

FACTORS THAT AFFECT PARTICIPATION IN THE “CARNAVAL DE NEGROS Y BLANCOS” IN COLOMBIA

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1. Introduction

The articulation of Intangible Cultural Heritage (ICH), Information and Communication Technologies (ICT), and education was the central axis of this research from a study focusing on the “Carnaval de Negros y Blancos” (CNB), the Black and White Carnival held in the city of San Juan de Pasto, Colombia. The aim was to connect cultural, artistic, and heritage practices to mediate through digital platforms. Therefore, the following question was raised: how can a technological tool be generated to train leaders and manage the processes of different artistic performances linked to the CNB? The answer could be concretized through the hypothesis that by identifying the factors that affect artists, artisans, and managers’ participation in registering the CNB’s artistic creations in the contest, it is feasible to develop a technological tool for training and management.

The approach carried out in this kind of research is based on the administrative dimension and is linked with the educational one. It is essential to notice that implementing a systematization process through ICT in the carnival requires informed decisions regarding the population and a guarantee to preserve the acquired knowledge. Among the main achievements and contemporary advances of humanity is the focus on science and technology, which was evidenced during the COVID-19 pandemic. The situation showed that a large proportion of human activity could be measured through ICT, a factor that also involves cultural and heritage practices such as CNB; it is here where the educational component becomes a link to articulate both the carnival and education. Consequently, it is essential to create a space for participation where it is possible to analyze and validate the technological tools utilized by the carnival agents.

A bibliographic review was carried out, which included studies related to analytical approaches, the applicability of ancestral techniques, and their link to education. First, Merolla linked the Internet with Berber communities in North Africa; it was concluded that historical memory and innovation are not mutually exclusive; the use of the Internet contributes to local identities through the production of content that reinforces their artistic and cultural practices; however, in some of their web products, discourses on

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globalizing were contradictory to ideas of Berber autochthony [1]. Second, in the carnival in Trinidad and Tobago, they linked engineering with costume design; in this case, the use of qualitative research techniques to understand technological applications in artistic creations was highlighted [2]. Also, in the I-Treasures program, an integrated project within the European Union and the 7th Framework program for research [3], the link was made between heritage, learning, and technology, and the strategy used was mediated by ICT in order to keep traditional knowledge and its transmission within the educational panorama. Examining these studies allowed us to understand that heritage and technology are two fields which, when combined, can provide a great many opportunities for investigation since their motivation is to contribute to the protection of the heritage.

From the context of the study, it is pertinent to mention essential data related to the carnival. The CNB is held annually from January 2nd to January 6th, and it has an extensive program that highlights the participation of six different artistic performances divided into two moments: on January 3rd, there is "El Canto a la Tierra", which is a parade of large dance and music groups and, on January 6th the Supreme Parade takes place. It was declared a Cultural Heritage of the Nation in Colombia in 2001, and in 2009, it was included in the UNESCO Representative List of Intangible Cultural Heritage of Humanity [4]. In addition, the CNB has had a tremendous historical trajectory in its organization, where managers, artists, artisans, and masters have formed relationships and given transcendence to the carnival.

The CNB includes six artistic modalities as described in Figures 1 and 2.

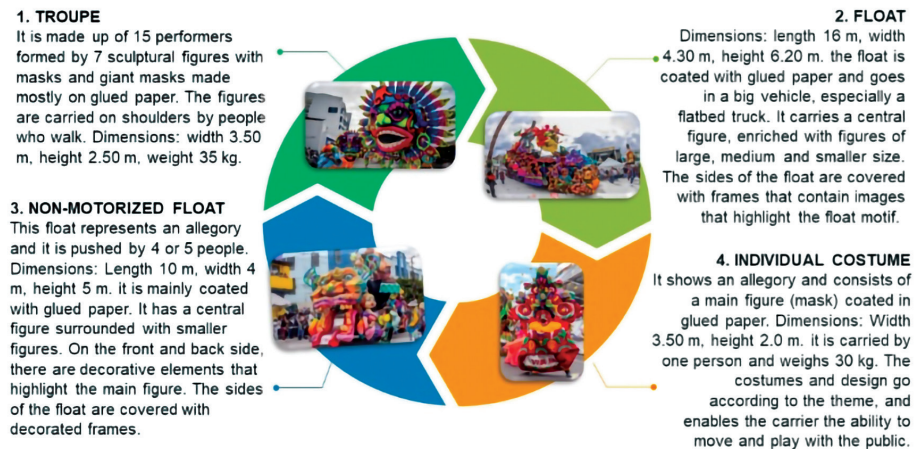


Figure 1. Handcrafted allegories (Courtesy, Corpocarnaval. Photograph of floats by Quique Rosero).

The CNB's history, trajectory, and transcendence within the territorial dynamics establish a vital link among the inhabitants of southwestern Colombia, which spreads joy to the visitors during this celebration. Each edition has faced challenges in search of an experience that directly ensures social and symbolic construction. The participants' registration, control, and evaluation processes are carried out manually every year, making its organization and management a difficult process. Consequently, the

5. CHOREOGRAPHIC COLLECTIVE

It is made up of large groups (220 people) who dance and perform choreographies related to Latin American and regional Andean music. They are characterized by their choreographic, musical and costume design. They play instruments such as shepherd's pipes (zampoñas), Indian flutes (queñas), rondadores which is a set of chorded cane panpipes, bass drums and side drums. They parade with artists on stilts.

6B. BELLOWS MURGA

It is a musical group - 10 to 16 members. They essentially play: accordion and violins, strings, and percussion instruments, there are also male and female voices and white voices. They can use amplification. They play traditional music from Nariño. Their costumes match with the artistic motif. The maximum number of participant groups is 10, and they are awarded from 1st to 3rd place.



