



Mapping the Digital Arts Industry in Pakistan

A Report by Lahore Digital Arts Festival

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Abstract

Lahore Digital Arts Festival (LDF) was founded in response to a need for more formal digital arts related exhibitions in Pakistan. While there are any number of gaming and animation studios as well as a boom in emerging digital artists, the industry remains nascent. Digital arts are still rare in gallery spaces, and it is only after 2020 that the first NFT/digital arts based exhibitions have taken place. The industry represents great potential, especially for young people and minorities; however, there has been little attempt to study and understand the scope of the industry and the challenges facing its future growth. This report aims to provide a research-based overview of the digital arts industry in Pakistan with the objective of better understanding the current status of the industry and its main challenges through the eyes of its participants. The research was conducted through a survey distributed across Pakistan to educational institutes, artists, galleries, gaming studios, and more. Following analysis of the survey, the report presents three key recommendations around community building, education, and artist safety with the aim of building the structures of the industry for sustainable, long term growth.

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Introduction

In 2014, the British Council published a landmark study on the Cultural and Creative Industries in Pakistan, highlighting the importance of the sector's growth as well as the challenges facing it.¹ The study focused on the entire scope of cultural and creative industries, including cultural heritage and handicrafts as well as art, film, and other sectors, stressing the potential in Pakistan. Following this report, the UNESCO Pakistan 2018-2022 Strategic Document highlighted culture and particularly intangible cultural heritage as an area of interest,² followed up by a project with the Kaarvan Crafts Foundation to map cultural heritage sites in Punjab in 2021.³

Apart from these studies, there is little research on the specific digital arts field, though there is evidence to suggest that there is great potential for its growth through the strength of adjacent sectors. One area in which Pakistan seems to be flourishing is the video games, e-gaming, and esports sector, with one study estimating close to 36.8 million gamers in Pakistan.⁴ The country has made waves in international esports competitions as well.⁵ Social media apps such as Tik Tok and Facebook have also become extremely popular in Pakistan, with some estimates as much as 18 million users on Tik Tok.⁶ Animation studios, game design, and art design are also areas of strength, and Pakistan's meme culture has reached international fame, with a few memes minted as NFTs and sold on the international market for incredible prices.⁷

However, in terms of the digital arts in more formal gallery spaces, Pakistan has been slow to match the pace of other countries despite an article in Dawn news from 2014 that described the industry as "Infant but Intense" and named several artists defining the new world of contemporary digital arts.⁸ While there are a few stars in the international digital contemporary arts world such as Rashid Rana, Omar Gilani, Shehzil Malik, Sajjad Ahmed, and others, the overall strength of the local industry has lagged behind. For example, it is only in 2020 that the first digital arts exhibitions

¹ Taylor et al., "Cultural and Creative Industries in Pakistan."

² "UNESCO Pakistan Country Strategic Document 2018-2022."

³ "UNESCO Project Around Selected Heritage Sites In Punjab."

⁴ "Video Game Industry."

⁵ "Pakistan's Ash Wins Tekken7 Championship."

⁶ "Digital 2022."

⁷ Neemos, "Rewind 2021 – Infamous Pakistani Memes Sold as NFTs."

⁸ Abdurab, "Infant but Intense — Digital Art in Pakistan."

took place.⁹ The legal status of cryptocurrency in Pakistan has made NFT-based arts and exhibitions difficult and Pakistani representation in the wider web3 space low.¹⁰

Lahore Digital Arts Festival (LDF) was founded in 2019 in response to the maturation of digital arts on an international level and a perceived lack of similar opportunities and platforms in Pakistan.¹¹ LDF's approach has primarily been to offer emerging artists in Pakistan the opportunity to gain exposure and experience through exhibiting their work.

It is clear that the digital arts industry in Pakistan is poised to explode if given the chance, providing unparalleled opportunities for young people to earn and contribute to this everexpanding industry, which can be connected to the UN Sustainable Development Goals number 8, "Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all."¹² It can also provide a path for recovery following disasters such as economic recession, 2022 floods, and other such events. However, without coordination and understanding, the industry will remain disjointed and progress could remain limited and slow.

This report aims to provide an overview of the different stakeholders in the current digital arts industry, including educators, students, artists, collectors, curators, and more. The research was conducted through a survey distributed across Pakistan to educational institutes, artists, galleries, gaming studios, curators, organizations, and universities. The main objective of the survey and the research report was to understand the main challenges currently facing the digital arts industry in Pakistan and provide a roadmap for short and long term actions to support and further its growth.

Background and Literature Review

Since its inception, LDF has looked for opportunities to conduct research around the digital arts industry to better place itself and provide more relevant opportunities for emerging artists. This report represents a scaling up of initial research activities undertaken during a program in November 2022 in collaboration with the Embassy of France as part of the Institut Français' "Novembre Numerique," or "Digital November" that happens around the globe every year. During this program, LDF spoke to five diverse artists about the challenges facing the digital arts industry

⁹ "Genesis 50+."

¹⁰ Rehman, "On The Evolution Of Web3 And How New NFT Artists Can Bring More Innovation To The Table."

¹¹ "Mission Statement - Lahore Digital Arts Festival."

¹² "Goal 8 | UN SDGs."

and their thoughts for the future. In anticipation of LDF's second online festival in 2023 around the theme of Metaverse Bodies, the team conducted a roundtable to hear from artists their thoughts on the theme as well as on LDF and the digital arts industry as a whole.

One main challenge in this research is simply in its lack of precedence – as mentioned, the only existing studies of the British Council and UNESCO do not focus directly on the digital arts and indeed concentrate more deeply on cultural heritage. As such, there are no existing networks of scholars and studies readily available to tap into. It is acknowledged that the LDF team is not equipped to undertake a full scale, exhaustive mapping of the entire country as organizations such as British Council and UNESCO; rather, this report focuses on the analysis of a survey conducted by LDF.

There is some existing literature which references the digital arts or digital media in Pakistan. Many of these focus on the phenomenon of social media, such as the impact of Tik Tok in society,¹³ the role of social media in identity and nationalism,¹⁴ and the opportunities of digital media for businesses.¹⁵ A few papers reference the ongoing wave of digitization, particularly in regards to libraries and the Higher Education Sector.¹⁶ Samina Sheikh discusses the impact of digital art in a discussion on the postmodern conceptual approach of contemporary art in Pakistan.¹⁷

Despite these beginnings, we have not found any existing literature focusing in particular on the field of digital arts in Pakistan. Abroad, there are other examples of studies mapping the creative and cultural industries such as that of the British Council. In terms of specifically focusing on the digital arts, we often find papers that use the case study of a few artists to postulate on the wider field and its transitions,¹⁸ or focus on the history and definition of the field.¹⁹

¹³ Afsheen and Ahmed, "Role of Tik Tok in Social Acceptability and Improved Socio-Economic Status (SES) of Transgender and Trans-Sexual in Pakistan."; Sabir et al., "TikTok Addictions and Its Disorders among Youth of Pakistan."

¹⁴ Mughal, "New Media and the Narratives of National Identity and Nationalism: A Pakistani Case Study."

¹⁵ Abdur Raheem, Akber, and Hashmi, "Aspects and Importance of Digital Media in Pakistan."

¹⁶ Rafiq and Ameen, "Use of Digital Media and Demand for Digitized Contents in Higher Education Sector of Pakistan."

¹⁷ Sheikh, "Postmodern Conceptual Approach in Contemporary Art of Pakistan."

¹⁸ Cohen, "Seoul's Digital Media City."; Wamutoro and Makunda, "The Influence of Photography and Digital Art on Contemporary Art and Design in East Africa."

¹⁹ Ha and Kim, "Factors Determining Whether an Art Museum Will Offer Virtual Content."; Collier, "Obsolescing Analog Africa."

Nonetheless there are some examples we can draw from. A study by Diouf et al examines the history and present status of the digital arts in the French community of Belgium (Fédération Wallonie-Bruxelles),²⁰ while Vidal and Papilloud conducted research around digital artists and adjacent stakeholders carrying out digital arts projects in France and Germany.²¹ Madichie and Hinson provide an overview of the digital arts in Africa as part of their book "The Creative Industries and International Business Development in Africa."²²

Beyond the historical connection of digital arts and their study, archiving plays a key role in establishing a ground where the digital art can be documented, stored or even debated for historical and future reflections. At present there is no dedicated digital arts archive for artists in Pakistan but inspirations can be drawn from archives such as Archive of Digital Art (ADA), IF Digital, and the Media Art History conference series.²³ These resources help to establish the grounding of the report and provide insights to further investigate into the digital arts scene of Pakistan.

