, and synthesis. The following table (Table 2) shows the list of the efforts made by cultural sectors in several cities of Tehran province during the COVID-19 outbreak.

Table 2. Cultural projects launched by public and private cultural sectors in Tehran province.

ID	Name	Producer(s)	City	Description of project	Start date	Dur. days	Source
1	"Suri" Book Festival	City Cultural Association	Robat Karim	The traditional ceremony of ''charshanbeh suri'' before new year was held virtually. Children participated in sections of Photography, One-minute film, painting, reading books, and sending audio. The goal of this festival was to make optimal use of books during home quarantine and to increase public awareness.	5 March 2020	14	General Directorate of Islamic Culture and Guidance of Tehran Province 2020w
2	"Sokha" Festival	City Cultural Association	Robat Karim	Festival with the theme of lifestyle with # Stay at home. The festival was related to students who like to speak in public seminars or in TV as an executor. The students should send their audio registers to the related department. At the end of the festival some gifts were given to the selected students. The purpose was to discover performing talents, entertain the youth and teenagers during the quarantine.	3 April 2020	15	General Directorate of Islamic Culture and Guidance of Tehran Province 2020u)
3	"Hope, Peace of Life" Culture and Art Festival	City Cultural Association	Varamin	The first cultural and artistic festival entitled "Hope, Peace and Life" by the Office of Islamic Culture and Guidance with cooperation of Nedaye Varna news series was held in Varamin city. On account of the outbreak of COVID-19 and the impossibility of the presence of art lovers in programs, this festival was held virtually in order to increase vitality and hope among people. People could send their paintings, stories, etc. to the related office and participate in the festival.	15 March 2020	30	General Directorate of Islamic Culture and Guidance of Tehran Province 2020j
4	Music at home	Deputy Minister of Culture	Mallard	The first virtual music festival in various sections of music (all instruments) and singing. Music lovers sent their pieces of traditional and pop music, be it instrumental or sung, to the related department. At the end	19 April 2020	25	General Directorate of Islamic Culture and Guidance of Tehran Province 2020n

				of this festival winners received prizes.			
5	Home puppets show festival	Municipality and Performing Arts Association	Shahriar	The first puppet show festival was held online. The theme of festival was staying at home, fighting the coronavirus, and helping to stop the spread of this virus. The time of each video was a maximum of 5 minutes and the prize was awarded to 12 selected works.	20 April 2020	1	General Directorate of Islamic Culture and Guidance of Tehran Province 2020i
6	"Green Growth, cooperation for all ages" Festival	City Cultural Association and Visual Arts Association	Robat Karim	Virtual festival with the approach of promoting recycling culture and introducing the waste industry with the aim of supporting home scouring. The festival was for children and adolescents with their families. The purpose of holding such festivals was to identify and institutionalize artistic talents at the city level. All ages were invited to make artistic handicrafts and sculptures from recycled materials.	9 May 2020	40	General Directorate of Islamic Culture and Guidance of Tehran Province 2020g
7	"Moon of God" Festival	Basij Artists Center	Islamshahr	On the occasion of the holy month of Ramadan, a virtual cultural and religious festival was held. This festival included various sections such as: memorizing and reciting the Holy Quran, photography, painting, decorating the Sahar and Iftar table in a simple way and with the approach of Islamic-Iranian lifestyle. There was a special competition for the first day of fasting and praise of children.	29 April 2020	22	General Directorate of Islamic Culture and Guidance of Tehran Province 2020m
8	Ramadan Virtual Festival	Cultural and Artistic Institute	Pakdasht	This festival aimed to produce content about the holy month of Ramadan and also to support # Stay at Home, to combat COVID-19. Collective participation in of social distancing, promoting the culture of staying at home, appreciation of the medical staff, memories of the month of Ramadan, and the practice of empathy and kindness were	20 March 2020	30	General Directorate of Islamic Culture and Guidance of Tehran Province 2020t

			some of the topics. It was an art and folk festival.			
9	Film Festival and Photo Theme of the Corona in the City of Ghods	Cinema Association	Ghods	A screenplay and photo festival on the theme of COVID-19. Those who were interested sent scripts in pdf format and the submitted photos in Jpg format to the festival secretariat.	4 May 2020	25	General Directorate of Islamic Culture and Guidance of Tehran Province 2020f
10	Theater festival of Tak	Performing Arts Association	Pishva	This festival was held for those who are interested in the performing arts to present their works of art and to create valuable artwork. The goal of this festival was cooperation, empathy, and collaboration with doctors and nurses and all those who are at the forefront of the fight against COVID-19. All age groups could participate in this cultural work at home by making a short film of their play.	20 March 2020	23	General Directorate of Islamic Culture and Guidance of Tehran Province 2020x
11	"Illustrators of the Day" Photography Festival	Advertising Center	Islamshahr	On the occasion of Eid al-shaban, a virtual photography festival organized by the Advertising Center with hashtag of "# illustrators of the day" were held.	3 April 2020	50	General Directorate of Islamic Culture and Guidance of Tehran Province 2020k
12	Virtual Music Festival	City Music Association	Islamshahr	Participants submitted their musical works to the festival which included the following musical instruments: piano, daf, guitar, singing, tonbak, tambourine, violin and centurion.	29 March 2020	32	General Directorate of Islamic Culture and Guidance of Tehran Province 2020ab
13	Ramadan in the frame of images	Municipality	Tehran	The second Ramadan festival in the fields of photography, graphics, short films, music videos and animation were held virtually. Sharing content with the hashtag #every_home demonstrating that every home was a mosque.	19 April 2020	20	General Directorate of Islamic Culture and Guidance of Tehran Province 2020s
14	Little Seven sin, Children's Art	City Cultural Association	Robat Karim	The need for distance education in cyberspace in order to empower different sections of the society to deal with COVID-19, holding this type of festival while learning	11 March 2020	14	General Directorate of Islamic Culture and Guidance of Tehran Province 2020l

