

ORIGINAL

Prototype design based on solutions provided by the artisans of the Ñawpa Pacha Association

Diseño de prototipo con base en soluciones brindadas por los artesanos de la Asociación Ñawpa Pacha

Martha Lida Solarte Solarte¹  , Claudia Magali Solarte Solarte²  , Martha Lisseth Montenegro Martínez³  

¹Corporación Universitaria Minuto de Dios-UNIMINUTO, Programa Administración Financiera. San Juan de Pasto. Colombia.

²Universidad CESMAG, Programa Administración de Empresas. San Juan de Pasto. Colombia.

³Corporación Universitaria Minuto de Dios-UNIMINUTO, Programa Administración Financiera. San Juan de Pasto. Colombia.

Cite as: Solarte Solarte ML, Solarte Solarte CM, Montenegro Martínez ML. Prototype design based on solutions provided by the artisans of the Ñawpa Pacha Association. Salud, Ciencia y Tecnología. 2025; 5:1621. <https://doi.org/10.56294/saludcyt20251621>

Submitted: 18-09-2024

Revised: 02-12-2024

Accepted: 03-06-2025

Published: 04-06-2025

Editor: Prof. Dr. William Castillo-González 

Corresponding author: Claudia Magali Solarte Solarte 

ABSTRACT

The research revealed the design process of a prototype of handmade products made with fique by the artisans of the Ñawpa Pacha “Mundo Ancestral” Association of the Yascual Resguardo - Nariño - Colombia. The methodology used was the qualitative approach, type of Participatory Action Research (PAR), as data collection techniques, focus groups, interviews and co-creation workshops were conducted for the development of the prototype and the sample consisted of 25 artisans. The main result of the workshops, according to the analysis of the information, was the decision to present as a final prototype a home line, composed of several elements such as mats, lamps, wall hangings, and individuals, among others, made with fique. The most relevant conclusion was that the community of artisans demonstrated a sense of belonging, willingness, creativity and participation in the workshops and discovered their drawing skills and abilities, contributing to the elaboration of the prototype.

Keywords: Handicraft; Fique; Prototype; Tradition; Mindala; Entrepreneurship.

RESUMEN

La investigación dio a conocer el proceso de diseño de un prototipo de productos elaborados a mano con fique por los artesanos de la Asociación Ñawpa Pacha “Mundo Ancestral” del Resguardo de Yascual - Nariño - Colombia. Como metodología se utilizó el enfoque cualitativo, tipo de investigación Acción Participativa (IAP), como técnicas de recolección de información se realizaron grupos focales, entrevista y talleres de co-creación para la elaboración del prototipo y la muestra estuvo conformada por 25 artesanos. Como principal resultado de los talleres de acuerdo al análisis de la información, se obtuvo la decisión de presentar como prototipo final una línea hogar, compuesta de varios elementos como materas, lámparas, colgantes de pared, individuales, entre otros elaborados con fique. La conclusión más relevante fue que la comunidad de artesanos, demostró sentido de pertenencia, disposición, creatividad y participación en los talleres realizados y se descubrieron las habilidades y destrezas para el dibujo contribuyendo a la elaboración del prototipo.

Palabras clave: Artesanía; Fique; Prototipo; Tradición; Mindala; Emprendimiento.

INTRODUCTION

Modernization processes, new global market trends, and the State's neglect of the countryside have led society to undervalue the potential of agriculture as a source of knowledge, a producer of high-quality goods, and a generator of added value. The Department of Nariño, being a predominantly agricultural territory, has not been immune to this complex situation. Furthermore, agricultural policies promoted by the government have favored large agricultural producers and large processed food companies. Demand for small farmers' products is decreasing, and their marketing conditions are becoming more unfavorable. As a result, farmers are looking to associations as an alternative that benefits the generation of income to support their families.

In the municipality of Túquerres, the association of *fiqueros* of the Yascual indigenous reservation sells fique fiber in areas surrounding their region, mainly in Samaniego and Guaitarilla, however, the price paid by buyers does not compensate for the work they do, which does not allow them to generate sufficient income to support their families, therefore they are currently implementing strategies to diversify their production by generating added value and making use of fique waste to manufacture other products that sell in the market at a better price.

However, this process is primarily carried out by the organization's men, who segregate women into other caregiving tasks and delegate traditional roles to them, relegating them to secondary roles within the organization. This fact reflects the existence of a productivity gap between men and women in the association.

Furthermore, the women of this community possess significant potential, such as their knowledge and skill in weaving fique fiber. However, the products they produce do not meet the technical, design, and quality requirements to position themselves in the market. For this reason, scaling up toward production diversification is a *sine qua non* for these women to achieve better economic results from the sale of their handicrafts and foster their economic empowerment.

In this sense, the research aims to contribute to the production of handicrafts by developing a prototype that will help identify and design a new line of hand-woven fique-based products that can be marketed in regional, national, and international markets.