6A. ANDEAN MURGA

It is a musical group - 12 to 20 members. They play essentially Andean instruments made of organic material (Indian flutes, flutes, rondadores, and shepherd's flute), harmonic and percussion instruments; they play traditional music from Nariño. Their costumes match with the artistic motif. The maximum number of participant groups is 10, and they are awarded from 1st to 3rd place.

6C. BRASS MURGA

It is a musical group - 12 to 17 members. They play brass instruments (trumpets, saxophones, trombones, clarinets, among others), harmonic and large and small percussion instruments. They play traditional music from Nariño. Their costumes match with the artistic motif. The maximum number of participant groups is 10, and they are awarded from 1st to 7th place.

Figure 2. Expressions of music and dance (Courtesy, Corpocarnaval).

need for software for the registration, control, and evaluation processes of the artistic manifestations of the CNB internally affects the efficiency of the selection process and organization of the Carnival. For this reason, a software called MUNAY YACHAY (in Quechua, it translates as, to know and to enjoy) was created, a digital tool to facilitate the process for carnival artists and managers.

This article is the product of the collaborative exercise between the research team, Corpocarnaval, the Institution responsible for planning, promotion, programming, and organization of the Black and White Carnival in Pasto, and the artists who participate in this phase. The results show the aspects that strengthen or weaken the creation of artistic performances based on the actions, requirements, and implications for their participation in the carnival. The study is divided into three sections: a description of the methodology, which includes the definition of the epistemological support and the activities that constitute the method; the presentation of the results and the theoretical discussion, which are obtained by analyzing the statistical data. The conclusions served to guide the structure of the application from the ethical point of view, based on the principles of accessibility and transparency of information. The technical aspect will be considered in accordance with the interdisciplinary team of the study and the users.

2. Methodology

The study is based on the paradigm for mixed research, which comprises the artistic performances of the CNB in two dimensions: the pedagogical dimension and the management of the creation processes for the artists, artisans, managers, and administrators who constitute the study population. In addition, a non-probabilistic sample was taken, based on criteria of convenience, which allowed us to identify aspects that strengthen or weaken the artistic creation in each of the modalities of the CNB and to understand management implications as a support in developing artistic proposals.

In describing the problem presented in the introduction, it is clear that an epistemological approach is required based on a pragmatism that adheres to the purpose of the research and as a conception that complements the scientific methodology. This philosophical conception is derived from the works of Dewey, Pierce, Mead, and Rorty, among others [5]. The purpose of this research is to focus on the problem from its epistemological paradigm because since it is a pluralistic approach, it guides the methodology in the practice and consequences of its actions. This approach also focuses on applications and their dynamics to find what solutions already exist to solve the problems. In this case, the pragmatic aspect becomes a philosophical confirmation for mixed studies, where the problem becomes more important than the methods used since decisions are oriented towards the use of plural techniques that address the problem and find a solution. The qualitative moment corresponds to the conceptual phase, the documentary analysis, and direct contact with the CNB participants, complemented by a quantitative stage with a survey and a third moment for technological mediation related to software construction through the agile software development, XP.

The methodology started with a survey to investigate the participants' knowledge of the CNB in each of the artistic performances. The survey contained 25 questions, some of which needed a single answer and others multiple ones. At the same time, a list of participants by category of the contest was completed, thanks to the information provided by Corpocarnaval, which is in charge of the artists' registration, accreditation, and control process. The questionnaire was also applied to a non-probabilistic sample defined by three criteria: being an artisan, leader, or artist belonging to an artistic category; taking part in the teams that support the enrollment and registration of proposals and lastly, being registered in the Corpocarnaval database. Subsequently, the questionnaire was subjected to validation by an expert; this process permitted the adjustment of each question with the characteristics of the target population; the survey was published on the site <http://centrodeestudiosregionales.org/encmy>.

In order to implement the instrument, two lists were analyzed. The first contained a historical record of artists with personal data and the time of participation in the carnival contest; the second corresponded to the artists' registration between the 2020–2021 carnival, which took place during the COVID-19 pandemic. Thus, these data were helpful in identifying names, ID numbers, cell phones, emails, and artistic organization. One hundred and thirty-seven artists answered the survey about individual costumes (30), troupes (30), the *murgas*, which are like street bands and use different types of musical instruments: metal, Andean, and those made with bellows (30), choreographic collectives (15), and motorized (12) and non-motorized floats (20). Consequently, two aspects were evident. Firstly, there was a decrease in the number of participants due to the pandemic, when the CNB was presented online and on TV, with no audience in the streets, and secondly, the limited number of participants authorized by Corpocarnaval. Initial contact with artists allowed voluntary registration in an online form. In addition, meetings scheduled by Corpocarnaval were used to promote the project and invite participants to fill in the questionnaire. These actions served to complement and update the information coming from the leaders and their support teams; a total of 269 artists from 78 organizations were registered. After collecting this information, we proceeded with the third step, which consisted of sending links via email and instant messaging; the survey was completed with the subsequent consolidation of results and data analysis. The fourth step resulted in 92 completed surveys, corresponding to 34% of the whole population interviewed. Steps five and six collected information from three dimensions (which are explained below).

- a) Participation in artistic performances
- b) Management
- c) Access to ICT

3. Results

The data analysis addressed three areas, cultural participation, cultural management, and heritage with ICT. Cultural participation is deemed as the action of belonging to an event and is framed within the exercise of cultural rights, especially the relationship of citizens with cultural policy, as it is contemplated as a regulation in ICH. From Ramos' critical perspective, cultural policy has changed its definition over recent years, especially with the fundamental interests of citizens related to the promotion of companies; the above is linked to the presence of cultural industries in events of intangible heritage [6]. This situation highlights the importance of generating actions to strengthen citizens' participation as a cultural right.