			the necessary training to make seven small trays with the artist's hands to cope with this difficult dilemma.			
15	Virtual literary contest "Waiting and Imam Zaman"	Literary Association	Islamshahr	This competition was held with the aim of developing and promoting the culture of Mahdism and in support of the "Stay at Home" plan. The participants had the opportunity to submit their literary works. A gift was given to the winners.	25 March 2020	25	General Directorate of Islamic Culture and Guidance of Tehran Province 2020z
16	"We Defeat the Corona" Virtual Painting Contest	Islamic Culture and Guidance Office	Islamshahr	A virtual painting competition with the theme "We defeat Corona". Topics were home, the safest place, healthy defenders, defeating Corona, training in home, School at home, home hygiene, family health.	25 March 2020	10	General Directorate of Islamic Culture and Guidance of Tehran Province 2020ac
17	"Divine feast in the city of Islam"	Cultural and Artistic Institute	Islamshahr	This festival had the aim of creating spiritual vitality and was held in cyberspace, developing and deepening the teachings of the Holy Quran. The competition of housekeeping customs in the holy month of Ramadan (for women) with a light approach to Islamic-Iranian life and announced a special fasting contest for the guardians.	20 April 2020	12	General Directorate of Islamic Culture and Guidance of Tehran Province 2020e
18	Three-minute book reading in Doomsday	Cultural and Artistic Center and Islamic Culture and Guidance Office	Islamshahr	Three-minute book reading contest in Doomsday in order to support #StayAtHome. The questions of this competition are taken from the book "Three Minutes in the Resurrection." It is a short, fascinating, and astonishing narration of the memories of one of the defenders of the shrine about purgatory. This book was like other works called near-death experiences and are the result of significant individual observations that take only three minutes in space between worlds.	20 March 2020	16	General Directorate of Islamic Culture and Guidance of Tehran Province 2020y

19	"We Defeat the Corona" Virtual Painting Contest	Cultural Institution-Libraries	Baharestan	A virtual painting exhibition competition for children aged 4 to 12 years.	5 March 2020	105	General Directorate of Islamic Culture and Guidance of Tehran Province 2020ad
20	Photo Contest "Creative House"	City Film and Photo Association	Baharestan	Created social vitality and recorded lasting memories of staying at home for the sake of breaking the chain of transmission of COVID-19; a photo contest of the creator's house was held.	15 March 2020	65	General Directorate of Islamic Culture and Guidance of Tehran Province 2020q
21	Cuf - Qaf Book of Quarantine	Qaf Literary Association	Pishva	Those interested in books and reading submitted a film to briefly introduce a book they had recently read to fellow citizens, introduce friends to this challenge, and invite the sharing of these films on social media. It was a step towards creating a culture of study and positive use of the quarantine period.	2 April 2020	29	General Directorate of Islamic Culture and Guidance of Tehran Province 2020d
22	Artificial intelligence and media for active content production workshop	National Park of Soft Science and Technology and Cultural Industries	Tehran	Specialized online workshop on artificial intelligence and media for those active in the field of content production. This workshop was aimed at those active in the production of video and cinematic content and visual media.	17 April 2020	1	General Directorate of Islamic Culture and Guidance of Tehran Province 2020a
23	Heritage Crossroads of History	Islamic Culture and Guidance Office of city	Robat Karim	A contest of photography and painting of historical and cultural places for children. Considering the historical background of the city such festivals better introduce the city in cyberspace and attract young people. The activity explored cultural identities and discovered top talent in the field of photography. Some groups took photos of these historical places and children sent their paintings from these heritage sites.	20 April 2020	30	General Directorate of Islamic Culture and Guidance of Tehran Province 2020h
24	Nowruz at home	Islamic Culture and Guidance Office of city	Shemiranat	Painting and short storytelling competition with the theme of "Nowruz at home" for children and adolescents.	20 March 2020	61	General Directorate of Islamic Culture and Guidance of