In developing recommendations for the future, the report will rely on responses from the survey (see the below section for details), placed in context and dialogue along with learnings and studies from other countries. Sue Hua's research paper on digitalization and connectivity in the Asian art market will be used to examine possibilities for including Pakistan in the larger regional structure,²⁴ while Carin Holroyd's discussion of strategies used by the governments of Japan and South Korea in supporting the digital arts will be examined to suggest potential steps for governmental support in Pakistan.²⁵

In terms of scope, it is necessary to first discuss what constitutes 'digital art' and thus what exactly is the industry in focus here. Thomson-Jones et al define digital art as "art that relies on computer-based digital encoding, or on the electronic storage and processing of information in different formats—text, numbers, images, sounds—in a common binary code,"²⁶ while Özdemir more generally describes it as "various works of art that have evolved with the development of

²⁰ Diouf, Vincent, and Worms, "Les arts numériques."

²¹ Vidal and Papilloud, "Les Arts Numériques."

²² Madichie and Hinson, "Africa in the Age of Digitalisation."

²³ "Home - ADA | Archive of Digital Art."; "IFdigital."; "Media Art History."

²⁴ Hua, "Disruption, Digitalization and Connectivity."

²⁵ Holroyd, "Digital Content Promotion in Japan and South Korea."

²⁶ Thomson-Jones and Moser, "The Philosophy of Digital Art."

digital technologies."²⁷ Media art theoretician and curator Christiane Paul separates two distinct tracts of the medium, saying "Digital art has roots in two strands of history — 1) rule-based, «programmed» art and conceptual art and 2) kinetic / light / moving image art."²⁸ For the purposes of this report, Özdemir's definition is most closely followed, however with a slightly more narrow focus, wherein the digital arts are taken to be a contemporary fine arts medium in which digital technology is an integral part of the production. Hence, filmmakers of traditional movies or photographers are not considered. The definition as used in this report includes digital painting, photo manipulation, video art, sound art, augmented or virtual reality artworks, animation, game design, 3D art, and Artificial Intelligence art.

Methodology

This report has been compiled with mixed methodology, including desk research for outside examples and existing literature, and field research using a survey to the digital arts community in Pakistan, which returned both quantitative and qualitative data. The quantitative data was essentially demographic data and presented as percentages, while the qualitative data was analyzed using a general inductive method with thematic and sentiment analysis.²⁹ Finally, a comparative analysis was conducted to place the extracted qualitative data in context with the concepts and theories uncovered in the desk research process.

The first step was desk research to examine what existing literature existed and if possible, the types of data that other surveys used to assess a community such as the digital arts sector. This was placed with contextual knowledge and understanding of the specific Pakistani digital arts scene, gained from previous conversations, interviews, and roundtables conducted by the Lahore Digital Arts Festival in the context of other projects. From this research, a survey was developed, with the goals of: 1) understanding the basic makeup of the digital arts industry in terms of demographics and working practices, 2) understanding how members of the community view their community and its prospects, and 3) understanding what the community sees as its main challenges and potential solutions.

The survey was distributed in April-May 2023 throughout a coordinated campaign utilizing a variety of methods to ensure the maximum participation. The methods for distribution were:

²⁷ Ozdemir, "A Conceptual Framework on the Relationship of Digital Technology and Art."

²⁸ Terminsky, "Interview with Christiane Paul."

²⁹ Thomas, "A General Inductive Approach for Qualitative Data Analysis."

direct emails to digital artists who have in the past submitted to LDF open calls, direct emails or contacts to LDF's educational institutional partners who will be requested to share with their students, cold emails to gallery owners and curators, direct and cold emails to existing and new contacts in the gaming and animation industry, other cultural entrepreneurs, and a coordinated social media campaign across LDF's Instagram, Facebook, and LinkedIn pages. A. For the full distribution plan, see Annex II.

The survey itself was hosted on google forms and was divided into three sections: demographics, status and perspective on the digital arts industry, and challenges and potential solutions. As the language of the report is in English, the survey was also in English, however, participants had the option to submit their responses in Roman Urdu.³⁰

The first section aimed to gather quantitative data on the makeup of the industry, including relationship to the industry (artist, curator, etc), age, gender, education, and presence in Pakistan. A sub section aimed at working artists requested information on their working status: if digital arts was a main source of income, if they work with clients in Pakistan or abroad, if they were formally trained in the digital arts, and their main and secondary mediums. These questions were all closed-ended with options to choose pre-existing categories. For certain questions, an "other" field was present to collect any data that the choices missed.

The second section of the survey focused on qualitative data intended to assess how participants feel about the digital arts and how they see the industry as it exists in Pakistan. This section was intended to understand a variety of relationships integral to the industry, such as the artist to the wider industry, the artist to other artists, and the health of the industry within Pakistan. In framing the questions and analyzing the responses, the researcher used an ethnographic survey methodology wherein the questions were aimed at understanding the participant's behavior and experience within and around the digital arts community through five targeted questions.³¹³² The ethnographic method was chosen as it favors contextual understanding and allows the researcher to analyze as an observer and participant, as LDF places itself. The questions were:

• What is your relationship to the digital arts industry in Pakistan? Are you involved or do you interact with the industry?

³⁰ None, however, chose to take this option and all responses were recorded in English.

³¹ Eriksson and Kovalainen, *Qualitative Methods in Business Research*.

³² Longe, "Ethnographic Research."

- What concerns do you have about the digital arts in general?
- How often do you see events/exhibitions/classes or other activities related to the digital arts in Pakistan? Do you feel it is enough?
- Are the digital arts important to your practice/business? If so, do you primarily export/work with clients within or without Pakistan?
- Do you own or would you purchase a work of digital art? Would the nationality of the artist or origin of the work affect your decision?

The third and final section focused on challenges and solutions as seen by the members of the community. The questions were:

- What do you see as the main challenges facing the digital arts in Pakistan?
- In the short term, what solutions would you like to see to address some of these challenges?

• In the long term, what solutions would you like to see to address some of these challenges? To analyze the second and third sections, as mentioned, a general inductive method was used with elements of thematic and sentiment analysis. First, the analyzing researcher read all the responses multiple times, noting down the general categories that emerged. In the second section, the questions were more geared towards 'yes' or 'no' answers; however, attention was given to nuance and reasons for these answers. Where appropriate, sentiment analysis was used with positive and negative coded words to give responses a score from -2 (very negative) to 2 (very positive). In the third section, where responses were much more open and varied, the researcher developed a series of internally consistent categories which were then used to code the data. This was a difficult task considering the interconnected nature of many of the concepts and issues presented, as such, the researcher's knowledge of the industry and context were used to distinguish which category a

response should be classified in. Some responses where respondents mentioned multiple ideas were separated into different categories.

Each question was analyzed separately and examined multiple times as responses were adjusted and categories defined. Where appropriate, answers to other questions were placed alongside the results, in order to address challenges around the lack of context in purely thematic analysis approaches.³³ Throughout the analysis, the researcher attempted to balance contextual

³³ "Thematic Analysis without Paradox: Sensemaking and Context | Emerald Insight."

knowledge with purely inductive methods of extracting information from the data. Details on the categories chosen will be discussed in the appropriate part of the Findings section.

Findings From the Survey Results

Following a month-long campaign, the survey garnered 102 responses. The results are presented in four sections: Demographics, makeup of the industry, perspective on the industry, and Pakistan specific challenges and solutions. Here, only the results are reported; the comparative analysis and further recommendations can be found in the Discussion and Recommendation sections, respectively.

Demographics

The results of the demographics show an industry which is majority young, female, and well-educated, however, less than half of respondents had formal training in the digital arts. Most respondents were based in Pakistan.