Problem statement

The Yascual Indigenous Reserve is part of the Municipality of Túquerres, located in the department of Nariño, north of the municipal capital. It is the largest territory in the municipality. It is located in the district of Yascual and its center of action is in 35 villages in the municipality of Túquerres with a population according to the 2019 census of 6 127 people, of which 51 % are female and 49 % male.⁽¹⁾

Fique producing associations require greater efficiency and effectiveness in the development of handicraft production processes. This is carried out through eight fundamental steps that go from cultivation to obtaining a finished product. The steps are: fique cultivation, process with defibering machine, natural fique fiber washed and laid out, artisanal packaging, fiber combing, fique spinning, weaving on a horizontal loom.⁽²⁾

Between 1970 and 1974, the government allowed synthetic fibers from the United States and jute packaging from India into the domestic market. These imports deteriorated the economy and the well-being of a large number of families who relied on fique farming. The only alternative to this crisis was to return to traditional subsistence products. However, the processes of modernization and globalization, combined with the state's abandonment of the countryside, have prevented these products from generating substantial income. Farmers cannot find anyone to buy their crops at fair prices, and many of these products cannot compete with those imported from abroad, making the industry increasingly fragile and less profitable.

However, new consumer trends are pushing companies to make changes to their products and processes. One of the most influential trends is the growth of consumer environmental awareness, which generates a series of expectations and demands, demanding products and processes that do not negatively impact the environment.

Within these processes, packaging is very important, as in addition to protecting the product from damage and prolonging its shelf life, it must not pollute the environment. This need has led to the emergence of natural packaging, rather than the consumption of synthetic products. This market opportunity, coupled with the culture of knowledge passed down from the ancestors of farmers in traditional fique-growing areas like Yascual-Túquerres, is motivating farmers to return to farming to preserve and take advantage of its benefits.

It has been detected that women possess traditional knowledge related to hand-weaving fique thread, which they have been leveraging to create handcrafted products such as bags, which are made on a daily basis, in their private spaces where they normally work. However, these products lack the design and quality characteristics that would position them in the market and generate high incomes for these women. There is a need to develop productive skills related to the production of handcrafted products that are more attractive to buyers, enabling them to earn higher incomes that foster their economic empowerment and contribute to greater ownership of their rights.

Literature review

According to the bibliographic review, it is determined that for the research it is necessary to take into

account mainly the following references:

The Ministry of Agriculture and Rural Development carried out a study in 2021 on the fique agro-industrialization chain in Colombia. In the characterization chapter, it determines that fique producer associations are venturing into the transformation of the crop, and that among the products offered in the chain are sacks, ropes, agro-blankets, handicrafts and derived by-products. It also notes that there are 10 producing departments in the country and the most representative is Nariño with 45% of the total national planted area.

The document also mentions some advances that have been implemented in the department of Nariño regarding fique. In the municipality of Tambo, support has been provided for the implementation of defibering equipment to separate juice, bagasse, and fiber, taking advantage of 98 % of the biomass and generating added value in the transformation process. In addition, through Agrosavia, support is provided for the construction of a prototype machine that separates juice, fiber, and bagasse from fique, and preliminary operating tests and adjustments are being carried out for each module. This is important for the present research because there are already some references in the region that can guide the activity.

On the other hand, Rendón et al.⁽³⁾ published their research “The industrial potential of fique cultivated in Colombia” where they point out that the fique plant (*Furcraea* sp.) is a native plant of the Andean region with a great capacity to adapt to different environmental conditions, of which only 4 % of the plant is used to develop natural fibers. The comprehensive use of fique and its by-products represents a source of opportunities for the industry and can play an important role in achieving sustainable development. The available literature suggests that fique fiber, juice and bagasse could boost sectors such as agriculture, construction, pharmaceutical industry, energy generation and development of environmental solutions, among others. This review article could help researchers understand the fique production system, present research experiences and analyze the potential of recent developments for the industry.

Specifically regarding handicraft work, Olarte⁽⁴⁾ in his research work, points out that in the department of Cesar, the district of La Mina, located in the foothills of the Sierra Nevada de Santa Marta, there are artisan workshops in the trade of fique weaving, where over time they have managed to strengthen their knowledge of the weaving that was inherited from their ancestors. The community obtains raw materials from small farmers, and their artisans are in charge of transforming the raw material, dyeing, weaving and marketing their products. Their main product is the Kankuama backpack, and in a secondary role, hammocks and beach bags. The community has been served by Artesanías de Colombia in several years, which has allowed them to strengthen the trade, participate and sell in different fairs and business meetings.

In turn, Vidal et al. ⁽⁵⁾ point out that artisanal weaving represents one of the most important and interesting branches of culture to study in Latin American communities. Weaving, beyond the art of weaving, is a cultural, symbolic, and even popular resistance practice, through which communities can capture and transmit great knowledge and wisdom that have been stored in the memory of the people. Weaving has historically been an “other form” of expression for communities (artistic and technical) that engages in a responsible dialogue with the territory and its resources (contributes to local development), builds identity (sense of belonging), transcends the constructed (artisan object), and allows (the artisan), through his or her production (poetic act), to take part in the construction of the social fabric (community).