						Tehran Province 2020p
25	Virtual music concert	Music Association	Rey	Live music concerts in cyberspace. This artistic program occured on aaccount of the observance of the social distancing plan to prevent the spread of COVID-19 and was performed virtually without an in-person audience.	6 April 2020	2	General Directorate of Islamic Culture and Guidance of Tehran Province 2020aa
26	Corona theme storytelling in Shahriar	Literature Association	Shahriar	In order to promote and encourage the art of storytelling, a storytelling challenge was held on the topic of COVID-19, encouraging writing to get through the crisis.	20 March 2020	30	General Directorate of Islamic Culture and Guidance of Tehran Province 2020c
27	"Nasim Vahi" book reading contest in cyberspace	Islamic Culture and Guidance Office of city	Ghods	A book reading contest on the occasion of Ramadan in cyberspace. Those who were interested read the book "A Basket of Heaven" and answered the questions posed.	20 April 2020	30	General Directorate of Islamic Culture and Guidance of Tehran Province 2020o
28	Book reading contest "Stay at home with a kind friend"	Islamic Culture and Guidance Office of city and Literary Association	Mallard	The book reading plan "Stay at home with a kind friend" was implemented virtually with the aim of combating the spread of the virus to encourage people to stay at home. Questions were extracted from the introduced books and the participants were given the opportunity to answer questions.	7 April 2020	2	General Directorate of Islamic Culture and Guidance of Tehran Province 2020b
29	Stay at home	Islamic Culture and Guidance Office of city	Mallard	In the early days of the new year and with the aim of promoting people staying at home to deal practically with the spread of COVID-19 by using cyberspace and networks, a social event was held virtually with the aim of trying to encourage more family members to stay at home, making good use of communication capacities(including cyberspace), and striving to enrich families' leisure time in order to fight COVID-19. The sections of the event included storytelling, music, play reading, painting, and	29 March 2020	14	General Directorate of Islamic Culture and Guidance of Tehran Province 2020v

				storytelling with a focus on showing the sacrifice and services of the medical community. Those interested in participating in this event sent their works to ir.gov.farhang@mallard #StayAtHome.			
30	"Public Relations Show" training webinar	Islamic Culture and Guidance Office of city	Tehran	A webinar held for all communication and media enthusiasts. It emphasized the need to train cultural, artistic, and media activists and promote educational events. It promoted the idea that cyberspace is a suitable platform for cultural and artistic education and its importance should not be overlooked.	7 April 2020	-	General Directorate of Islamic Culture and Guidance of Tehran Province 2020r

The current study analyzed the projects from thematic, and technical perspectives as suggested by Rosa Tamborrino for the MNEMONIC project[1] [Tamborrino et al. 2022]. The digital Atlas of "MNEMONIC: Italian hub of cultural resilience"[2] digitally showcases society's memories and Italian cultural web experiences during the quarantine period [Aliakbari 2023]. The qualitative-quantitative analysis approach used in the MNEMONIC project allowed for a comprehensive understanding of both digital and non-digital initiatives, unveiling crucial aspects such as the digital formats/tools used, thematic areas, and target users. By adopting this method, the study provided a nuanced and holistic portrayal of the digital cultural projects in a non-western country like Iran, helping to identify the adaptability and innovation within the cultural sphere. In this regard, for each project, important attributes such as Project-ID, Thematic area, Digital format type, Digital tool, Target audience, Target role were recorded (see Table 3).

Table 3. Thematic and technical analysis of the projects

ID	Thematic area	Digital format type	Digital tool	Target audience	Target role
1	Culture	Festival, Contest	Telegram	Children	Active
2	Culture	Festival, Contest	Instagram	Adults	Active
3	Culture, Art	Event	Email	All ages	Active
4	Performative Art	Festival, Contest	WhatsApp	All ages	Active
5	Performative Art	Festival, Contest	WhatsApp, Telegram	All ages	Active

6	Culture	Event	Not found	Children, adults, families	Active
7	Religion, Culture	Festival, Contest	Telegram	Adults	Active
8	Art, Folk, Culture, Religion	Festival, Contest	Telegram, Instagram	All ages	Active
9	Performative Art	Festival, Contest	Email	All ages	Active
10	Cinema and theatre	Festival, Contest	WhatsApp, Instagram	All ages	Active
11	Performative Art	Event	Telegram, Instagram	All ages	Active
12	Performative Art	Festival, Contest	Not found	Adults from 12 to 22 years old	Active
13	Religion, culture	Festival, Contest	Website, Email	All ages	Active
14	Tradition, folk	Workshop	WhatsApp, Telegram	Children	Active
15	Art	Festival, Contest	Instagram	All ages	Active
16	Art	Festival, Contest	Instagram	All ages	Active
17	Religion, culture	Festival, Contest	Telegram	All ages	Active
18	Religion, culture	Festival, Contest	Telegram	All ages	Active
19	Art	Festival, Contest	Telegram, Instagram	Children 4 to 12 years old	Active
20	Performative Art	Festival, Contest	WhatsApp	All ages	Active
21	Cultural	Festival, Contest	Instagram	All ages	Active
22	culture	Webinar	Not found	Film makers	Passive
23	Art, Culture, History	Festival, Contest	Not found	Adults, Children	Active
24	Art, cultural, intangible heritage	Festival, Contest	Email	Children, Adults 7 to 17 years old	Active
25	Performative Art	Event	Instagram	All ages	Passive
26	Culture	Event	Telegram	Children	Active
27	Culture	Festival, Contest	Website	All ages	Active
28	Cultural	Festival, Contest	Telegram, Instagram	All ages	Active
29	Cultural	Event	Email, WhatsApp	All ages	Active
30	Cultural, Art	Webinar	Website	All ages	Passive

As can be observed from Table 2, the two main initiatives were the "stay at home" and "House away from Corona". Among 30 projects, two webinars and six online events have facilitated knowledge sharing and interactive experiences among participants. Additionally, several cultural celebrations and activities were fostered through 21 festivals and contests. The most common digital tool that was used by the Iranian people was social media as launched by 19 digital initiatives.