In mentioning cultural rights and how to locate those rights in citizens' participation, as pointed out by Ramos, culture is diverse and requires different paths, not only those marked by the market. The relationships between the participants of heritage practices are essential in the artistic processes of perception, creation, and diffusion. These processes require the exercise of citizen presence in order to be more democratic and equitable in public. In this particular case of the CNB, it is related to administrative decisions that affect the time for artistic creations, economic resources, and guarantees to meet the requirements of the contest. For this reason, the actions of the government and cultural institutions organized for such purposes require information and feedback regarding citizens' access to the resources available for their participation in the carnival.

3.1. Participation in the contest

Participation is regulated by the Participation and Contest Regulations during the carnival period. This document establishes rules for artists interested in the contest [7]. It is important to note that the regulation is valid for two years, which corresponds to the dynamics and mobility of the cultural manifestation in terms of its participation, which is why the document emphasizes the name *Concurso del Carnaval*. Among the data obtained on participation, it was possible to identify that 83% of the registrations corresponded to organizations and individuals, compared to 17% who were legal entities. This shows that most of the creative initiatives associated with the carnival modalities register broad participation by *persona natural*. In Colombia, it is a concept used for contracting through use of a proper name and identification with legal responsibility.

Up to 2021, most of the artists in the survey (63%) had participated in 8 or more editions of the CNB, thus evidencing long-term experience. The category with the highest participation in the study was the choreographic collectives, followed by bands of street musicians and troupes; as for individual costumes, participation is representative, although lower than the previous two categories; the motorized floats and non-motorized floats have the lowest proportion. In terms of trajectory, these artists have participated in different modalities of the artistic performances celebrated at the end of each year. They include the December 31st parade, known as *Años Viejos*; the children's parade of artists, called *Carnavalito* and the parade of representative traditions

in the *Familia Castañeda* parade. It is worth noting that the contest rules contemplate that an artist cannot participate in two modalities simultaneously.

Thus, it was necessary to inquire about the time needed to prepare a proposal for the artistic creation; in the survey, it was found that the time invested throughout the year by the majority of participants (60%) was more than six months.

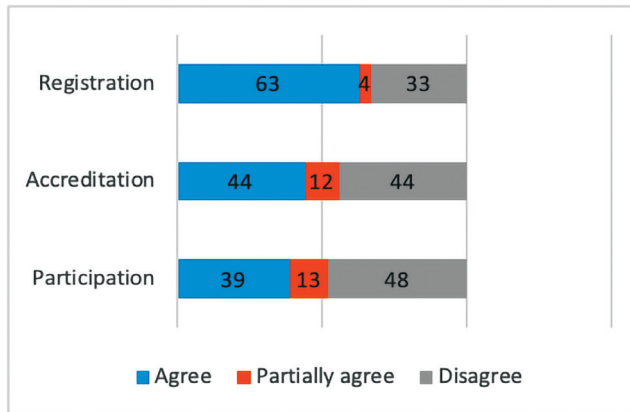


Figure 3. Participants' agreement according to the stages of the contest.

Figure 3 shows the participants' opinions of CNB requirements and conditions and whether they agreed or disagreed with them when participating. They are divided according to three regulatory stages; for registration, the great majority agreed (63%) and only 33% disagreed; for accreditation, the numbers leveled off with the same percentage (44%) and finally, for participation, the majority of participants disagreed with 47%, compared to 39% who agreed. In conclusion, the participants gave a favorable opinion about the document verification process, which takes place at the registration stage. However, the level of agreement with the requirements for participation needs to be higher.

3.2. Management related to the carnival contest

The concept of management varies according to the context where it is applied; in this case, it is within the Intangible Cultural Heritage framework (ICH). The main body for cultural policy in Colombia is the Ministry of Culture, which states that management has to do with a "set of procedures that are carried out with public institutions, private entities or community organizations, among other possible instances, to promote the safeguarding of any public event registered in a Representative List of Immaterial Cultural Heritage (LRPCI in Spanish), through PES implementation" [8]. Management around ICH also has specific legal support. The Special Safeguarding Plans (PES) are considered "a management instrument, through which actions and guidelines are established, aimed at guaranteeing the safeguarding of the ICH. For cultural events which are considered immaterial, it is essential to have protection against threats and risks that can distort their main characteristics as a popular carnival and mutate it into a fair or show" [9]. In this sense, the PES constitutes a fundamental document for

management because it locates the historical context and characteristics of the carnival and presents the chronological evolution of public policy related to carnivals. The document also describes the carnival in detail, including its central characteristics, primary days, celebrations, and modalities.

In this way, the PES acts as a management tool to safeguard carnivals and their components, in which guidelines and actions are specified should the CNB present any threats or risks. Consequently, the management of the PES can be comprised of several areas. First, there is the management carried out by the responsible entities, in this case, Corpocarnaval; the second has to do with the collectivity that supports the carnival, such as the artists, artisans, and other people who participate in the Carnival Contest. Therefore, the second item in the survey asked participants if they met the requirements needed to take part in the carnival.

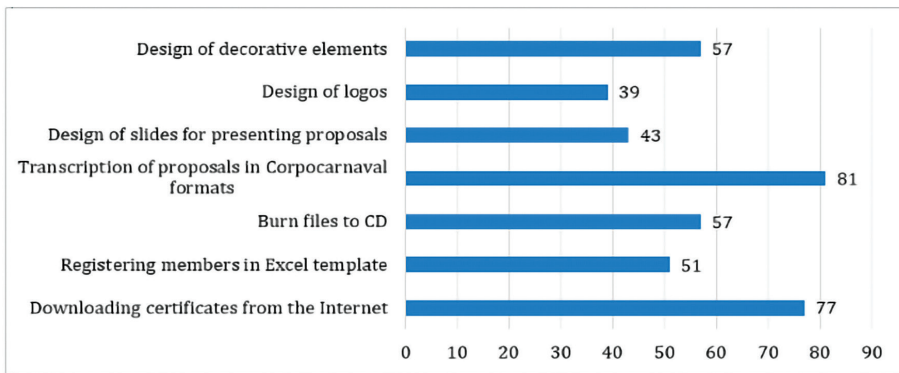


Figure 4. ICT-supported actions to meet participation requirements.