Of the 102 responses, the majority of respondents identified as digital artists (82.4%). 24 identified as educators, 10 as curators, 4 as collectors, and 3 as gallery owners. However, it must be noted that 32 respondents identified with multiple categories. Of those who identified in single categories, 59 chose only digital artist, 2 identified solely as curators, 1 as collector, 3 as educators, and 1 as a gallery owner. Of those who chose multiple categories, the most common was both as digital artist and educator (12) or curator and educator (5), with a few identifying as all three or other combinations. Other entries included researcher, student, designer or graphic designer, visual artist, and studio owner.

The majority of responses were from a very young age demographic, with 52% identifying as 18-24. 33.3% fell into the 25-34 bracket, 10.8% in 35-44, and 3.9% in 45-54. We had no responses from participants over the age of 55. 61.8% of respondents identified as female with 38.2% as male. In terms of education, 62.7% said they had received a Bachelor's degree and 22.5% had received a Master's. Only 2% had a PhD; however, 9.8% had only completed A levels and 3 said they were still studying. This is consistent with the age demographics. Of the total respondents, 47.1% said they had formal training in the digital arts, 44.1% did not, and the rest were formally trained in other disciplines or ongoing learning.

In terms of geographic location, 92.2% of respondents said they were based in Pakistan: 2% were not based in Pakistan at all, 3.9% were in and out, and 2% were looking to move abroad. The three main cities of Pakistan, Lahore, Islamabad, and Karachi represented the majority of responses with 46.1%, 26.5%, and 20.6% respectively. Rawalpindi, Gujrat, Peshawar, Hyderabad, and Haripur KPK were also represented.

Makeup of the Industry

The next set of questions was designed to understand how many respondents were working in the digital arts industry in Pakistan and what mediums are most popular. Overall, the majority were working (full-time or part-time) or earning income from the digital arts, and most (75%) were working and earning in Pakistan. Generally, artists work in multiple mediums, with digital painting as the most common.

Participants were asked to choose from a selection of statements the ones that most closely represented their situation, such as whether working in the digital arts represented the main source of income or not, if they worked full or part time, etc. 24 (23.5%) responded that they work full time in the digital arts and their primary source of income is from the digital arts and 27 (26.5%) said their main source of income is from a job related to the digital arts. 29 (28.4%) said they work part time in the digital arts and 15 (14.7%) said their primary source of income is from a job not related to the digital arts. 29.4% said they were studying digital arts, while 17.6% said they were studying something else and working in digital arts on the side. Other responses included part time digital artist, educator, gallery manager, or visual artist in some other medium. Once again, one must look closer at these numbers as many selected multiple responses. For example, 10 respondents said they were both studying digital arts and working in it full time or their main source of income was related to the digital arts, 10 exclusively were part time digital artist, 11 were just studying and not working, and 11 were working in jobs related to the digital arts.

Of the 102 respondents, 75.5% said they were based in Pakistan and work primarily in Pakistan. 18.6% said they were based in Pakistan and work remotely abroad. 2% were based remotely but work in Pakistan, and 3.9% were not based and did not work in Pakistan.

In terms of mediums, digital painting (38.2%), photo manipulation/photoshop (14.7%), animation (8.8%), 3D Art (7.8%), and video art (5.9%) were the most commonly chosen as the

main medium. However, all but three respondents also choose at least one and often multiple secondary mediums. In addition to these five main categories, other mediums represented were sound art, digital illustration, AI art, graphic and other design, and a few non digital art mediums. Branding, logos, and other digital media design were referenced. While there were only 1-2 respondents who worked in AR/VR art and AI art as a main medium, 8 and 12 chose it as a secondary medium. In total, 60 participants chose three or more mediums.

While not comprehensive, considering LDF's past and current partners, reach, and exhibitions, all of these demographic numbers seem consistent with what one would expect from the industry, such as higher percentages of young people and a greater number of digital artists than curators or gallery owners connected to the digital arts.

Status and Perspective of the Industry

Section 2 of the survey consisted of five questions designed to gauge how the respondent is interacting with the digital arts industry in Pakistan, with the goal of gaining a broader understanding of how the industry functions as well as how it is viewed from the inside.

In order to analyze the results, each question was treated separately at first through the methodologies described above and based on Thomas' general inductive approach.³⁴ Connecting themes and repeating words were identified and counted. Questions 1 and 2 (interaction with the industry and concerns about the digital arts) were analyzed with a sentiment analysis approach; however, rather than using a machine learning program to pull coded words which can result in distorted data due to the lack of context, the researcher developed a more rule-based approach, with a sliding scale of -2 for "very negative" and 2 for "very positive" with five total possibilities, using trigger words, tone, phrasing, and other cues (also contingent on the researcher's contextual knowledge of the use of language in Pakistan).³⁵ While the aim was to collect all answers into a small number of overarching categories, unusual or unique answers where only 1-2 respondents brought up a certain theme or word were noted and the researcher investigated other answers by the same respondent to understand the full meaning. Finally, questions were compared against each other to explore possible interesting interactions, such as whether or not those who said they had little to no interaction with the industry also had a preference for owning digital art.

³⁴ Thomas, "A General Inductive Approach for Qualitative Data Analysis."

³⁵ Devika, Sunitha, and Ganesh, "Sentiment Analysis."

Question 1: What is your relationship to the digital arts industry in Pakistan? Are you involved or do you interact with the industry?

This question aimed to understand how and if the community interacts with itself. Answers were mixed, with a significant portion interacting through purely online methods and the majority interacting professionally. There was little mention of in person or other community events. Respondents were generally positive about the quality of interaction; however, the lack of and inability to join communities was a notable factor.

Responses were divided into two categories: the channel of interaction and descriptions of the interaction. The most common responses referred to interacting with the industry through professional channels (38.2%), while 25.5% noted their relationship was through social media (with 5 responses overlapping between professional and social media). 9.8% mentioned education (teaching) while 8 mentioned fellow students or teachers at university. 2 respondents specifically mentioned community outreach activities and 2 mentioned collaborations. 25.5% respondents said they had little to no interaction, with 8.8% of these saying they had no interaction. 18.6% respondents mentioned multiple channels of interaction.

In terms of how the interaction was described, 5 respondents said it was collaborative; however, 7 mentioned difficulties in finding or joining communities. 8 respondents expressed a desire to interact more. Geographic reasons were cited in a few instances for a reason not to interact, such as less events in certain cities or not being based in Pakistan. Of the 102 responses, 12 were coded as negative or very negative, with challenges in the industry the main reasons cited (these will be treated in more detail in later sections.) One noted that the online communities are only useful if one is engaged and active, and interest quickly wanes. 5 negative responses mentioned difficulty in finding communities, finding their space in the industry, or joining communities. 29 were coded as positive or very positive, using criteria such as positive words (enjoy, good, uplift) and detailed descriptions of multiple methods of interaction, indicating a strong and active interaction. 4 of these mentioned as positive aspects. Those responses that emphasized self driven efforts to get involved were in this category.

Interestingly, 6 of the responses that said they had no interaction with the digital arts industry were coded as neutral as they did not include any signifying words or reasons; they simply

stated the lack of interaction. 1 cited geographic reasons (not based in Pakistan), 1 as their lack of formal training and thus access to communities, and 1 as their lack of work in the industry.

Question 2: What concerns do you have about the digital arts in general?

Although the question was meant to capture a general attitude towards the digital arts, many respondents focused on Pakistan's industry in particular, as such the results could potentially be blended with the 1st question of the 3rd section, which asked the respondent's view as the main challenges of Pakistan's digital arts industry. Despite this, the analyzing researcher decided to treat each question separately, as the 3rd section encourages the respondent to take an outsider perspective and this question is geared specifically towards the respondent's feelings or sentiments. The most common concerns were economically-related, public awareness and appreciation, the future of AI in the field, and access to technology. Over half of the responses were coded as negative, but a significant percentage were neutral, and some even expressed no concern.

The most common concerns centered around jobs, job security, compensation, slow growth of the industry in Pakistan, and the overall economic viability of the industry. 31.4% of responses mentioned something in relation to this. Related, though slightly different, 11% mentioned the lack of platforms, mostly specific to places for artists to display their work or learn from more established artists. On a connected topic, 5 responses mentioned a lack of education (access to education) and 4 referred to a concern around finding or building communities.