These are the principles that make it possible to raise the relevance not only of their knowledge and study, but also of their preservation as a cultural and ancestral manifestation. Textiles become a historical device that reflects the continuous social and cultural changes and advancements of a territory. Each of the elements that comprise the textile and with which they were made (inspirations, materials, tools) represent trades, knowledge, and manifestations of a culture that are understood as a message through iconic codes and as a legacy for the future inhabitants of their territories. Through them, “it is possible to establish that, based on the ways in which people remember and forget, we can trace both the traces and signs of their identity.”

⁽⁶⁾ stands out in the research entitled “Weaving Arhuaca backpacks, a form of indigenous resistance and female empowerment” in which it is described that through ancestral knowledge, Arhuaca women develop fique fabrics such as backpacks, this knowledge is transmitted to their daughters who learn from the age of 5 and is perfected over the years, when weaving the backpacks each woman expresses her feelings, the fique woven backpack is exclusively for transporting heavy products. As a result of this research, it is obtained that their bags have been purchased for marketing abroad, reaching up to three times the initial price, in the pandemic they were affected by this situation, selling their products for between 50 and 60 thousand pesos.

On the other hand, interesting projects are found in other communities, as explained by Vasquez ⁽⁷⁾ in his research “From the desert to the pixel: An investigation into the transformations that the Wayuu backpack has had since its entry into the globalized market”, it is described that the Wayuu population has woven significant advances in the elaboration of bags, going from making bags with diamond figures to capturing figures of characters on their backpacks, being more striking, their culture is developed through their fabrics, which allows them to capture their ideas and thoughts, as well as they affirm that weaving is the way to face life and thus they can channel their emotions. The creations of Wayuu backpacks have had to adapt to the global

market, for which they adjusted their designs to Western culture, the backpack has an important level in the market, it is marketed to all parts of the world.

Otherwise, Ferro⁽⁸⁾ points out that crafts correspond to the set of knowledge that has been inherited and responds to the needs of communities, it is a symbolic support for customs, beliefs and rituals, it is a way of life, in addition this author states that crafts share the principles of Sumak Kawsay or Good Living, and that it covers several dimensions transversally, it focuses on the economic development of small productive cells, promotes forms of social organization based on association and cooperativism, allows the integral improvement of communities, is based on concepts of equity, that is, the change from vertical to horizontal structures, crafts, due to their production rate, are in accordance with ecological systems that, by not having industrial processes, are in harmony with Mother Earth and move away from anthropocentrism and work on the principles of respect for nature, in addition to its symbolic nature, it becomes basic to the concepts of identity, considering the valuation of knowledge and traditions; the care of intangible heritage; artistic manifestations; the establishment of philosophical bases; the recognition of diversity and multiculturalism that allow for strengthening identity values.

METHOD

The research approach is qualitative, as the project is related to understanding and intervening in the reality in which people and their communities live, which requires a thorough understanding of the context. This method also allows for capturing the deeper meanings of the communities or social groups involved in the research.

Likewise, the qualitative approach rejects the rational pretension of merely quantifying human reality; instead, it gives importance to the context, function, and meaning of human actions. It values reality as it is experienced and perceived, with the ideas, feelings, and motivations of its actors.

Teleologically, qualitative research transcends data collection, discovery of facts, and analysis of phenomena, emphasizing their interpretation in a constant search for actions that lead to the transformation of reality within a specific historical context.

The type of research is Participatory Action Research (PAR), as it allows for the development of research in small or medium-sized groups with the active participation of their members, based on the belief that people are the ones who construct the reality in which they live. The relationship between the researcher and the community is horizontal and dialogic. Community members are not simply recipients, addressees, or beneficiaries, but rather recognize themselves as producers of knowledge, thereby facilitating collaborative work across different areas of knowledge.

The subject of research are 25 artisans who make up the Ñawpa Pacha Association “Mundo Ancestral” of the Yascual Reservation - Nariño - Colombia, who are dedicated to the production of handicrafts in fique.

The following information gathering techniques were used:

- Interview: This involves a direct conversation with the people involved in the project's research, using open-ended questions; it allows for the collection of information and details related to the research process.
- Co-creation workshops: These are a tool designed to enable key stakeholders, along with the design team, to generate a set of potential ideas that respond to the proposed innovation processes. They provide an opportunity to bring together people with different perspectives involved in the activity to jointly participate in the creation of a solution that positively impacts people's lives and the production of handicrafts such as handbags through the development of a prototype.
- Focus group: It is made up of a group of artisans with greater knowledge of the Yascual de Túquerres reservation (25 participants in total) in order to identify the Strengths, Threats, Weaknesses and Opportunities of the artisan community in the territory.

The research was supported by professionals in industrial design and marketing, who provided knowledge and techniques to help meet the objectives regarding the needs and preferences of fique-based crafts.

RESULTS AND DISCUSSION

Below are the results and analysis of the interview with Mr. Antidio Getial Tez, leader of the Fiqueros Association of the Yascual Indigenous Reservation.