Figure 4 shows that CNB artists used ICT tools to consolidate different aspects of their application. Consequently, it was found that most respondents used ICT for related activities, such as those in the response options shown in the graph.

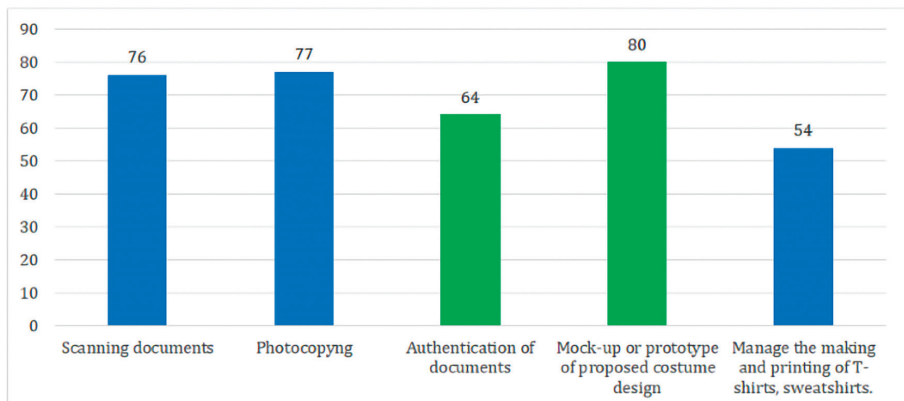


Figure 5. Actions carried out by participants to meet entry requirements.

Figure 5 complements the data that was consulted regarding management; it is necessary to note that this chart shows the manual work carried out by the artists to participate in the carnival. Among the categories shown, there are items such as model design, photocopying, and scanning documents; two tasks (shown in green) are not mediated by ICT.

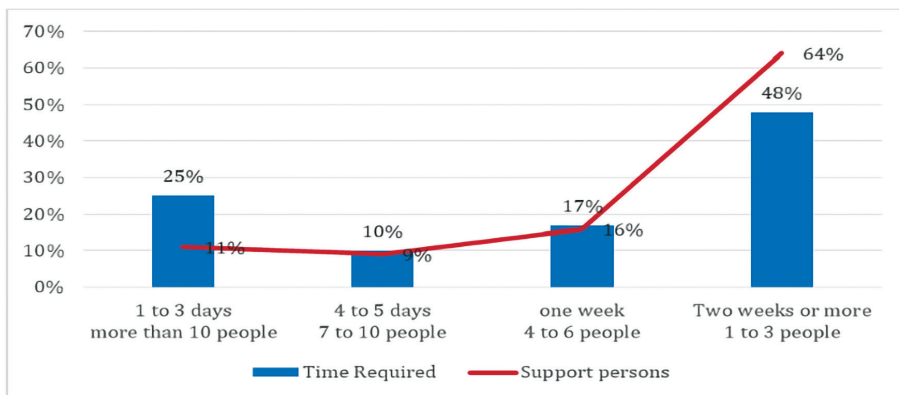


Figure 6. Relationship between the percentages required in time to prepare the documents and the necessary human resources.

A relevant aspect is the time for preparing the documents (indicated by the blue bars) required to register with Corpocarnaval, compared to the human resources needed to accomplish the task, evident in the red line of Figure 6. As can be seen, the majority of artists (48%) say they require two weeks or more; when the process is carried out individually, the data show that a more significant amount of time is needed.

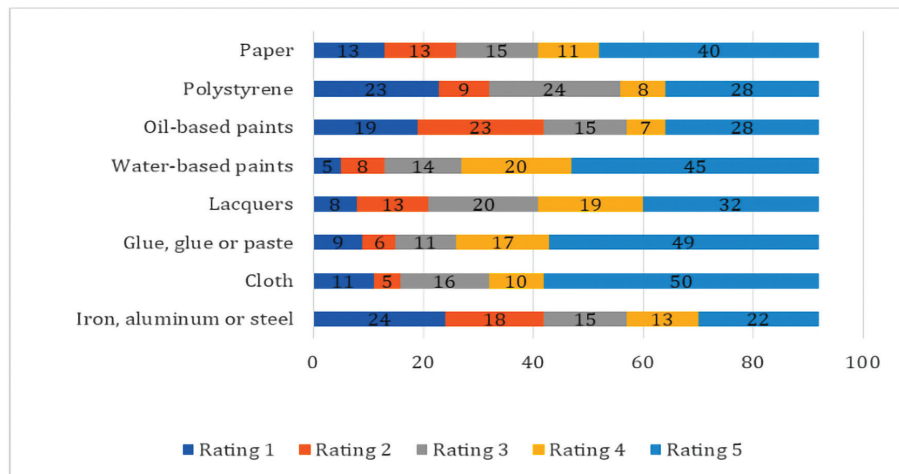


Figure 7. Materials and supplies used for prototypes.

Another aspect consulted in the survey was the source of financing used to cover the expenses to meet the requirements for registration and accreditation, a significant 71% comes from personal resources. Otherwise, for resources coming from organizations, sponsorships, or donations, respondents mention that they must resort to other sources, such as loans or credit.

In relation to the materials and elements that artisans use most in designing their prototype or model, seven specific materials were identified, and additional ones were also indicated (Figure 7). As a result, it is recognized that the most used materials are fabrics; secondly, glue or paste, and thirdly water-based paints. The less essential materials include iron, aluminum, or steel, and styrofoam. Other materials that were used included foam, polymer clay, porcelain, wood, and soft materials such as plasticine, craft foam, lace, resins, and fibers.