In Iran, there are several social media platforms including WhatsApp, Telegram, Instagram, Facebook, Twitter, YouTube, Iranian platforms (such as Soroush and Gap), Line, Viber, and Emo [Chegeni et al.

2022]. These results are consistent with the findings of Chegeni et al. 2022 who reported the high frequency and patterns of social media use in Iran. In this study, the most frequently used social media platforms were identified as WhatsApp, Telegram, and Instagram (see Table 3). These platforms have gained popularity due to their user-friendly interfaces, broad accessibility across devices and operating systems, and their ability to connect people across the country and other geographical locations. Interestingly, only one project utilized a dedicated website for hosting an online webinar. This highlights limitations in terms of digitalization and lack of availability of other tools in the country. Furthermore, email has been widely used as a means of communication and content sharing among citizens (see Table 3). These projects were carefully tailored to cater to different user groups, with a meticulous focus on age divisions encompassing children, adults, and the elderly. Although a smaller number of initiatives specifically targeted the elderly, it became clear that most projects were inclusive and have engaged people of all generations. The different target groups' enthusiastic participation and volunteer involvement served as an example of shared commitment and passion for fostering cultural activities in the country at that time.
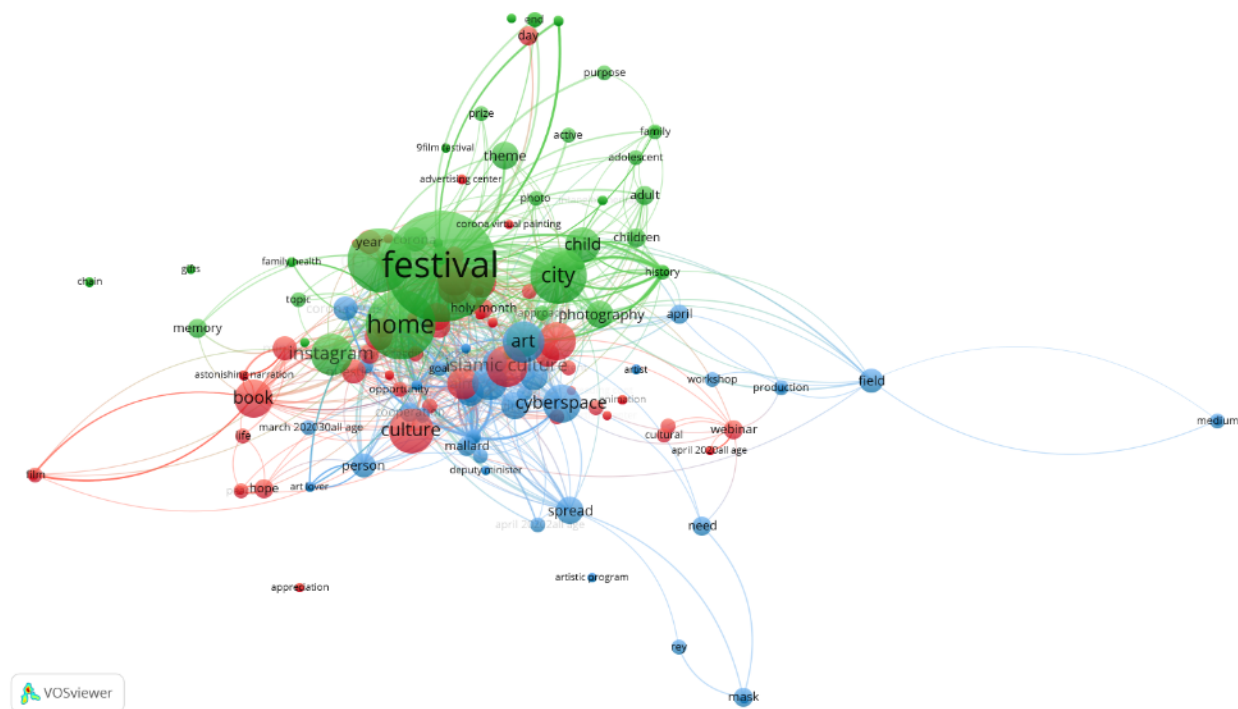

Figure 3. Network visualization of keywords based on the text data. Note: minimum number of occurrences of a term=1

Following this analysis, a term-occurrence map based on text data provided in Tables 2 and 3 was conducted using VOSviewer software. The total number of 631 terms were found in the list of projects of which the terms with the greatest total links strength are shown in larger circles (see Figure 3). As

can be observed from the map, 'festival', 'contest', 'apr', 'home', and 'event' were the most common keywords. Table 4 provides a list of the 20 most frequently used terms in the reviewed projects.