The second most mentioned concerns were connected to the public's understanding of digital arts; that is, a general lack of awareness and recognition in the existence or value of digital arts. 25.4% of responses mentioned concerns of this kind. Many of those responses that specifically mentioned the lack of recognition or appreciation around the digital arts also referred to the disconnect between traditional fine arts and digital, and the general feeling that digital arts require less skill.

AI featured heavily in respondents' concerns, with 17.6% of respondents mentioning it. Of these responses, only one looked at AI in a positive light and thought it might be helpful for artists; for the rest, words like "take over" were common. 8 of these responses were coded as 'very negative,' and 4 others as 'negative.' Similarly, copyright, intellectual property, security, and other questions of copied artwork, whether from AI or other artists, often came up, appearing in 13.7% of responses. The word ethics was used in 3 responses, along with 3 instances referring to 'stealing'

or 'theft.' A handful of responses (4) specifically pointed to a lack of innovation, whether from a lack of new aesthetics, people following trends, or copied/stolen artwork for quick financial gain. Connected to both the economic viability of working in the industry and security, 3 responses specifically mentioned exploitation as a concern.

Further, a significant amount of responses (9.8%) mentioned concerns around technology - from access to tools, costs of these tools, ease of use, and the pace of technology. 2 of these mentioned the expenses and hassle of displaying digital art, an interesting connection to the concerns about a lack of platforms to display work. 4 responses specifically mentioned concerns around the younger generation and their ability to get education and join the field. On a related topic, 3 responses also mentioned a sense of gatekeeping, or barriers (perhaps intentional) set by senior artists for young people entering the field. 2 responses mentioned a concern around the business knowledge of the field and navigating it.

Unique or thought-provoking responses were also highlighted: these included concerns around the lack of regulatory or government bodies in connection to the field, neglect of the native language, the relative importance of fame and quality, the lack of buyers, and the quick growth without a clear direction or center.

Overall, as the question specifically referred to concerns, we would expect to see more negative coded responses. This was reflected in the answers, with 16.6% coded as very negative, 39.2% as negative, 28.4% as neutral, 9.8% as positive, and 5.9% as very positive. 5 responses did not provide any concerns, with 3 specifically stating they had no concerns. The researchers also checked for correlations with this distribution and participants' status in the industry (working full time, studying, etc) and their age. No clear correlations were present as each status and age group was represented with each coded response. However, the 3 responses which stated they had no concerns were in the 18-24 age group.

Question 3: How often do you see events/exhibitions/classes or other activities related to the digital arts in Pakistan? Do you feel it is enough?

This question aims to understand how the participants of the digital arts industry view its activity. The responses were overwhelmingly in the negative, with most saying the amount of events is very low and not enough. Those that did say there were enough events attributing this particularly to their insider status. 76 respondents said that there were not enough digital arts related events - only 4 responded that there were enough. The most common words used were

"rarely" (19 responses) or "not often" (12 responses), with 7 saying they saw none at all. Of those who specified timing, 2 said they saw events monthly, 5 said 1-2 times a year, 3 said 2-3 times a year, and 1 each said bi monthly and weekly. 7 said they saw "some," and 3 said they saw "very often," though these 3 all mentioned they saw the events because they are in the industry themselves.

In addition to extracting timing information, reasons or critiques were also summarized from the findings. 3 responses mentioned geographic challenges, while 4 specifically pointed out that many events seem to be for a privileged inner circle or established artists only. One in particular connected the lack of events to a reason that artists freelance for foreign clients. Lack of resources, spaces, and equipment were mentioned, as well as a lack of information. A few mentioned that the available courses are not up to the current standards or teach outdated methods, while only one response said there were plenty of courses available. On a more positive side, 5 responses specifically mentioned that there should be more events particularly because of the talent of the artists in Pakistan.

Question 4: Are the digital arts important to your practice/business? If so, do you primarily export/work with clients within or without Pakistan?

This question aimed at understanding how much digital artists are working inside Pakistan - despite the majority being based in Pakistan, LDF's understanding of the industry is that many artists export work through freelancing or foreign clients. This question aimed to quantify this phenomenon. The first question was intended to contextualize the second, in order to understand specifically which of those who were using digital arts in their business were working with local clients. Some respondents answered one or another, however, if the respondent discussed their clients and previous data from the demographics section showed they were working in the digital arts, it was assumed that the digital arts were part of their business. From the responses, it can be seen that the digital arts are being used in the industry, and more than half are indeed working with clients in Pakistan, though many work with clients within and without the country.

From the first question, 80 respondents (78.4%) said the digital arts were important to their business and 4 said they were sometimes or somewhat important. 3 specifically stated they weren't important, 5 did not answer or their answers were inconclusive, and 6 said they were not working yet. Of these, most were students who had not entered the field yet, their primary source of income was from a job not related to the digital arts, or were doing digital arts as a hobby or on the side.

Only 2 of these responses mentioned clients, and both were in the category "I am studying something else and working in digital arts on the side." These 2 responses were not considered in the analysis of those who said that digital arts were both important to their business and provided information on their clients. Of those who responded that the digital arts were important to their practice or business, 10 were not working - they were either studying, hadn't started working yet, or were pursuing digital arts as a hobby.

70 responses were remaining after these cases were removed (and 3 responses which were inconclusive). Of these 70, 32.8% (23) said they worked with clients within Pakistan and 3 said they worked with clients "mostly" in Pakistan. 17% worked with clients abroad, with an additional 4 that worked with clients "mostly" abroad. 24.2.% said they worked with clients both in and out of Pakistan. For the remaining 11 responses, the respondent did not clearly specify but mentioned clients or business; however, by examining the data from their responses the questions around their working situation and where they are based, it was extrapolated that 7 most likely worked primarily with clients within Pakistan and 4 worked primarily with clients abroad.³⁶ Summarizing the groups and placing both "mostly" categories into "both," we can say that 42.8% worked with clients within Pakistan said they currently worked with clients in and out of Pakistan. Of note, 4 respondents who said they currently worked with clients within Pakistan said they hoped to work with foreign clients in the future.

Question 5: Do you own or would you purchase a work of digital art? Would the nationality of the artist or origin of the work affect your decision?

The final question of this section aimed to understand if Pakistani digital artists were also contributing to the industry as consumers as well as creators. The second part of the question, which asked if the artist's nationality would affect their decision, aimed to understand if there is any bias within the industry around the quality or desirability of art. The results show that many artists already own digital artworks or are open to the idea, though some privilege prints over purely digital files. The majority did not feel that nationality should affect the decision; those that did feel so felt it important to support Pakistani artists over others.

³⁶ For example, those that were categorized as "Primarily outside clients" responded "I am based in Pakistan and work remotely abroad," while those categorized as "primarily inside" were either full or part time digital artists who had also responded "I am based in Pakistan and work primarily in Pakistan."

For the first part of the question, responses were coded as "no," "open," or "yes." The category of open included trigger words like *might, would like, maybe, wouldn't mind,* etc. The category of yes were clear that the respondent already owned digital artwork and sub-categories were noted if the respondent specified if they owned digital copies or printed copies of digital artwork. 6 respondents answered a single word "yes" to the question and as such it cannot be determined if they were answering the first or second question (ownership or the effect of nationality). For this, 13.7% replied they did not own digital artworks, 32.4% were open to owning digital artworks, and 39.2% already own digital artworks, with 2.9% specifying they owned digital copies and 7.8% specifying they owned printed copies of digital works. There was no particular correlation to age or interaction with the industry in regards to ownership.

For the second part, 61.8% stated that nationality would not affect their decision. 7.8% stated that it would affect their decision but did not specify how, and 8.8% said that they would prefer to buy artwork from Pakistani artists. 4 responses mentioned affordability as a factor in their decision to buy or not and the high price of digital artwork. 3 responses specifically stated art's place as beyond borders and nationality. 16 responses highlighted the quality of the art as the deciding factor over nationality, while 2 mentioned the repute of the artist and 3 said the art should be aligned with their own values. Other responses of note were that nationality would not affect the decision unless the artwork was specific to a certain culture, a preference for paintings over digital copies or NFTs, the overall environment of the digital art market, and a statement of being a maker, not a buyer. Of those who said they preferred to buy from Pakistani artists mentioned affinity of the culture and a desire to support local artists and friends.