On the other hand, the application of Workshop No. 1 is presented. Propotype - Sketching which is distributed in the following stages:

First preliminary stage to the creation of the prototype

At this stage of the project, the planning and development of the prototype began, based on the ancestral knowledge and fique weaving techniques of the indigenous community of Pastos del resguardo de Yascual -

Túquerres - Colombia. To this end, the approach work began, which consisted of making an initial visit to this territory to explore the landscapes, gastronomy, architecture of the region, as well as to identify the traditional identity and culture.

Table 1. Analysis of the interview with Mr. Antidio Getial Tez, Leader of the Fiqueros Association of the Yascul Indigenous Reservation

Question	Answer	Analysis
How many years have the associates been working in crafts?	A group of us decided to form an association in 2016. After the fique growers association was established, we continued and waited the six years it took us to start producing fiber, and we continued.	The association's workers have been producing handicrafts since 2022, after being established in 2016. This means that the artisans and craftspeople are new to making handicrafts in the association, using their knowledge and techniques.
What types of crafts do you make?	The type of crafts we make are bags, all kinds of bags, colorful, natural especially for women, bracelets and espadrilles	The Association makes typical handicrafts, but with traditional artisan techniques, bringing art and culture in its handicrafts, backpacks, bracelets and espadrilles.
Have you received training in making handicrafts?	Yes, we hired, we had to do that ourselves, from here, we hired a lady from Chachagüi called Nora, who is part of an association of artisans and another young man named Juan Carlos Vallejo from here in the municipality of Providencia, also an artisan, they were the restructurers, also by tradition, by passing on knowledge and techniques.	The association, despite being only a few years old, has provided training for its artisans and helped them improve the quality of their crafts and the efficiency of their processes. This training has also been provided by other artisans who help other associations.
Has the association received financial support from any institution to produce handicrafts?	We had a small project presented to the Ministry of Culture, where we received financial support. We were able to benefit from very limited resources.	This association of fiqueros has received small financial support for submitting a project to the Ministry of Culture, which calls for greater recognition and support for artisans and the preservation of cultural identity.
Have you received advice on marketing and selling handicrafts?	That's what we need, someone to help us find someone, a market place in Pasto, we can set up there, that's what we would like.	The association should and wants to have advice from the ministry or the region to gain greater knowledge of marketing and sales.
Have you participated in national and international trade fairs, business meetings, and events?	Yes, we had a fair in Túquerres on August 4, 2024, and some things were sold.	The association's participation in fairs presenting its crafts has occurred, but infrequently, resulting in a low level of recognition of the crafts and the association among the target audience.
What would artisans need to strengthen their activity?	First, we would need a place to meet to make the crafts. That would be like a community property, a community hall. We don't have that, and what we need is a sewing machine, because the crafts can be made with finely shredded fiber, and for that, you need industrial sewing machines.	The request and wishes for the continuous improvement of the association are basic but fundamental things to strengthen the performance and development of the association and production of the same crafts, asking for sewing machines and spaces to share knowledge and work in one place for all artisans.
What are the main obstacles to developing craft activity?	Economic scarcity and the place where we can associate at work, where people can gather in one place and dedicate ourselves to work.	Lack of income and economic hardship are key factors in the sustainability of the culture, roots, and the association itself, allowing the artisans to earn extra income to support their families and their needs.
How do you market handicrafts?	The way we market is very traditional, for example, people in the village crave a craft and buy it from us.	The association implements very traditional marketing methods, for the same reason of lack of knowledge in marketing and lack of technological tools to make itself known and be able to market.
What marketing channels do you think should be implemented?	Yes, we would be willing to implement digital distribution channels like WhatsApp, Facebook, and social media, and make offers through those channels.	Positivity and the desire to implement new marketing tools is a positive factor in reaching different audiences and areas, whether regional or national, and achieving recognition.
What suggestions do you have for improving the visibility of handicrafts in the market?	-The implementation of technology to be visible to others and to be able to sell more and generate income for our association.	The association, seeking to improve and be recognized, wants to implement technological tools to improve visibility and marketing.
What suggestions do you have for increasing the efficiency and productivity of crafts in the association?	The first thing we need is what was announced earlier, what we need is the machinery, and to have professional knowledge of fabrics, the economic issue is the difficulty that we face.	Improving production and marketing efficiency relies on the implementation of machinery, increased knowledge, and economic improvements to enhance the effectiveness of artisans.

Of course, the objective was to meet the artisan community, and the association's leader, Mr. José Antidio Tez Getial, and Mrs. Fidelina Getial, the community representative. The artisans are mostly single women who also engage in other tasks such as raising guinea pigs and chickens, herding cattle and sheep, and raising pigs, among other agricultural tasks such as planting potatoes, onions, and vegetables, in addition to domestic chores.

This initial meeting was important for the research and design team because it fostered empathy with the community. This process yielded results such as the creation of a promotional video for fique crafts. The corporate identity and logo were also redesigned.

It should be noted that the project has been under development previously. Therefore, in previous workshops held in Yascual by the professors, researchers, and students of the financial administration program at the Minuto de Dios University Corporation (Uniminuto), the name Ñawpa Pacha was defined, meaning "Ancestral World," referring to Yascual as the ancestral territory of fique artisans. The braided fique skein was also defined as an icon or brand. In addition, a catalog of products and prices was designed.