3.3. Information and communication technologies (ICT)

ICT tools are part of a scientific-technical revolution; they are essential due to the socio-historical effects of their use [10]; their presence in different environments and contexts is unquestionable [11], including cultural manifestations, in which ICT is also seen as a culture [12]. Therefore, for those artists who take part in the CNB, the interaction, and incorporation of ICTs is very relevant, as it is a technological system with a wide field of action involving the acquisition, storage, processing, evaluation, transmission, distribution, and dissemination of information [13]. In this case, ICTs are used for safeguarding the CNB. The primary purpose of this research was to develop a software tool to support the registration, control, and evaluation processes for the artists who participate in the contest carnival; the results show that it is possible to strengthen its organization and management through digital tools. Therefore, it is a priority to know how familiar the artists are with the use of ICTs when participating in the CNB. Thus, information, such as the artists' perception of ICTs, was collected, as well as the possibility to access and use digital platforms. Finally, they were asked about access to electronic devices and the use of social networks.

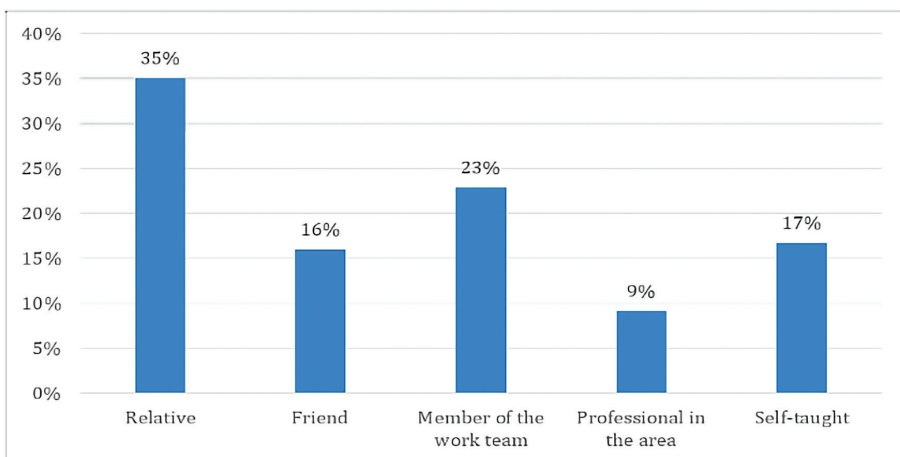


Figure 8. Type of support to access digital platforms.

After the survey, it was found that 93% of respondents confirmed that they were knowledgeable about the handling of these technological devices, while 7% said they do not possess any device, indicating that most of the population is, however, familiar with managing the technology and can access information through digital tools. We also enquired about how each artist learned to handle technological devices; their answers showed that 57% had learned autonomously, 23% relied on people close to them to access this type of media and digital information, and 20% achieved access through training. Access through third parties, as expressed by some artists, indicates a relationship with prevention, prejudices, or doubts about the handling and usefulness of technological devices, which ratifies the need for assistance to soften the effect of these factors.

Although the percentage of artists who have yet to gain knowledge of managing electronic devices is minimal (7%), Figure 8 shows that it is essential to provide assistance in managing digital platforms by trying to include the artists' relatives and their work teams.

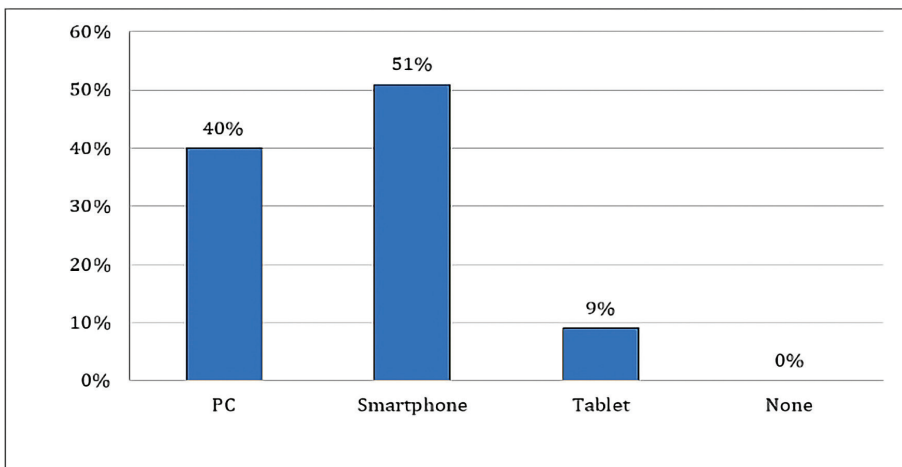


Figure 9. Availability of electronic devices.

On the other hand, the survey asked about which mobile devices the artists in the carnival use the most; the result is shown in Figure 9, evidencing a high use of smartphones (51%) and computers (40%).

As regards the frequency of use of electronic devices, Figure 10 shows that 82% of artists use smartphones very frequently. In contrast to the frequency of use of digital tablets, it was determined that this tool is only sometimes used by carnival artists. In the section concerning internet access, it was seen that 90% have an internet connection at home, and 55% have mobile data service on their cellphone. The previous information indicates that slightly more than half of the population can access information at any time and place, but almost half of the artists could not do so, having to resort to places that offer this type of internet service. In the same context, they were asked about the most frequent uses they made of their devices; findings revealed that 49% use digital tools for work, 27% for studies, and 24% as a hobby. It is important to note that this question was a multiple choice one.