Based on the text analysis of the study, the most frequently used terms were identified (See Table 4). The keywords for April and March highlight that most of the online projects were implemented during the quarantine period. Moreover, the online initiatives were performed mostly in the format of festivals, contests, events, and webinars. In addition, the most used platforms for launching the programs were Instagram and Telegram reinforcing the previous analysis. One should also note that the aim of most of these projects was related to cultural and religious ceremonies. The Nowruz (the Persian new year) which is one of the intangible heritages of the country which took place during the quarantine period. Many of these initiatives were conducted with the aim of staying at home during Nowruz. Moreover, the holy month of Ramadan also occurred during that period and many online activities were launched for the purpose of praying in a virtual way when it was not possible for to physically go to mosques and other places of pilgrimage. Based on the analysis derived from Table 3 and Table 4, children were the central point of interest on the part of producers and most of the online activities such as painting contests were launched for children to keep them active during the quarantine period. Likely, this was in order to avoid negative impacts on their mental health and wellbeing during this period. Moreover, Islamshahr was the most active city among the cities of Tehran province and collaborated intensively with organizations in launching projects. Other cities also employed a bottom-up approach and activated citizens to take part in several initiatives.

Table 4. Top 20 keywords

Rank	Term	Occurrences	Relevance score
1	festival	38	0.0835
2	home	19	0.1474
3	contest	17	0.1413
4	city	14	0.1824
5	culture	10	0.3679
6	art	9	0.2196
7	Instagram	9	0.3075
8	Islamic culture	9	0.1847
9	book	8	0.4255
10	cyberspace	8	0.1845
11	child	7	0.2946
12	event	7	0.3329
13	islamshahr	7	0.5372
14	painting	7	0.2009
15	march	6	0.32

16	telegram	6	0.25
17	order	5	0.3241
18	photography	5	0.3477
19	ramadan	5	0.474
20	robat karim	5	0.267

Within this framework, the variables have shed valuable insights into the dynamics of artistic and cultural initiatives in the digital space in Iran. It has highlighted the development of new digital tools and formats by providing valuable insights into audience preferences, cultural trends, and participation levels. This data-driven approach enabled us to identify patterns, assess the effectiveness of different formats, and understand the audience's role in shaping and experiencing cultural content. Leveraging this data, producers can create personalized and immersive digital platforms that enhance audience engagement with cultural events, offer virtual experiences, and promote cultural accessibility.

4.   DISCUSSION AND CONCLUSION

The study reported here is the first review of the digital cultural projects launched between March 2020 and May 2020 (quarantine period) in Iran. This study is the first to record a wide range of online initiatives in the field of cultural heritage and provides clear evidence of the growing interest of the country in digitalization. This is particularly true in relation to the significant increase in the number of digital cultural projects (as shown in Table 2). Since March 2020, the number of virtual activities has increased sharply in the country. Among the 30 digital projects found through the scoping review process, about fifty percent (N = 14) were launched early in the quarantine period.

The diverse range of digital projects launched through various digital formats showcases the immense creativity and innovation in promoting E-culture in the country. During the COVID-19 pandemic, Iran experienced significant digital cultural shifts as people sought to maintain social connections, engage in artistic expression, and adapt cultural practices to the constraints of lockdowns and social distancing measures. The Iranian government launched digital cultural initiatives to bring cultural experiences directly to people's homes through digital means and foster a sense of community during challenging times. These initiatives featured virtual events, festivals, and online workshops in art, culture, music, and theater. The interactive nature of these initiatives allowed individuals to explore and engage with diverse cultural content. These digital cultural shifts provided an avenue for Iranians to express themselves, connect with their heritage, and navigate the challenges posed by the pandemic. Initiatives such as "Heritage Crossroads of History" and " Little Seven sin, Children's Art" that offered unique and diverse content, representing different aspects of Iran's rich cultural heritage, tended to resonate more with the local population and particularly with children. These initiatives created a sense of connection in cultural traditions and contributed to sustained interest and utilization. However, following the initial boom in interest during the peak of the pandemic, there has been a gradual decline in public utilization and interest in these digital

cultural initiatives. As physical cultural activities resumed and people regained more freedom of movement, the urgency to rely on digital alternatives has diminished in the country. Nevertheless, some initiatives such as "book reading contest" continued to offer fresh and engaging content even after the initial COVID-19 driven boom.

The digital cultural initiatives proved to be a lifeline for the cultural sector which faced significant challenges due to lockdowns and restrictions. By embracing technology and offering virtual experiences, the government successfully connected artists, performers, and cultural practitioners with audiences, providing a virtual space for showcasing their talent and creativity. Hence, people's participation and interest in these initiatives not only helped sustain the cultural ecosystem but also highlighted the importance of integrating digital platforms into future cultural endeavors.