The community work developed prior to the prototype is of great value, as it allows for greater progress in the solidity of an innovative sensory plastic product (prototype). This allows for achieving the community's goal of being recognized by Artesanías de Colombia as an artisan community of national and international stature.

In addition, a demonstration and promotional video of the crafts and farming community of Yascual, Colombia, was edited and published on social media, which was added as a QR code on the label cards (figure 1).

On the other hand, we participated in the 2025 Black and White Artisan Carnival in the city of San Juan de Pasto, capital of the department of Nariño (Colombia), which was declared Intangible Cultural Heritage of Humanity by UNESCO in 2009. Therefore, their participation was of great importance and is a result that is part of this first meeting with the community, since at first they did not want to participate under the name of Corpofique, but rather under the name Ñawpa Pacha. However, they agreed to participate, with the addition of the presentation label placed on their products, which shows the identity of the Yascual territory and the creation process through fique craftsmanship (figure 2).

Second stage: Inspirational Fabric Workshop and Prototype Design - Sketching

The difficult access to the territory made it difficult to work continuously, so the work was divided into two days. A schedule was previously designed to organize key items such as schedules, activities, methodologies, materials, leaders, and guests. Once the meeting dates were defined, the project was implemented, keeping in mind that the schedule could be adjusted to accommodate changes and unforeseen events.



Source. ⁽⁹⁾

Figure 1. QR Code - from the Yascual Crafts Promotional Video

The main objective of this workshop was to draw the bases of the prototype to be developed through the inspiration and creativity of the community. Each committed participant developed a proposal; therefore, up to this point, there is uncertainty as to what the final prototype will be. The product is born from the community and not from the designer. In this case, design is a channel or mediator that allows basic tools to be offered so that the artisan can express his talent reflected in the fique crafts.⁽¹¹⁾

Among the basic tools mentioned above that artisans and artists can rediscover is analog drawing, or hand drawing, which is an easy and affordable medium. Using a pencil and paper, you can easily visualize ideas and thoughts, thus organizing and correcting the design of the product you want to make as many times as you want.



Source: Photography⁽¹⁰⁾

Figure 2. Exhibition of Yascual crafts at the Pasto 2025 Artisan Carnival, Corpofique Exhibitor Sonia Cárdenas Gaviria

“The warmth of drawing and the possibility of capturing ideas at any time, surface or place, can only be achieved by the human hand... A hand drawing, or a sketch, captures the designer’s feelings on a surface; it is an easy and quick way to represent ideas.”⁽¹²⁾

In addition to the main objective of this first workshop called Prototype Sketching, essential related activities were added to the project, such as:

- a) Inspirational Knitting Workshop - Day 1
- b) Discussion on ancestral knowledge about weaving in Guanga - Day 1
- c) Mindala - Day 2
- d) Main Workshop Prototype Sketiching - Day 2

Below is a description of how the workshop unfolded.

Inspirational Knitting Workshop - Day 1



Source: Photographs⁽¹⁰⁾

Figure 3. Yascual artisan community building the 2025 Artisan Carnival Inspiration fabric

This workshop, held on February 28th and March 1st, 2025, was the first developed by the community and the research team. The focus of this workshop was to create a mood board or inspiration canvas, compiling and printing photographs taken during the 2025 artisan carnival. This workshop seeks to showcase the creative work of other artisans, thereby fostering feedback, discussion, and dialogue among Yascual artisans around the inspirational fabric (figure 3).

Discussion on Ancestral Knowledge related to Guanga Weaving - Day 1

At this stage, held on the afternoon of February 28, 2025, we had the pleasure of having Professor María Fernanda Chamorro as our guest. We met with her at the artisan carnival. She is an industrial designer from the University of Nariño, holds a Master's degree in Design from the National University of Colombia, and a Specialist in Design Management from Jorge Tadeo Lozano University. She has a special focus on community work through creativity and self-recognition (individual and collective) based on participatory and co-creative dynamics with design methodologies and the positive impact of cultural expressions on social construction.



Source: Photography⁽¹⁰⁾

Figure 4. Discussion on Ancestral Knowledge around guanga weaving led by Professor Mg. María Fernanda Chamorro, Industrial Designer

María Fernanda Chamorro gave a talk on important and relevant topics regarding guanga weaving, which represents more than just a simple fabric, since for decades garments were woven that represented the femininity of indigenous women from the Pastos, empowerment, artistic expression, and the artisan's resilience, highlighting the guanga weaving technique as the very essence of the garment. She comments that weaving was a task carried out entirely by women, and gives as an example the chumbe or sash, which is an essential element in rural work (figure 4).⁽¹³⁾

During the discussion, the tradition bearers expressed that in their childhood and adolescence, their mothers and grandmothers made various products woven in guanga, using both sheep wool and fique thread. However, currently, only one of the tradition bearers knows how to weave in guanga, so from this perspective, there is much to address. It is believed that recovering the guanga represents the greatest act of commitment and awakening as an independent Indigenous people, since the guanga, in addition to being an ancestral technology inherited by the taitas of this region, also represents the sustenance of a peasant household and the empowerment of an artisan.