Challenges and Solutions

In the final section of the survey, participants were asked three questions around the main challenges facing the digital arts in Pakistan and solutions they would like to see in the short and long term. The findings are detailed below.

Question 1: What do you see as the main challenges facing the digital arts in Pakistan?

The challenges mentioned in this question were similar to the general concerns about the digital arts, with some significant shifts; economic concerns were mentioned but not the most common, and while AI was mentioned a few times, it was much less prominent. Rather, questions

of public awareness and appreciation as well as the overall feel and functioning of the industry were more spotlighted. A lack of platforms and infrastructure were also cited as main challenges.

Considering that some respondents cited multiple challenges and others a single one, and some went into great detail while others didn't, in order to best analyze the survey data, the results were divided into broad categories. These categories were extracted directly from the data by noting the repetition of certain words or themes, and the data was examined multiple times to ensure consistency of the coding. Some responses were equally appropriate in multiple categories and the researcher's discretion was used. The categories are as follows: Awareness, Industry Culture, Economic, Platforms, Infrastructure, Learning Opportunities, Accessibility, Media, and Cultural. Awareness refers to the general public's understanding and appreciation of the digital arts, and including recognition, appreciation, and support. Industry Culture refers to the health of the community and how artists feel about each other and the sector. Economic refers to mentions of jobs, opportunities for jobs, compensation, and other financial considerations. Platforms refers to places where artists can display or share their work, such as events or exhibitions. Related to platforms is Infrastructure; however, while the former was taken to understand places and opportunities for digital artists to showcase and meet each other, infrastructure was taken to mean challenges on a structural level, such as government and legal. Learning Opportunities refers to education or other workshops where digital artists can learn their trade, whether formal or informal. Accessibility refers to specific challenges of accessing tools or equipment necessary for the digital arts. Media refers to responses that specifically concern the mainstream media and the representation of digital arts therein. Finally, Cultural (general) refers to overall challenges facing Pakistan that affect the digital arts as well.

The number of responses for each category was calculated on how many times they appeared in total, whether or not an answer cited multiple challenges. The number of responses for each category is detailed in the table below and each category will be examined in more detail to provide a more nuanced understanding.

| Category | # of responses |
|------------------|----------------|
| Awareness | 43 |
| Industry Culture | 35 |
| Economic | 34 |

| Platforms | 28 |
|------------------------|----|
| Infrastructure | 22 |
| Learning Opportunities | 16 |
| Accessibility | 8 |
| Media | 5 |
| Cultural (general) | 4 |

The most common challenge cited was a general lack of awareness around the digital arts. Of these 43 responses, 26 specified a lack of appreciation with 6 of these even more explicitly citing a lack of appreciation of the value and skill of digital arts. 3 responses suggested this was connected to the overall lack of understanding and awareness of the arts in general. 8 mentioned the gap in understanding and preference between traditional fine arts and the digital arts. The word 'stigma' appeared in 2 responses.

The second most common challenge cited were concerns around the industry culture. Here, responses included mentions of the use of AI and unskilled workers copying artists (7), issues with the community such as finding community, feeling supported, guidance from seniors, gatekeeping, and lack of collaborations (13), the fact that certain mediums, corporate interests or social media trends dominate the industry (6), and the immaturity of the field in Pakistan and the lack of deep exploration into the full possibilities of digital arts (2). One of these, for example, pointed out that the digital arts have not been explored beyond the visual medium, such as research or other implications. 6 other responses expressed a similar concern to this latter point, that the industry in general is not up to date with global and technological standards. One interesting response noted that because digital art is shared online or via social media, many artists follow trends for more views rather than focusing on the longevity or depth of the work.

The third category, economic, refers to concerns associated with the economic conditions of the industry. Most were concerned with the earning potential of working in the digital arts, including fair pay, compensation, and opportunities (18). 1 cited concerns with the overall economy in Pakistan, with 1 other mentioning the slow growth of the industry. 2 mentioned resources. 3 responses used the word "exploitation." 7 cited concerns connected with the market, including preferences for traditional arts, limited audience and buyers, and the oversaturation of similar mediums and similar work.

The next highest category was platforms. Here, a lack of exhibitions (9), events and networking (3), and spaces and facilities (2) were the most common challenges cited. 6 responses used the word "exposure" and 6 used the word "opportunities."³⁷

In the infrastructure category, security was a main concern, with responses citing security concerns, 5 mentioning copyright protection and 1 mentioning payment security. 3 other responses mentioned payment processes – in particular, ways of processing payments from abroad – as structural issues. Most responses mentioned a combination of government support, investment, and funding (8), with 1 of these specifically mentioning a lack of funding for young creators. 1 mentioned the challenge of load shedding and electrical issues, while another cited the 'lack of collective voice' for the industry. This latter response is similar to a response coded under "Industry Culture" which mentioned that the digital arts industry is generally managed by those who do not have direct experience in the field.

The lack of courses and learning opportunities, particularly in regards to formal training, was another main challenge that respondents identified. This category was often linked or connected to other challenges, such as Industry Culture (lack of formal training leading to copying or unskilled workers) or Platforms (lack of spaces or exhibitions). 5 of the 16 responses citing this challenge mentioned the word "formal" in regard to education or training.

While appearing in fewer responses, Accessibility, Media, and Cultural were all cited as challenges. Responses for accessibility generally referred to the high costs or difficulty of access to the tool, software, or other technology required for digital art. For media, respondents pointed out the lack of promotion or communication of the industry and the lack of representation of digital art in mainstream media including films and TV. The cultural category referred to concerns which were not directly related to digital arts but Pakistani culture in general. 2 referred to the relative unimportance of digital arts in the face of other challenges, and two mentioned general cultural and social issues that inhibit the arts.

Finally, there was only one response that stated they did not see any such challenges in Pakistan for the digital arts. However, in an earlier response in section 2, the respondent had

³⁷ Here, the trigger word 'opportunities' were included in the platforms category if they did not specify what opportunities the respondent felt were lacking. Lack of financial opportunities or jobs were included in the Economic category.

expressed concerns of accessibility of tools. One other unique response expressed concerns with the sustainability and environmental aspect of the digital arts.

Question 2: In the short term, what solutions would you like to see to address some of these challenges?

Like the previous questions, responses were extracted into categories through the use of code words and thematic grouping. The categories were the same as the previous answer, and no answer required the creation of a new category. Some categories present in the previous answer were not relevant. As before, the number of responses was calculated by how many times they appeared in total whether or not the response contained multiple suggestions. Where answers could belong in multiple categories, the researchers' discretion was used. The breakdown of categories for suggested short term solutions and the number of times the suggestion appeared are listed in the table below:

| Category | # of responses |
|------------------|----------------|
| Platforms | 45 |
| Learning | 26 |
| Infrastructure | 21 |
| Industry Culture | 12 |
| Media | 11 |
| Economic | 10 |
| Awareness | 4 |
| Accessibility | 3 |

The most common suggestion for short term solutions by far fell into the platforms category, which most closely corresponds with the challenge of awareness, perhaps the reason the number of responses is very close (43 to 45). The separate category of awareness listed above contained only those responses which only cited awareness but did not provide any suggestions for how that awareness could be created. Within platforms, responses include the need for events (13), exhibitions (20), residencies (3), marketplaces (7), and festivals (4). One suggested a Pakistani equivalent to Etsy, and many responses suggested art markets either online or in person. Competitions, websites or community platforms, collaborations, and networking were mentioned

1-2 times each. Within events, 2 specifically mentioned small events with 1 noting the need for events in multiple cities. One suggested that organizations working in Lahore or Karachi should try to expand their activities to other cities. For exhibitions, 2 responses mentioned the need for better curation and exhibitions that provide e-catalogs and curatorial notes, 3 specifically mentioned physical exhibitions, and 2 mentioned exhibitions for students or emerging artists. In regards to the physical exhibitions, one response noted how this can help establish the digital arts as a legitimate medium. 2 of the responses for exhibitions were connected to marketplaces and the ability of artists to sell works at exhibitions.