A key finding of research was the dominance of social media, as highlighted by the high number of projects that were launched through Instagram, WhatsApp, and Telegram (see Table 3). At that time, social media platforms have become significant cultural spaces where people share their experiences and engage in cultural initiatives such as sharing artistic paintings, music, and participate in cultural events. This shift in the role of social media has been observed not only in Iran but also around the world. As stated by Deborah Agostino regarding the utilization of social media by Italian museums, these initiatives have shifted the role of social media, turning them from communication channels to tools for disseminating cultural content [Agostino et al. 2020]. However, in Iran, most of society was already familiar with social media platforms, and the government utilized these platforms for cultural activities and communication during the pandemic. People turned to social media since the development of new tools such as apps and websites to share online initiatives was limited in the country. The utilization of social media by cultural institutions had unique considerations due to the country's specific social, political, and cultural context. Iran faces challenges related to the digital divide, with disparities in internet access and connectivity across different regions and socio-economic groups. This digital divide hindered the development and adoption of new tools as not everyone had equal access to technology and internet infrastructure. Therefore, utilizing existing social media platforms in Iran to launch digital cultural initiatives allowed for quick deployment and accessibility, since many people were already familiar with these tools. However, developing new apps or websites required more time and resources, which was constrained during the crisis.

Regarding the sustainability of these initiatives during and beyond the COVID-19 pandemic, it is worth noting that the increased reliance on digital initiatives during the pandemic has led to lasting changes in people's preferences and habits. However, after the pandemic, the Iranian government's regulation and restriction of social media platforms impacted the content shared within the digital cultural space. These restrictions highlight the government's role in guiding and controlling the use of social media in a country like Iran. This has clear implications for the improvement of digitalization strategies and the development of this domain by recognition of its social, political, economic, and cultural values.

The maturity and ability of associations and cultural and artistic activists in the Tehran province effectively increased awareness of the advantages and opportunities for increased adoption of digital services in the country by COVID 19 outbreak. However, there were several challenges in this process such as limited and unequal access to the internet and technology particularly in rural areas and

marginalized communities. For this reason, some non-digital cultural initiatives were implemented in the country in order to leave no one behind. For example, the librarian staff awarded books to the people who were living in rural areas without enough access to the internet. Therefore, addressing the digital divide and promoting accessibility remain important challenges in ensuring equal opportunities for digital innovation and development across all segments of the population in Iran. Combining social media platforms with dedicated websites, apps, or digital archives can offer a more comprehensive and sustainable approach to digital cultural initiatives. Some questions remain; for example, what kind of web-based design has been done in recent years for cultural purposes within Iran by public and private sectors (such as museums and other memory institutions)? How robust could these hybrid approaches be to create curated experiences, educational resources, and interactive platforms that go beyond the limitations of social media platforms? A comprehensive scale pertaining to the use of other kinds of digital platforms and websites is lacking in the country and this highlights the need for further investigation. This would allow for a more comprehensive review of digital initiatives in other provinces of Iran. It would also empower cultural stakeholders to make informed decisions, improve future initiatives, and foster greater engagement with diverse audiences.

5. ACKNOWLEDGEMENTS

6. REFERENCES

Deborah Agostino et al. 2020. Italian state museums during the COVID-19 crisis: from onsite closure to online openness, Museum Management and Curatorship, 35:4, 362-372, DOI: 10.1080/09647775.2020.1790029.

Farzaneh Aliakbari. 2023. Ethical Challenges of an Italian Hub of Cultural Resilience: MNEMONIC Platform. ATTI E RASSEGNA TECNICA DELLA SOCIETÀ DEGLI INGEGNERI E DEGLI ARCHITETTI IN TORINO LXXVII-N: 34−40. http://art.siat.torino.it/wp-content/uploads/2023/07/A_RT_LXXVII-1_aliakbari.pdf

Ali Asadpour. 2021. Student challenges in online architectural design courses in Iran during the COVID-19 pandemic. E-learning and Digital Media, 18(6), 511-529.

Hamdollah Askari and Liping Chen. 2021. Challenges and Opportunities of Teaching Online in an Iranian EFL High School Context During the Covid-19 Pandemic. The Reading Matrix: An International Online Journal, 21(2).

Hamed Barjesteh et al. 2022. COVID-19's impact on digitalization of education: incorporating visual vocabulary learning application to foster vocabulary knowledge. Asian Education and Development Studies, 11(1), 172-187.

Maryam Chegeni et al. 2022. Prevalence and motives of social media use among the Iranian population. Journal of Environmental and Public Health,2022.

Kolsoum Deldar and Razieh Fruotan. 2022. The process of Digitalization of Patient Education: Speeding Up During Covid-19 Pandemic, Int J Community Based Nurs Midwifery, 10(2), 156-157.

Farzaneh Gerami et al. 2022. Digitization of World Heritage Sites of Iran as a Tool for Facilitating Online Access During Worldwide Pandemic: Case Study of Pasargadae World Heritage Site. Library Philosophy and Practice (ejournal), 6564.

Safoura Khodaei et al. 2022. The effect of the online flipped classroom on self-directed learning readiness and metacognitive awareness in nursing students during the COVID-19 pandemic. BMC nursing, 21(1), 1-10.