Mindala - Day 2

This dynamic workshop was held on March 1, 2025, in the morning. The activity was coordinated by Professor María Fernanda Chamorro and the research team. A food mindala was created, with each participant contributing a food item from their garden or chagra. Among the products were corn, beans, broad beans, avocados, yellow potatoes, squash, chilacuanes, arracacha, and others. Yascual handicrafts were also included in the mindala (figure 5). After the mindala was created, a discussion was held about individual and collective recognition through the knowledge imparted about the four elements of the earth, which are essential and vital for forging life. The air present in our breath allows the voice of knowledge to flow. Fire is represented in the warmth of each participant. Humans are 80 % water, like food and the earth; it is the one that provides all the resources available. The land allows for the development of crops for food, medicine, textiles, and other crops. It also represents the effort and hard work of the farmer who brings food and valuable rewards like a good harvest. Therefore, the community recognizes the land as Pachamama, which means Mother Earth.



Source: Photography⁽¹⁰⁾

Figure 5. Mindala designed to include traditional foods and crafts from Yascual - Nariño, Colombia

Main Workshop Prototype Sketching - Day 2

This final stage of the meeting took place on the morning of March 1, 2025. Two working groups were organized with the community to provide feedback on the proposals. The workshop focused on conceiving new product ideas through drawing. Three steps were proposed: a) Seek inspiration from the photographic weaving of the San Juan de Pasto 2025 artisan carnival, which was made available to the community (the net or weave was made by artisan Fidelina Getial, an empirical master of crafts in Figue de Yascual). b) On paper, write the name and visualize the best craft made so far, the techniques used, and any possible changes, adjustments, and redesigns they can imagine, as well as their greatest difficulty in creating the product. c) Conceive and draw a new craft proposal, taking into account its strengths and weaknesses, as well as its ancestral roots (figure 6).



Source: Photographs⁽¹⁰⁾

Figure 6. Collection of photographs of the drawing or sketching process and self-assessment of proposals

This last workshop was a major step forward in obtaining the first prototype outlines. The next activity to be developed by the design team is to analyze and idealize these potential product ideas from different perspectives and, based on these, in addition to all the feedback acquired during the workshops, be able to provide the necessary advice to achieve a solid design proposal.

Workshop 2 - Defining the Prototype

In this phase of the project, developed on April 26, 2025, the goal was to define the prototype proposal that the community and the designer would create. Therefore, this was defined as one of the main and key phases of the project. Cultural elements of the community were identified and characterized in the crafts they are making, such as the combination of rattan weaving techniques, guanga and jigra weaving techniques, natural dyeing with clay and walnut, among other elements. In this way, greater added value is being provided to the crafts of Yascual.

Activity 1 - Workshop on color theory.

Despite the difficult transportation conditions from Tuquerres to Yascual, the workshop began at 11 a.m. A presentation of the agenda was made, outlining the key activities, among which the search for a possible design line stood out.

Color theory was discussed, identifying colors such as primary, secondary, tertiary, warm, cool, analogous, and monochromatic, all present on the chromatic scale (figure 7). This way, we seek to ensure that crafts can find greater harmony in color combinations. In addition, fique dyed with natural colors was identified, which the community itself has discovered, such as: clay-dyed, walnut-dyed, eucalyptus, barra, and black morochillo. In addition, some fique handles were dyed with aniline dyes. One of the difficulties identified in the community was a lack of knowledge about color theory and combinations, even among the most experienced artisans. Therefore, the accompaniment and advice of a professional is encouraged to continue in contact with the artisan community of the Yascual Indigenous Reservation, the majority of whom are 60 % female heads of household, 30 % children and adolescents, and 10 % male heads of household.



Source: Photographs⁽¹⁰⁾

Figure 7. Activity on the chromatic scale

Activity 2 - Definition of prototype

In this development phase, the researcher focuses his efforts on searching, among the deepest recesses of the community's hearts and memories, for the lost identity that represents their region. A search for their traditions, customs, rituals, and beliefs began.

In this way, we delve a little deeper and discover that a simple weaving technique, characteristic of the region's grandmothers, is a women's labor from generations ago, and that at one time it represented the subjugation of an aboriginal people to a new empire, the submission of women to men, who, in addition to household chores, sought support for their families through looms. For its part, this trade was and continues to be for the region a poorly paid job, with long hours, poor sanitation, and no reciprocity from those who take advantage of the humility and fragility of the territory and its inhabitants.

This is how the looms, the balls of dyed fique, the guangas, the laces, and the study and academic spaces that the artisans of Yascual occupy, represent a cry of rebellion and relief, since the community itself affirms that it does not want to leave or lose its customs and has strived to revive its techniques, demonstrating in this second meeting an exponential advance in terms of finishes in a series of crafts that they developed for the

exhibition of a fair that will take place that day in the municipality of Guaitarilla.