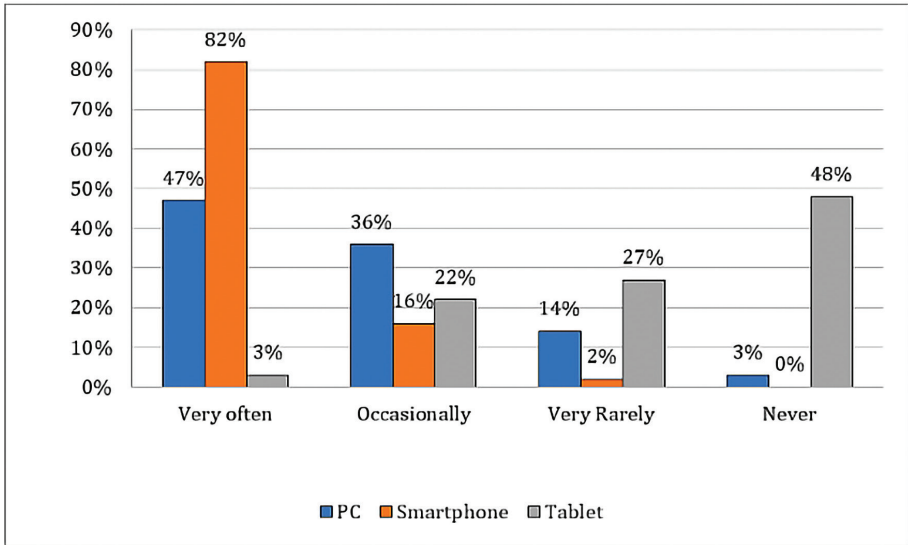


Figure 10. Frequency of use of a computer, cell phone, and tablet.

Figure 11A shows the computer tools they use, resulting in 27% using email, 25% using word processors, such as Word, 19% using web pages, 15% using PowerPoint presentations, and 14% using Excel. Several options, moreover, could be marked simultaneously; although the question was related to the use of media and social networks, the use of word processors, presentations, and spreadsheets was also evident. Figure 11B reflects the type of social networks used; it can be seen that 29% use WhatsApp and 29% are on Facebook, being the two most widely used platforms by CNB artists; likewise, 22% access YouTube and to a lesser extent 13% Instagram, 4% Telegram and 3% use Twitter. This shows that WhatsApp and Facebook are the most used social networks.

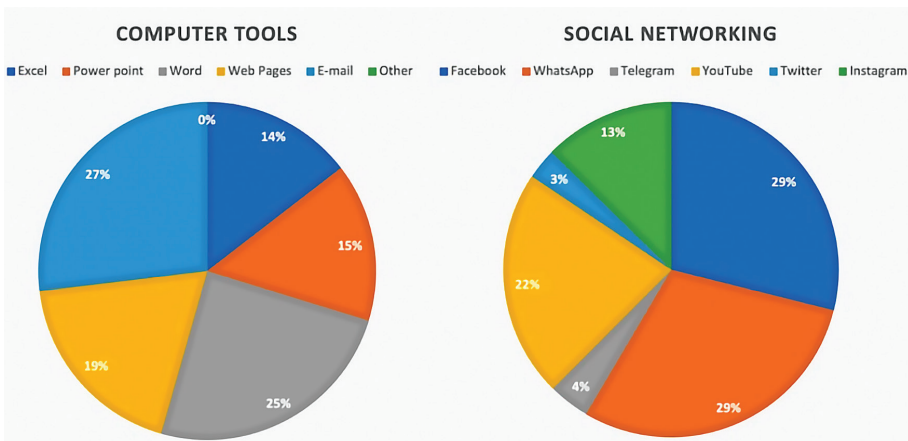


Figure 11. A) Computer tools (left) and B) social networks (right) used by participants.

Finally, it was asked if the artists considered it worthwhile to implement software that registers their participation in the carnival; 98% of the respondents answered yes, and only 2% did the opposite. Among the reasons that justify their answers is greater agility when processing data, ease of access, a more ecological means, and greater clarity in the information. Besides, they serve as tools to support the work, the models in designs, as well as comfort and, to promote activities and entrepreneurship inside and outside the carnival. Finally, it contributes to improving the organization of documents and favors the economy. Among the negative aspects, there are those participants who, needing equipment and access to the Internet or digital media, have to pay for these services, which increases their expenses, and would therefore, prefer to do it manually. Another question regarded the participants' device of preference to access the software; 49% preferred to do it through a cell phone, 45% from a computer, and 6% from a tablet. This ratifies the type of equipment to which they have access and the use of given technological tools, finding that artists prefer to access information through smartphones and rely closely on computer equipment.

4. Discussion

This section explains the theoretical connections with the empirical elements found in the previous section. Participation is the ultimate goal of all processes because it implies and requires a series of procedures that finally determine the conditions in which the artists get approval to be an active part of the CNB, and it is duly registered in the Participation Regulations. However, the carnival as a cultural manifestation goes against everyday norms due to the exaggeration generated by the artistic designs and expressions representing it [14]; paradoxically, the carnival has its own regulations. The contest has rules which determine the processes of registration, accreditation, and descriptive aspects of the different artistic representations of the CNB, as well as the evaluation, scoring, and award criteria used in the carnival. Cooperation between Corpocarnaval and the artists made this article possible and was ratified by the board of directors. In order to comply with the regulations, participants follow a contracting process, which acts as a tool to establish legal conditions between officialdom and the participating artists, who must meet specific requirements expressed in the description of the work (quality criteria and time, among others). In addition, the contract is supported by a compliance policy that guarantees this commitment. However, it should also be considered that participation goes beyond formality and is a commitment to self- or professional liberation as a principle of motivation, desire, taste, and challenge, the primary motivators for both the experienced and the novice artist and other protagonists of the carnival.