Micah DJ Peters et al. 2015. Guidance for conducting systematic scoping reviews. JBI Evidence Implementation, 13(3), 141-146.

Nicola Raimo et al. 2021. Digitalization in the cultural industry: evidence from Italian museums. International Journal of Entrepreneurial Behavior & Research, 28(8), 1962-1974.

Rosa Tamborrino. 2020. Coronavirus: Locked-down Italy's Changing Urban Space.https://theconversation.com/coronavirus-locked-down-italys-changing-urban-space-133827.

Rosa Tamborrino et al. 2022. MNEMONIC : atlante digitale della memoria del presente : il patrimonio culturale e naturale nell'Italia in lockdown. In Valore del patrimonio : studi per Giulio Mondini. - (Heredium ; 3). Sesto Fiorentino (FI): All'insegna del giglio. https://doi.org/10.36153/heredium03-022.

Hossein Vahidi et al. 2021. Digital citizen science for responding to COVID-19 crisis: Experiences from Iran. International journal of environmental research and public health, 18(18), 9666.

Nees Van Eck and Ludo Waltman. 2010. Software survey: VOSviewer, a computer program for bibliometric mapping. scientometrics, 84(2), 523-538.

General Directorate of Islamic Culture and Guidance of Tehran Province. 2020a. Artificial Intelligence and Media for Active Content Production Workshop. https://iccip.ir/fa/news/17663/-کارگاه-آنلاین-تخصصی-هوش-مصنوعی-و-رسانه-برای-فعالان-عرصه-تولید-محتوا-توسط-شرکت-نمایه-پردازان-بنیاد-از-شرکت-های-مستقر-در-پارک-ملی-علوم-و-فناوری-های-نرم-و-صنایع-فرهنگی.

General Directorate of Islamic Culture and Guidance of Tehran Province. 2020b. Book Reading Contest Stay at Home with a Kind Friend. https://tehran.farhang.gov.ir/fa/news/518356/-پویش-فرهنگی-هنری-در-خانه-بمانیم-در-ملارد.

General Directorate of Islamic Culture and Guidance of Tehran Province. 2020c. Corona Theme Storytelling in Shahriar. https://tehran.farhang.gov.ir/fa/news/520421/-چالش-داستان-نویسی-با-موضوع-کرونا-در-شهرستان-شهریار.

General Directorate of Islamic Culture and Guidance of Tehran Province. 2020d. Cuf - Qaf Book of Quarantine. https://tohfeh.farhang.gov.ir/fa/news/519064/کاف-قاف-کتاب-قرنطینه.

General Directorate of Islamic Culture and Guidance of Tehran Province. 2020e. Divine Feast in the City of Islam. https://eslamshahr.farhang.gov.ir/fa/news/521830/-برنامه-های-فرهنگی-با-عنوان-ضیافت-الهی-در-شهر-اسلام-در-اسلامشهر-در-حال-برگزاری-است.

General Directorate of Islamic Culture and Guidance of Tehran Province. 2020f. Film Festival and Photo Theme of the Corona in the City of Ghods. https://tohfeh.farhang.gov.ir/fa/news/521790/-برگزاری-جشنواره-فیلمنامه-و-عکس-با-موضوعیت-کرونا-در-فضای-مجازی-توسط-اداره-فرهنگ-و-ارشاد-اسلامی-شهرستان-قدس.

General Directorate of Islamic Culture and Guidance of Tehran Province. 2020g. Green Growth, Cooperation for All Ages' Festival. https://tehran.farhang.gov.ir/fa/news/522662/-برگزاری-جشنواره-مجازی-استانی-رویش-سبز-سرزمین-همه-سنین-در-شهرستان-رباط-کریم.

General Directorate of Islamic Culture and Guidance of Tehran Province. 2020h. Heritage Crossroads of History. https://tehran.farhang.gov.ir/fa/news/521279/-برگزاری-مسابقه-عکس-و-نقاشی-میراث-چهار راه-تاریخ-در-شهرستان ریاط-کریم.

General Directorate of Islamic Culture and Guidance of Tehran Province. 2020i. Home Puppet Show Festival. https://tehran.theater.ir/fa/134156.

General Directorate of Islamic Culture and Guidance of Tehran Province. 2020j. Hope, Peace of Life' Culture and Art Festival. https://tehran.farhang.gov.ir/fa/news/518373/-برگزاری-اولین-جشنواره-فرهنگی-و-هنری-امید-آرامش-زندگی-در-سورامین.

General Directorate of Islamic Culture and Guidance of Tehran Province. 2020k. Illustrators of the Day' Photography Festival. https://tehran.farhang.gov.ir/fa/news/519125/-جشنواره-مجازی-عکاسی-با-عنوان-تصویرگران-روز-در-اسلامشهر-برگزار-می-شود.

General Directorate of Islamic Culture and Guidance of Tehran Province. 2020l. Little Seven Sin, Children's Art. https://tohfeh.farhang.gov.ir/fa/news/517317/-برگزاری-جشنواره-هفت-سین-کوچک-هنر-کودک-در-شهرستان ریاط-کریم.