All of the above could be said to emerge as a collective expression of the desire to make themselves known as artisans. María Fernanda Chamorro, a professor and master's degree holder in design management, stated after the first workshop she participated in that there is a lack of cultural identity in the Ñawpa Pacha community. And if the people lack identity, their products also lack identity. Therefore, this outcry represents a response to a visible problem.

A complementary activity that provided a deeper understanding of the community's identity captured in the products was the audiovisual reproduction of a film entitled: *Obra viva | Tejido en guanga* (Living Work | Woven in Guanga by Paola Tafur and Hilaria Bomba in Cali).



Source: Photographs⁽¹⁰⁾ Video: <https://www.youtube.com/watch?v=amyBBdQe6g8>

Figure 8. Ñawpa Pacha Association - in the main room of the Yascual indigenous council

Characterizing the prototype

Through the development of the prototyping workshop, it was identified that simple actions such as turning the sewn fabric over allowed for better finishes in the fique stitching, as well as the mixing of fabrics, some in guanga and others in agujeta. Likewise, more advanced sewing patterns were identified than those previously displayed in the first workshop. The hypothesis is that the inspirational loom allowed the community to awaken creativity regarding the type of local crafts exhibited at the 2025 artisan carnival, seeking among these, a space to display their most iconic works in the next exhibition in 2026.

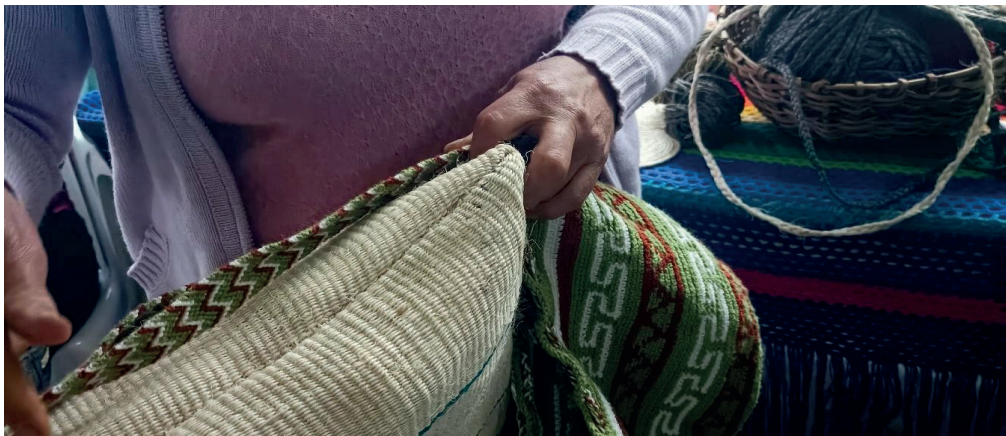


Figure 9. Mrs. Fidelina, master craftswoman, and Danny M. Guachavez, designer, checking out a possible prototype. Backpack bag made of fique, guanga, and lace

At the conclusion of the workshop and in feedback on the community's experiences, and without losing focus on defining the prototype, the community expressed jigra weaving as a generational weaving technique that dates back 221 years or even longer, as people stated that their 96-year-old great-grandparents already knew the jigra weaving technique. Likewise, another substantial value was identified: Mrs. Fidelina stated that she had been a bejuco weaver for 28 years and had been weaving with a needle for four years. She stated that the bejuco is used to create baskets or (Chindes) for agricultural purposes, which are no longer widely used. However, it is a task that has been carried out in Yascual for generations. Furthermore, the encarnajado (woven-in-carnival) or braiding of fique thread has been a tradition that continues with the name of the native people themselves.

With the above, the following parameters were defined for the development of Yascual's flagship product: i) It must be made in Yascual; ii) It must be a mixture of native materials (bejuco and fique); iii) It must contain shades of native natural dyes in order to raise awareness about natural dyes such as walnut and juco and their generational and ecological value.

As a result of the workshop and the analysis of the information, the decision was made to present a home line as a final prototype, composed of various elements such as flower pots, lamps, wall hangings, placemats, and others, taking into account the parameters already established and defined. Consistent with the project, the designer and Ms. Fidelina will develop the final prototype proposal based on the creative sketch that the designer captures on paper, taking into account the parameters and skills of the Yascualeño artisan (figure 10).



Figure 10. Sketching process of the Hearth Line: Bejuco and Fique

Likewise, progress is being made in the search for a possible testing site for the home line, so it's important to analyze and define the line's target audience.

CONCLUSIONS

The artisan community of the Yascual Indigenous Reservation, known as Ñawpa Pacha, demonstrated a sense of belonging, willingness, creativity, and participation among children, youth, and adults in the workshops. Among the highlights were the drawing skills of the children and the most frequent weavers. This is because the act of weaving exercises the hand muscles and improves fine motor skills, depending on the technique, in addition to being a stress-relieving therapy.

The sketches developed by the community are bastions, possessing a strong identity, culture, and ethnic traits unique to their territory. The colors applied to the proposals are the brushstrokes of Yascual through each artist's individual interpretation of their surroundings. Therefore, they deserve the same respect and qualifications as a proposal made by a professional.