Learning, or training opportunities, were the second most common short term solution suggestion. Here there was an interesting variety of ideas: 9 responses suggested training or workshops for practical skills such as the business side of selling digital art (4), growing internationally (1), dealing with clients (1), finding and using applications and tools (2), and inside knowledge around pricing and security (2). While some suggested a broader scale and dedicated programs (3), the responses included the idea of more electives and individualized training for niche mediums as well as short workshops or seminars. On this topic, intergenerational workshops and seminars with senior artists sharing knowledge were specifically mentioned in 2 responses. 2 other responses mentioned teacher training.

The infrastructure category focused mainly on government support and access to funding for digital artists. Suggestions included student loans, scholarships, funds for young artists, equipment budgets, grants, and funding pools. 6 responses referred to the necessity for legal structures and industry standards. 1 of these suggested the creation of an artist council or other governing body that could ensure legal rights and industry standards, as well as a national platform that would animate the digital arts and design through activities such as competitions, trainings, and soft image building. 2 others suggested the creation of online payment systems that function within and without Pakistan.

The suggestions within the industry culture category were quite varied; however, they generally focused on community building or diversifying and/or increasing the quality of the industry. For community building, suggestions included: collaborations including intergenerational, international, and cross-discipline collaborations, the formation of an artist collective or association, gatherings across different cities, peer learning, and access to mentors. One response suggested the need for a think tank or regular group gatherings in multiple cities led

by senior artists. On the other side, the need for more artistic freedom, acknowledgement of niches, creating safe spaces for all mediums and for underappreciated or unrecognized artists, and more entrepreneurship. 1 mentioned talent retention and development (though the context or method was not specified), and another specifically noted the need for qualified digital curators.

The media category generally included the need for digital arts and design to be more prominently featured in the media and marketing campaigns. Words like exposure, representation, art knowledge, and even glorification were used in connection to media. 2 of these mentioned the need to raise up local talent, and another suggested the creation of journals or publications.

The economic category contained fewer specific suggestions. 2 were connected to the overall economic situation in the country, while others referred to fair pay, and better reach to target audience. 3 mentioned opportunities for students or emerging artists such as student or entry level jobs and opportunities for young artists to showcase or enter markets. 1 mentioned a recent uptick in collaborations with corporate brands and suggested more of these would be necessary. Another pointed out the need for industry wide solutions and mobilization, as the success of one person doesn't necessarily uplift or advance the growth of the industry.

As mentioned above, the category of Awareness here only included answers which cited awareness but did not suggest any method. All three of the responses categorized in Accessibility referred to access to technology and tools, though again no specific method was suggested. Finally, 5 responses were not clear or confusing, 4 people did not respond or said they didn't know, and 1 respondent said they did not feel any short term solutions would have an impact.

Question 3: In the long term, what solutions would you like to see to address some of these challenges?

A similar categorization scheme was used to analyze the responses to question three of this section, which asked respondents to suggest long term solutions to address the challenges they outlined in question one. However, because of the longer term focus, the responses varied more widely. Many of the same overall categories were still applicable; however, within the categories there were fewer repeating answers. Additionally, two new categories were added: Community and Research and Analysis. Community refers to activities which suggest creating formal structures for the digital arts community: although this could be categorized under infrastructure, the researcher felt that it was an important point to highlight, and infrastructure was kept for answers that referred to government structures or technical structures. The second new category,

Research and Analysis, was separated from learning opportunities, as this latter refers to opportunities for the members of the community to improve their skills, while suggestions of research and analysis proposed taking an outside view in order to address challenges.

Additionally, there were many more answers in this question which were not applicable to be categorized than previously - as in the second question, there were 7 responses which pointed to awareness but did not provide any particular method or suggestion for how to do so, and indeed 23 responses were not included in the analysis as they were unclear, left blank (or n/a), or did not provide any meaningful suggestion for solutions. The remaining categorization and number of responses which mentioned these categories are as follows:

| Category | # of responses |
|-----------------------|----------------|
| Infrastructure | 25 |
| Learning | 25 |
| Platforms | 18 |
| Industry Culture | 18 |
| Community | 12 |
| Media | 9 |
| Research and Analysis | 4 |
| Economic | 3 |
| Accessibility | 2 |

In the Infrastructure category, responses fell into these sub-categories: funds and investments (9), government related support (8), legal or regulatory support (6), and technical related infrastructure (5). Note that some responses contributed to multiple sub-categories. Within funding, responses with specific suggestions including funds for incorporating technology into art, funding for animation houses, and sponsors from both private and public sectors. In government related support, aside from funding suggestions included a governing body specifically for the digital arts to promote awareness and economic potential, yearly budgetary plans, government jobs for artists, support for bringing digital art to the international market such as the use of digital arts to promote local culture, including digital arts in city design, and redesigning policy to focus on the future and future technologies. Legal and regulatory support mentioned the need to treat the digital arts industry like any other field of business with the same kind of standards and regulations,

the need for increased security and relevant copyright laws, and overall increased ethical considerations around the field. Specific suggestions for technical infrastructure included supportive banking systems and websites like Fiverr or Upwork for a specific Pakistani market.

The Learning category was widely varied. Loosely, responses either dealt with more formalized digital arts education within universities or academia, the integration of arts and digital arts into education as a whole, or a more future-focused or updated approach to digital arts education. Many responses focused on the audience for digital arts education, such as the general public and digital arts courses in normal schools, courses for non arts students, courses for young people, non university courses such as workshops or seminars, and accessible courses for any level of skill. One response felt that the only way to achieve long term, meaningful impact would be the integration of art, design and critical theory into all K-12 curriculums throughout the country, while another suggested the integration of digital arts in traditional arts courses. Other responses focused rather on the topic of digital arts related courses, such as teaching the application of tools rather than just how to use the software and focusing on individuality and artistic freedom. One response suggested teaching marketing and portfolio development, while another pointed out the need for courses that also teach skills for success in the market. Many responses indicated the need for reworking curriculum to focus on the future and dedicated digital arts programs. One respondent detailed various ways to do this, including varying techniques, providing practical exercises for homework, rotating teachers, and an overall encouraging environment. Other interesting responses included one that suggested the integration of academia into a governing body (see above) for the promotion and regulation of the digital arts industry and one that suggested career counseling to help young people understand the scope and provide guidance.

The Platforms category was equally varied. Some responses referred to archives and museums, such as a digital arts specific museum or integration of digital arts into museums. Physical exhibitions, permanent and temporary exhibitions in galleries and museums, experimental and experiential spaces, and exhibitions in public spaces were all suggestions related to exhibitions. Other suggestions included exposure abroad, promotion in mainstream art communities, meetups within the industry to share ideas and concerns, competitions, panel talks, residencies, and Pakistan-centered large scale projects to increase variety and quality. One specific suggestion was to create tech-based fashion shows to increase awareness in the integration of technology and art.

Considering that responses around creating or maintaining official communities were shifted to the Community category, responses included in Industry Culture generally referred to collaborations or creating a more supportive environment. 4 responses brought in the concept of inclusivity, referring to the need for a variety of mediums, diversity of artists, collaborations, and acceptance of new ideas. One pointed out the need for more openness and communication around opportunities as well as the need for both full time and part time opportunities. The need for mentors and guidance from senior artists was mentioned twice, one of which suggested that "more mentors less contemporaries" were needed for growth. 3 responses referred to the interaction with the corporate sector, such as the need to collaborate with brands or develop initiatives that attract corporations. However, one of these cautioned on the 'agency culture' currently in use and how it limits the variety of mediums and work. One respondent stated the need for wider dialogue between professionals, policymakers, and stakeholders. In terms of collaborations, cross-discipline and international collaborations were both mentioned multiple times, as well as collaborations between traditional and digital arts. Finally, one respondent suggested sharing more heartfelt or historical works within the industry rather than only trendy or marketing related work.

The Community category consisted exclusively of responses that suggested some sort of formal or dedicated community, society, or platform for the industry. These ranged from very formal (an artist union to ensure fair pay across the sector) to more informal (blogs or networking opportunities). In addition to the idea of a formal union, 2 others suggested artist collectives or societies to promote artists (particularly young artists) or promote Pakistani artists internationally. One response suggested a directory of artists with catalogs, while 3 others stated the need for an online exchange where artists can find work, clients, and each other. Similarly, 1 response suggested a platform to share news within the industry. The remaining responses simply stated the need for a digital arts society or more formalized communities to meet, exchange, and discuss.