General Directorate of Islamic Culture and Guidance of Tehran Province. 2020m. Moon of God' Festival. https://fajrmode.farhang.gov.ir/fa/news/521892/جشنواره-مجازی-ماه-خدا در-اسلامشهر-برگزار-می-شود.

General Directorate of Islamic Culture and Guidance of Tehran Province. 2020n. Music at Home. https://tohfeh.farhang.gov.ir/fa/news/519457/پویش-موسیقی-در-خانه-در-ملارد-برگزار-شد.

General Directorate of Islamic Culture and Guidance of Tehran Province. 2020o. Nasim Vahi' Book Reading Contest in Cyberspace. https://hejabexpo.farhang.gov.ir/fa/news/522932/-اولین-دوره-مسابقه-کتابخوانی-نسیم-وحی-در-فضای-مجازی-برگزار-می-شود.

General Directorate of Islamic Culture and Guidance of Tehran Province. 2020p. Nowruz at Home. https://shemiranat.farhang.gov.ir/fa/news/518024/مسابقه-نقاشی-و-داستانک-با-موضوع-نوروز-در-خانه.

General Directorate of Islamic Culture and Guidance of Tehran Province. 2020q. Photo Contest 'Creative House. https://tohfeh.farhang.gov.ir/fa/news/518660/برگزاری-مسابقه-عکس-خانه-خلاق.

General Directorate of Islamic Culture and Guidance of Tehran Province. 2020r. Public Relations Show' Training Webinar. https://tohfeh.farhang.gov.ir/fa/news/518514/-وبینار-آموزشی-روابط-عمومی-شو-بصورت-مجازی-برگزار-می-شود.

General Directorate of Islamic Culture and Guidance of Tehran Province. 2020s. Ramadan in the Frame of Images. https://iranmode.farhang.gov.ir/fa/news/520141/دومین-جشنواره-رمضان-در-قاب-تصویر.

General Directorate of Islamic Culture and Guidance of Tehran Province. 2020t. Ramadan Virtual Festival. https://tohfeh.farhang.gov.ir/fa/news/523106/جشنواره-مجازی-رمضان-در-شهرستان-پاکدشت-برگزار-می-شود.

General Directorate of Islamic Culture and Guidance of Tehran Province. 2020u. Sokhan' Festival. https://tehran.farhang.gov.ir/fa/news/518689/برگزاری-نخستین-جشنواره-سخن-در-شهرستان-ریاط-کریم.

General Directorate of Islamic Culture and Guidance of Tehran Province. 2020v. Stay at Home. https://tehran.farhang.gov.ir/fa/news/518356/پویش-فرهنگی-هنری-در-خانه-بمانیم-در-ملارد.

General Directorate of Islamic Culture and Guidance of Tehran Province. 2020w. Suri' Book Festival. https://tehran.farhang.gov.ir/fa/news/518362/برگزاری-جشنواره-کتاب-سوری-در-شهرستان-ریاط-کریم.

General Directorate of Islamic Culture and Guidance of Tehran Province. 2020x. Theater Festival of Tak. http://gitionline.ir/fa/news/32938/داوران-نخستین-جشنواره-سراسری-تئاتر-مجازی-تک-معرفی-شدند.

General Directorate of Islamic Culture and Guidance of Tehran Province. 2020y. Three-Minute Book Reading in Doomsday. https://tohfeh.farhang.gov.ir/fa/news/519459/-مسابقه-کتابخوانی-سه-دقیقه-در-قیامت-برگزار-می شود.

General Directorate of Islamic Culture and Guidance of Tehran Province. 2020z. Virtual Literary Contest 'Waiting and Imam Zaman. https://tehran.farhang.gov.ir/fa/news/519011/-مسابقه-مجازی-ادبی-انتظار-و-امام-زمان-عج-در-اسلامشهر-برگزار-می-شود.

General Directorate of Islamic Culture and Guidance of Tehran Province. 2020aa. Virtual Music Concert. https://tohfeh.farhang.gov.ir/fa/news/518816/کنسرت-موسیقی-هنرمندان-شهرری-در-فضای-مجازی-اجرا-می-شود.

General Directorate of Islamic Culture and Guidance of Tehran Province. 2020ab. Virtual Music Festival. https://www.hamshahrionline.ir/news/497932/نخستین-جشنواره-مجازی-موسیقی-در-اسلامشهر-برگزار-می-شود.

General Directorate of Islamic Culture and Guidance of Tehran Province. 2020ac. We Defeat the Corona' Virtual Painting Contest. https://tohfeh.farhang.gov.ir/fa/news/518852/-برگزاری-مسابقه-نقاشی-در-بهارستان.

General Directorate of Islamic Culture and Guidance of Tehran Province. 2020ad. We Defeat the Corona' Virtual Painting Contest. https://tehran.farhang.gov.ir/fa/news/519123/-مسابقه-مجازی-نقاشی-با-محوریت-ما-کرونا-را-شکست-می-دهیم-در-اسلامشهر-برگزار-می-شود.