According to Avendaño and Eraso [15], as expressed by Bataille and Bajtin, the CNB is something that ruptures the order of society and generates chaos; however, this type of "transgression" introduces a new form of order which imposes its own rules, forms of organization, and times. Therefore, in controlled spaces such as school, the festive component is recognized as a vital act because it generates a break in the daily routine, giving way to a certain freedom based on the celebration. In addition, the carnival places people generally controlled by the rules of the working world and offers them a space of freedom to interact with strangers and with the city. Carnival is playful and, like any game, has its own rules that provide another form of social regulation. The concept of the paradoxical presence of "norm" is reiterated by Bakhtin, M. M., Forcat, J., & Conroy, C.

[16], who consider that “The (medieval) carnival is characterized mainly by the real logic of things such as ‘upside down’ and ‘contradictory’, or the constant permutations of the high and the low (the “wheel”) or, the front and backside, and several forms of parody, inversion, degradation, desecration, coronations, and buffoonish representations.” Thus, it is a clear manifesto for the carnival to grant a license for an “orderly disorder”, an upside-down world that generates freedom for the body’s thoughts and actions.

On the other hand, the policies of the Colombian State have been aligned towards the formalization of the creative and cultural sector since 2019; the government proposed strengthening and formalizing the cultural production sector through the Orange Economy policy, led by the Ministry of Culture in Colombia. This action aimed to expand opportunities through the validation of the cultural sector and artistic production.

In this sense, the following question arises: Why is the highest percentage of CNB participants registered as individuals, in contrast to the trend of formalization of the cultural sector in organizations? In this case, the number of artisans registered as *persona natural* who develop artistic activities in the informal sector is significant. However, this limits the possibility of dignified conditions for the realization of work as creators of the carnival and access to public and private invitations to finance their artistic work. In addition, for some artists’ initiatives, the carnival is a temporary event involving active participation for only two or three months of the year, while for the rest of the year, they have no funding or other resources to sustain their artistic creation to consider it as a constant economic alternative.

Consequently, the fact that most participation is informal, or individual, is related to the fact that some artists consider the carnival to be popular and spontaneous. In relation to the trajectory of the artists in the CNB, although there are conditions that affect sustainability in accessing economic resources, additionally, the contribution made by the carnival administration only covers some months during the year. This demonstrates the existence of another source of resources, which does not refer to monetary funding; this is observed in the fact that the participation of carnival artists has been linked to several editions, despite the difficulty of maintaining a constant financial source. However, there is evidence of increased interest in generating formal organizations visible in the most recent version of the carnival, as in the case of the choreographic collectives, which became formalized as legal organizations, a condition which allows them to explore and mobilize resources in other areas of cultural management.

The next topic addressed in the research was the management of ICH. Undoubtedly, management is the primary action required for the maintenance, safeguarding, and sustainability of events deemed as the intangible cultural heritage of humanity, specifically regarding the CNB. Therefore, there are two perspectives: the first supports the anthropological vision of the carnival as a manifestation and practice of the socio-cultural significance it has for a community; the second corresponds to the discourse of the administration of culture, which emphasizes the value of heritage as a cultural industry. These positions could be considered contradictory due to the tensions generated by the institutionalization of cultural practices; this aspect is raised by Tobar in the relationship existing between marketing and cultural expressions, as in the case of the CNB [17].

The Carnival is considered an event and a traditional practice in San Juan de Pasto and allows us to recognize the principle of pluriversality, identified by Tobar, as a variety of practices with a multiplicity of presences. Thus, it is necessary to recognize the purpose on which this study is based. In this sense, Cejudo [18] identifies several dimensions in the value of ICH, but once they are classified or named as heritage, they enter the field of the cultural industry. Therefore, Cejudo points out that the approach and the

demands on the types of management must have ethical support. He does not deny the presence of control actions resulting from institutionalization processes, but they must come from the internal dynamics of specific cultural practices and not from global requirements. Consequently, the web application does not intend to standardize the requirements for the registration of artists, since each artistic carnival modality has specific requirements to participate in the contest. That is why, in order to acknowledge the CNB's management process as a particularity of the carnival, it was necessary to examine the requirements the artists had to comply with to be able to participate in the contest and how they were addressed; these included the time spent to complete the registration of their proposals, the presence of funding sources and the use of materials that were used to develop their artistic proposals and prototypes. The data we obtained allowed us to confirm that each modality has its specifications in terms of the time required to present the proposals, the efforts to fill out the Corpocarnaval forms, and the preparation and design of the models and prototypes according to their particular characteristics.

Thus, among the actions which require effort and time from artists and artisans, is the transcription of proposals to Corpocarnaval formats. In this step, it was observed in the statistics from the survey data that the most significant use of ICT was in this action, indicating the importance of digital programs in this phase. The design of logos and slideshows is considered to a lesser extent. The objective of the research was to identify which aspects of the management of the CNB may pose a threat or risk to this festival, an aspect that is in line with the interests of the Carnival PES and, consequently, this identification of factors in the participation of *carnavaleros* is an essential input for the construction of the Munay Yachay web application under development. It is a challenge to propose an application to manage all the data, which, on the one hand, facilitates the process and, on the other, decreases outsourcing activities related to project design at the time of responding to a solicitation. It is, therefore, necessary to ensure this type of technology is developed as a strategy to simplify procedures, reduce bureaucracy and prevent the carnival from becoming a business. In relation to this last aspect, there have been some situations of subcontracting by artists and artisans for the design of projects at the time of the contest. Appropriate technology would ensure the implementation of strategies to simplify paperwork, avoid bureaucracy and minimize the promotion of financial services underlying the implementation of information systems, such as the outsourcing process related to the design of projects in responding to a call for proposals.