The inspirational weaving was well received by the community, who carefully examined the photographs, making their own assessments, observing, and seeking valuable visual information that could enrich their techniques. Collective and introspective dialogue, discussion, debate, and approval or rejection of the artisans' work also took place. This fosters a critical and analytical approach within the community, which can lead to recognition, self-recognition, and maturity as an artisan community.

The workshop on the recovery of the guanga conceived by the leader of the association, Mr. José Antidio Tez Getial, is a great contribution from the sector, since the guanga is an ancestral technology inherited by the taitas of the Pastos inhabitants of the territory of Yascual, this action is one of the greatest expressions of self-recognition and artistic empowerment that the community can project, because through the recovery of this artifact, crafts can be transformed that include mixed sewing techniques among other qualities of the product, but in addition the added value of the technique in guanga and all the cultural nuances that it possesses is added.

REFERENCES

1. Alcaldía municipal de Túquerres. Plan de desarrollo Somos Túquerres para un buen vivir 2020-2023 [Internet]. 2020 [cited 2024 Jun 20]. Available from: https://tuquerresnarino.micolombiadigital.gov.co/sites/tuquerresnarino/content/files/000266/13283_plan-de-desarrollo-tuquerres-2020_compressed-1.pdf

2. Fenalfique. Proceso del Fique en 8 Pasos [Internet]. 2024 [cited 2024 Jun 20]. Available from: <https://fenalfique.com/procesos/>
3. Rendón-Castrillón L, Ramírez-Carmona M, Ocampo-López C, Pinedo-Rangel V, Muñoz-Ruedas MJ, Ríos Cabrera MM, et al. Epistemología de la investigación cualitativa. *Educere*. 2009;13(46):627-35. Available from: <https://www.redalyc.org/pdf/356/35613218008.pdf>
4. Olarte García M. Fique de maguey y el pueblo Kankuamo [Internet]. 2022 [cited 2024 Jun 20]. Available from: https://artesaniasdecolombia.com.co/PortalAC/C_proyectos/fique-de-maguey-y-el-pueblo-kankuamo_15128
5. Vidal Prada E, Vargas Espitia A. El tejido Guane: importancia y propuesta de preservación desde la conjunción entre artesanía, educación y diseño. *La Tadeo DeArte*. 2021;7(8):136-59. doi: <https://10.21789/24223158.1801>
6. Sanabria Devia LC. Tejer mochilas arhuacas una forma de resistencia indígena y empoderamiento femenino [Undergraduate thesis]. Universidad del Rosario; 2023. doi: https://10.48713/10336_39861
7. Vásquez Muñoz S. Del desierto al pixel: Una investigación sobre las transformaciones que ha tenido la mochila Wayúu a partir de su entrada en el mercado globalizado [Internet]. Universidad de los Andes; 2023 [cited 2024 Jun 20]. Available from: <http://hdl.handle.net/1992/69144>
8. Ferro D. Identidad, cultura e innovación en las artesanías: un camino para el desarrollo sustentable y el Buen Vivir. Universidad Andina Simón Bolívar, Ecuador. 2017;1:95-116.
9. Muñoz Guachavez DA. Código QR generado. 2025.
10. Muñoz Guachavez DA. Fotografías. 2025.
11. Muñoz C. Cadena Agroindustrial del Fique. Dirección de Cadenas Agrícolas y Forestales. Ministerio de agricultura y desarrollo rural de Colombia; 2021.
12. Espinoza VP. La importancia del dibujo en la formación del arquitecto: Equilibrio entre el diseño digital y el analógico. In: Congreso de la Sociedad Ibero-americana de Gráfica Digital; 2017; Chile [Internet]. [cited 2024 Jun 20]. Available from: <https://pdf.blucher.com.br/designproceedings/sigradi2017/028.pdf>
13. Danez - diseño. Artesanías en Colombia hechas de fique - fibra natural - en Yascual - Nariño - Colombia 2025 [video]. YouTube; 2025 Jan 03 [cited 2024 Jun 20]. Available from: <https://www.youtube.com/watch?v=Mb1oOnNW-lw>

FINANCING

Minuto de Dios University Corporation-UNIMINUTO and CESMAG University (Colombia)

CONFLICT OF INTEREST

The authors declare that there is no conflict of interest.

AUTHORSHIP CONTRIBUTION

Conceptualization : Claudia Magali Solarte Solarte.
Data curation : Martha Lisseth Montenegro Martínez.
Formal analysis: Claudia Magali Solarte Solarte.
Research: Martha Lida Solarte Solarte.
Methodology : Claudia Magali Solarte Solarte.
Project management : Martha Lida Solarte Solarte.
Supervision: Martha Lida Solarte Solarte.
Validation: Claudia Magali Solarte Solarte.
Visualization: Martha Lisseth Montenegro Martínez.
Writing - original draft: Martha Lisseth Montenegro Martínez.
Writing - review and editing: Martha Lida Solarte Solarte.