The majority of the responses in the Media category simply referred to the need for more digital arts in the mainstream media and greater representation and exposure. One referred to the need to bring Pakistani art into global settings, while another suggested the need for prioritizing and showcasing high quality art in the media. Two responses specifically mentioned animation and bringing animated content into the media and marketing.

Three of the four responses in the Research and Analysis category advocated for the need for deeper, more rigorous approaches to solving the problems. The remaining one simply stated the need for research without going into detail. One stated the need for a comprehensive economic survey to gather data on the industry that can be used for laws, policies, and regulatory frameworks. Another suggested the use of analysis to examine international examples such as Iran, Egypt, and India to understand how the creative industries should act and reevaluating what digital art is in Pakistan and where it can go. The final response in this category advocated for clear strategic planning and sustained efforts across the whole field including encouraging research and innovation in the industry (other aspects of this response were integrated into other categories as well).

The Economic category accommodated responses that referred to general economic concerns. One referred to the expansion of the arts industry generally, while another felt that wider changes to the economic system were required for worker conditions and compensation to be addressed. Another referred specifically to job opportunities for designers (though did not mention a method). In the Accessibility category, one response mentioned the ease of access for beginners (such as through career consulting), and another suggested diversifying the languages used in digital arts to include more local languages.

This concludes the Findings section. Deeper discussion of these results and their most interesting aspects will be examined in the following section.

Discussion

In terms of the demographic results, LDF's reach is mainly with emerging artists and our understanding of the industry matches the survey results. The makeup of the industry section suggested that while there are many digital artists working in Pakistan, industry-wide connections and events are lacking. This connects to the lack of awareness and community mentioned in the challenges section.

Of particular interest was the shift from general concerns about the digital arts to Pakistanspecific challenges. For example, in the general concerns, AI was one of the most commonly cited, yet it was almost entirely absent in the latter section, and when mentioned it was in connection to protection or security for artists. In both sections, awareness was a common concern, as was the economic viability of the sector. Through the responses, it is clear that there is a genuine worry about the safety of artists in a variety of areas, including economic and legal, and access to knowledge and opportunities. Part of this is connected to awareness and the valuation of digital arts, but it shows a common theme that digital artists do not feel supported: morally or financially, within and without the industry.

Broadly, the main focus of the short term solutions was twofold: community building and awareness. This speaks to a general sense throughout the survey that there is a lack of cohesion and sense of community in the industry. Likewise, the long term solutions also focused on community and industry building in a more organized, sustainable format, along with education and training with a broader reach and more flexible approach.

While the responses were varied and touched on many different categories and ideas, the one throughline that stands out is the fact that, as of yet, the digital arts industry in Pakistan does not function as a true *industry*. Rather, it is more of a collection of individuals who dedicate themselves to the pursuit of digital arts and forge their own path to getting clients or work related to it. Visual culture is favored, and the structures of an industry – such as communities, archives, forums, conferences, funds, networking, laws, regulations, etc – seem more or less absent. Speculation or research on the reasons for this are beyond the scope of this report. Many of the reported challenges correspond to this lack of structured and cohesive industry.

What is abundantly clear from the survey results is that industry wide mobilization is required for the sustainability and health of the industry. LDF, through its 2023 activities, is touching on multiple aspects mentioned including physical exhibitions, short courses on the business side of digital arts, and research, but it remains a small organization primarily based in Lahore. In order to truly see long term growth, all stakeholders must be prepared to encourage the development of the *industry* of the digital arts. The recommendations section will present 3 recommendations for future steps based on the survey data and examples from around the world.

Necessity of future research

From the beginning, LDF's intention through this research was not to provide a comprehensive and exhaustive picture of the entire digital arts industry. Considering the small team and the distribution of resources, this kind of extensive research project such as that undertaken by the British Council is not feasible. The aim was rather to create a snapshot and understand better from the artist community itself what the on-the-ground situation is.

What is clear is that further research is necessary to take this work forward. Through the survey LDF was able to reach a fair amount of stakeholders, however, in order to understand the full situation, at least five thousand responses, with ethnographic interviews, site visits, greater

geographic outreach, and greater penetration in non-English speaking communities, would be required. For example, in this survey, gaming and animation studios, as well as gallery owners, were underrepresented, but play a vital role in the industry. Additional resources to develop unique coding systems to analyze data are also necessary.

Recommendations

From analysis of the survey data, we present three recommendations. Each has a short term component and a long term component. These are not exhaustive and represent what we feel are the most critical steps to create a more sustainable environment for the digital arts in Pakistan. As stated above, true growth will only be achieved with broad mobilization and sustained efforts. These recommendations go beyond LDF activities and are aimed at all stakeholders in the wider industry.

Recommendation 1: Community-Building

The survey results indicate that digital artists in Pakistan often feel isolated or struggle to find community. Events are rare, and young artists struggle to find their way.

In the short term, we recommend the creation of an online community platform by artists and for artists where they can share ideas, news, and make impromptu meetups. Moderators and community leaders will be needed to keep the discussions flowing and ensure a safe space for all. The first step in the process could be to map the existing community and therefore acknowledging their existence and showcasing their work to the general public. Already in Pakistan, some universities are beginning the process of creating media arts societies, such as that of LUMS, where students can come together and share knowledge.³⁸ Universities can act as a catalyst in bringing the community together, however, broad and inclusive community spaces. Inspiration can be taken from IF Digital, a platform run in France, provides a much needed platform and community to the digital artists. A platform like this not only enables the artists to show their work through a cultural organization lens but it also provides opportunities for various artists to collaborate among themselves.³⁹

In the long term, we recommend the creation of journals and news platforms, work exchange platforms ala Fiverr, and artist collectives for each main city. Schools and universities,

³⁸ "LUMS Media Arts (@lumsmediaarts) • Instagram Photos and Videos."

³⁹ "IFdigital."

media and journalists, and international partners can facilitate; however, the artists should remain at the heart of the initiative, and focus on inclusivity. The artist collectives might hold regular events or small, pop-up exhibitions to showcase multiple artists, thus increasing awareness and bringing together artists. In developing a stronger community that looks at the functioning of the industry as a whole and brings together artists and other stakeholders to continually discuss standards, techniques, and future growth, this can address the challenges of *awareness, platforms,* and *industry culture*. Additionally, as the industry takes itself more seriously, adjustments in the *economic* challenges may be seen. Holroyd's paper presented previously shows how government initiatives, both on the federal and city levels, can greatly impact the digital arts community, such as Seoul's Digital Media City.⁴⁰ These initiatives, which can be initiated by local governmental and international partners, can provide not only valuable community spaces but also economic and job opportunities.

To note here how LDF places itself within this context, the longer term ambition of LDF is to collaborate with existing digital arts archives and platforms that enable artists to not only think about local communities and collaborations but also internationally, to increase their network. A central tenet of LDF is to favor grassroots mobilization by working with already existing solutions, such as collaborating with Media Arts South Asia for <de>confine 2021.⁴¹ Going forward, LDF or other institutions could conduct other partnerships such as with other international festivals such as Athens Digital Arts Festival or Re:public Berlin.

Recommendation 2: Education

The survey data show that a lack of education and dedicated training hampers accessibility, awareness, and growth of the industry.

In the short term, we recommend that artists, studios, or other organizations like LDF dedicate themselves to the creation or curation of short courses or workshops, available online or in person, that focus more on application of tools, artistic voice and freedom, and practical knowledge of working in the field. By opening these short courses or workshops to a variety of ages and skill levels, general understanding or awareness of the digital arts can begin to penetrate into the wider arts community and eventually the public. Inspirations can be drawn from the works

⁴⁰ Holroyd, "Digital Content Promotion in Japan and South Korea."

⁴¹ "<de>confine 2021."

of Arts Electronica, which supports European voices of digital arts not only through showcases but extensive trainings and a support mechanism through which young artists and organizations are mobilized to connect, learn, advance and delve deeper into lobbying the digital arts ecosystem.⁴² Further, the NEW INC in collaboration with the New Museum in New York gives an interesting example of how museums can provide necessary training programs or incubators for artists.⁴³ Hence, museums within Pakistan, such as Lahore Museum, could be a catalyst in developing such initiatives, where artists can not only benefit from their existing structures but also contribute towards digitization and other interesting collaborations within the museum.