This means that all those actions performed through ICTs are recognized as part of the evolution of ICH, an aspect that evidences contradictions between keeping traditions alive and innovation through the insertion of technologies. Therefore, it is crucial to review alternatives to present creative proposals based on formats other than project writing; through transmedia, it is possible to contemplate alternative ways to present ideas of artistic creation. Oral and visual stories are closer to artists and artisans. Also, it is necessary to promote strategies, so that the registration process does not involve extra expenses or the need to resort to alternatives, such as the aforementioned subcontracting of services by artists and artisans to meet contest requirements. In the relationship carnival artisans and artists have with ICTs, it was demonstrated that they possess skills in handling mobile devices, such as smartphones, and terminal equipment, such as computers, for personal use. These aspects highlighted interaction with the Internet, making the implementation of software that can be accessed through technological tools a feasible solution to facilitating the various

phases in the organization of the carnival. This is possible through the recognition of the capacity of individuals for self-learning or guided learning on technological tools, which justifies the viability of developing the application to support the processes of participation and knowledge in the CNB. The participants' disposition and skills are proportionally related to the level of connectivity of the study sample, because it is the starting point to develop a software tool, which generates positive effects regarding the registration and participation processes in the contest, and is also agile and transparent in its evaluation, providing an essential value in the intrinsic logistical-administrative activities of the CNB. In addition, the 2021 virtual version of the CNB demonstrated, to a certain extent, the contributions and benefits of ICTs. During this period, when live events were limited, some artists displayed or performed their work through videos and other digital media, enabling viewers to enjoy the carnival through the use of ICTs.

5. Conclusion

The CNB is a multiversal manifestation in which considerable knowledge converges, but it also diverges according to the interests of different professions and fields of science. Therefore, this study acknowledges that information management can act as a support to safeguard ICH. This perspective does not dilute the contradictions and tensions that sustain this event since they are considered to be part of the same festival. Any interaction with the participants of the carnival must take into account these particularities in relation to the times, dimensions in space, designs of the artistic proposals, and the efforts that entail presenting ideas through models and prototypes.

This research mentions some aspects, such as modernization, information management, and data administration, which are considered fundamental instruments to propose a web application. Therefore, the Munay Yachay tool aims to manage information about intangible cultural heritage, starting from the consultation of participants and guaranteeing ethical conditions in its development, in the management of information and the systematization of historical data related to the carnival; it will be easily accessible and made available on technological platforms at the service of management based on inclusive and transparent democratic principles.

Almost all CNB artists recognize the usefulness of ICT because they have the knowledge and the disposition to learn; these are all elements that allow participants to recognize and handle these technologies easily. Finally, it was demonstrated that software to support registration and participation processes in the CNB is necessary. In addition, accessing carnival statistics for academic studies and for creating public policies is an essential contribution to enhancing the future of ICH. In summary, it is possible to recognize that the information systems will allow for consolidation and facilitate the management of data related to each edition of the ICT-mediated *Carnaval de Negros y Blancos*.

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Biographical notes

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Summary

The Black and White Carnival in Pasto (Carnaval de Negros y Blancos) is a cultural event that is deemed Intangible Cultural Heritage by UNESCO (2009). It takes place the first week of January every year in southern Colombia. In this event, artists and artisans display their creativity and compete in six different modalities: individual costume, troupe, band of street musicians, choreographic collective, non-motorized float, and emblematic motorized float. In each edition of the carnival, there is an accreditation process that grants official permission to compete and be part of this event from an artistic viewpoint. There are three stages: registration, accreditation, and participa-

tion, which are addressed to relate the factors that affect each phase and determine the options to participate in the CNB. For this reason, the data obtained for this research are related to variables of registration, management, and the influence of Information and Communication Technologies (ICT), which show the modernization of administrative processes through the implementation of information systems and digital tools. The results presented arise from the systematization of statistical data on determining factors that affect the decisions and actions that artists must undertake, such as adhering to the guidelines and complying with the regulations established by Corpocarnaval. In this phase, valuable information was obtained relating to registering the categories and providing the required documentation; the human and economic resources that were needed; the materials used for the models or prototypes; and the sources of financing, as well as the tools, frequency of use and ICT management skills.

Riassunto

Il Carnevale di Neri e Bianchi di Pasto (Carnaval de Negros y Blancos) è un evento culturale dichiarato Patrimonio Culturale Immateriale dall'UNESCO (2009). Si svolge la prima settimana di gennaio di ogni anno nel sud della Colombia. In questo evento, artisti e artigiani mostrano la loro creatività e competono in sei diverse modalità: costume individuale, troupe, banda di musicisti di strada, collettivo coreografico, carro non motorizzato e l'emblematico carro motorizzato. In ogni edizione del carnevale, c'è un processo di accreditamento che concede il permesso ufficiale di competere e far parte di questo evento dal punto di vista artistico.

Ci sono tre fasi: registrazione, accreditamento e partecipazione, che hanno lo scopo di mettere in relazione i fattori che influenzano ciascuna fase e determinare le opzioni per partecipare al CNB. Per questo motivo, i dati ottenuti per questa ricerca sono relativi a variabili di registrazione, gestione e influenza delle tecnologie dell'informazione e della comunicazione (TIC), che mostrano la modernizzazione dei processi amministrativi attraverso l'implementazione di sistemi informativi e strumenti digitali. I risultati presentati nascono dalla sistemizzazione di dati statistici sui fattori determinanti che influenzano le decisioni e le azioni che gli artisti devono intraprendere, come l'adesione alle linee guida e il rispetto delle regole stabilite dal Corpocarnaval. In questa fase sono state ottenute preziose informazioni relative all'iscrizione delle categorie e alla fornitura della documentazione richiesta; le risorse umane ed economiche necessarie; i materiali utilizzati per i modelli o prototipi; e le fonti di finanziamento, nonché gli strumenti, la frequenza di utilizzo e le capacità di gestione delle ICT.