In the long term, we recommend that universities and schools work to incorporate dedicated digital arts courses and school administrators and curriculum developers integrate digital arts mediums into general arts courses. Teacher training within schools and universities can help current and future teachers feel comfortable with these mediums and help guide young students interested in the forms to explore their skills further. Through these actions, the challenges of *learning opportunities, awareness,* and *accessibility.* Some universities, such as the School of Visual Arts and Design at Beaconhouse National University and the School of Creative Arts at University of Lahore, are promoting interdisciplinary programs that put digital art mediums as the center of the discourse.⁴⁴⁴⁵ Examples and curriculum design can be drawn from several already established art and technology courses in the US, France, Denmark, Japan and other countries that actively contribute to long term learning opportunities.

Recommendation 3: Artist Safety

Issues of copying, stolen artwork, and copyright are a genuine concern for many artists, and this connects to challenges of economic viability, security, and innovation within the industry. Trend-based work and a focus on social media contribute to these issues. It is clear that more knowledge and structures are needed around security.

In the short term, we recommend short courses, workshops, or panel talks from experienced artists and legal professionals through their own platforms or through platforms like LDF and media art societies, in order to provide necessary training on the process of making

⁴² "Digital Incubator | Stage II."

⁴³ "NEW INC."

⁴⁴ "BNU > SVAD."

⁴⁵ "School of Creative Arts | The University of Lahore."

contracts, existing copyright laws, and artist rights. Artists should learn how to protect themselves from the outset, whether they are creating work for social media or for a client. LDF's partnership with Kilam law and other local legal advisors is a reinforcement that an active legal partner is required to protect the rights of the artists and the digital art buyers.

In the long term, we recommend new, digital arts-specific copyright laws and industrywide accepted practices, perhaps issued by the artistic community as discussed in Recommendation 1 and supported by legal and regulatory bodies. Knowledge sharing and economic data can provide transparency and industry standards which artists are aware of and can cite when discussing projects with clients. We also recommend the collaboration of tech companies with digital artists to develop safe, accessible payment platforms that can function on international standards and connect artists with buyers within and without Pakistan. These actions can address challenges of *infrastructure, economic, security*, and *awareness*. Long term inspiration can be drawn from the EU framework for the protection of rights in the creative sector.⁴⁶ Such a policy discussion needs to happen between the artistic community, legal fraternity and policy makers to ensure that a robust framework is developed through which protection can be offered to the digital arts community. Additionally, it is noted that Hua's paper on the digitization of the Asian Art Market found that through this process of digitizing art market platforms, cross-regional and cross-national collaborations expanded naturally, thus showing that advances in infrastructure can automatically lead to community building.⁴⁷

Further research, data collection, and stakeholder contributions can fine tune and edit these recommendations.

Conclusion

The digital arts industry in Pakistan represents an excellent opportunity, and its sustainable growth can contribute greatly to bringing Pakistan's immense talent and resources to the global stage. This in turn can increase the soft image of the country and provide valuable connectivity and understanding through the arts between Pakistan and the world. However, in order for this to be achieved, a greater effort is required. This report stands as an initial step to diagnose the efforts needed and approach the problem in a systemized fashion.

⁴⁶ "Regulatory Framework | Culture and Creativity."

⁴⁷ Hua, "Disruption, Digitalization and Connectivity."

Overall, the overarching narrative of this report was that while there are a great deal of digital artists working in the field, the digital arts industry *as an industry* remains neglected, which is a driving factor in the main challenges presented by the community members themselves, such as the lack of awareness and community. While LDF is working to address many of these challenges, it will require many stakeholders to come together to deepen, expand, and strengthen the sector's structures, allowing it to become an industry on par with other main industries in Pakistan. This report represents the beginning of this research, and a greater effort and resources will be required to more thoroughly understand the steps that can be taken. More voices, diverse perspectives, and in-depth studies will be needed.

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Annex II: Distribution Plan for Survey

Target Audience: Digital artists

Estimated # of recipients: 100

Method of contacting: Email list from all LDF open calls

Messaging: Shape the future of the digital arts industry in Pakistan, be entered into a raffle to win LDF merch.

Target Audience: Galleries and collectives and their networks

Estimated # of recipients: 250

Method of contacting: Email or Instagram message to ~10 selected galleries and collectives

Messaging: Partner with LDF by sharing the survey in your socials/newsletters, we will tag you

on socials and put your logo in the acknowledgment page of the report.

Target Audience: Educators and Students

Estimated # of recipients: 300

Method of contacting: Direct contact to existing university partners requesting to fill and make

students fill as well

Messaging: Think deeply about the future of the arts world and contribute to the future, we will add the university name to the acknowledgment page of the report.

Target Audience: Gaming and Animation studios

Estimated # of recipients: 50

Method of contacting: Direct messages of contacts in studios to share

Messaging: Partner with LDF by sharing the survey with your employees, particularly art department, and we will tag you on socials and put your logo in the acknowledgment page of the report.

Target Audience: Others and social media audience

Estimated # of recipients: 500

Method of contacting: Social media campaign across Facebook, Instagram, and Linkedin including posts, reels of artists sharing their concerns.

Messaging: Shape the future of the digital arts industry in Pakistan, be entered into a raffle to win LDF merch.

Total expected impressions of survey: 1200

5% assumed response rate: 60

Provisional list of stakeholders to be contacted:

| Institution or Person | Туре |
|--|------------|
| NCA Rawalpindi | University |
| COMSATS | University |
| NCA Lahore | University |
| NUST | University |
| IVS | University |
| Hunerkada College | University |
| Pakistan Institute of Fashion and Design | University |
| Indus University | University |
| Karachi School of Art | University |
| Institute for Art and Culture (IAC) | University |
| Asian Institute for Fashion Design | University |

| Punjab University | University |
|-----------------------------|--------------------------|
| Chaandghar | Creative Studio |
| BNU | University |
| University of Lahore | University |
| Aror University Sindh | University |
| Pakistan Art Forum | Online Gallery |
| Big Immersive | Game and Metaverse Studi |
| Babyrus Khan | Game art design |
| Harris Ejaz | game art design |
| Tanzara Gallery | Gallery |
| Islamabad Art Gallery (IAG) | Gallery |
| Canvas Gallery | Gallery |
| PNCA | Gallery |
| Line Green Studio | Gallery |
| Satrang Gallery | Gallery |
| Khaas Contemporary | Gallery |
| Gallery 6 | Gallery |
| HAAM Gallery | Gallery |
| Ejaz Art Gallery | Gallery |
| Como Art Museum | Gallery |
| VM Art Gallery | Gallery |
| Koel Gallery | Gallery |
| Ghandara Art Gallery | Gallery |
| Full Circle Gallery | Gallery |
| Lakir Art Gallery | Gallery |
| Zain Naqvi | Digital Art Company |
| KCR Studios | Design Studio |
| 3rd World Studios | Design Studio |
| Mano Studios | Design Studio |
| Sukali | Design Studio |
| Little Studio | Design Studio |
| Tasweer Ghar | Creative Space |
| The Tinkers Collective | Collective |
| Harfun Studio | Artist Collective/Studio |

| June Collective | Artist Collective/Studio |
|----------------------------|--------------------------|
| YAR Collective | Artist Collective/Studio |
| COLABS Creative Collective | Artist Collective |
| Karachi Biennale Trust | Art Organization |
| Lahore Biennale Foundation | Art Organization |
| Art South Asia Project | Art Organization |
| Puffball Studios | Animation Studio |
| Unicorn Black | Animation Studio |

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Amal Chughtai Mehrbano Avesha Tanvir Nabeel Rooshan Sawera Kamran Zakia Irfan Humaira Heba Shahid Zarrar Abdullah Amenah Saeed Ayesha Hassan Afreen Zainab Gul Anonymous Kashif Humayun Mahnoor farhan Anwer Ali Fareeha Latif Sara Nisar Hamzah Burki Aneezah Tauseef Eyyan Fajr Faisal Bazil Faiqa Durrani Saad Jarwar Faziel Shah Ushna Aamna Mohsin Eiman Tiwana Nashmia Haroon Asadullah Sikander Imran Ahmad Anonymous