Strategies and experiences of the training process for women creators of productive initiatives.

Estrategias y experiencias del proceso de formación de mujeres creadoras de iniciativas productivas.

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RESUMEN

Palabras Clave:
Brecha digital, Género, Mujeres TIC, alianzas estratégicas

En el marco del proyecto de investigación y extensión, financiado por el Fondo Rotatorio de Investigación y Extensión de la Universidad Francisco de Paula Santander (UFPS) cuyo objetivo es fortalecer y desarrollar estrategias de emprendimiento y formación de competencias que permita promover el aprovechamiento de las TIC para el desarrollo integral de la mujer en la en la región, la UFPS y él Vive Digital Lab en alianza con la administración pública local y departamental desarrollaron la implementación de una estrategia interinstitucional, con el fin de consolidar una comunidad de mujeres líderes a través de acciones de formación y apropiación en emprendimiento, innovación y tecnología que se fundamentó en el método de investigación de acción participativa con la colaboración activa de las entidades implicadas en la estrategia, logrando beneficiar a 492 mujeres creadoras de iniciativas productivas para impulsar y transformar sus negocios. Se concluye la necesidad de hacer seguimiento a la transformación digital de las iniciativas productivas beneficiadas e identificar nuevas oportunidades de formación para seguir ampliando las habilidades digitales de esta población de mujeres

ABSTRACT

Keywords:
Digital divide, Gender, ICT Women, strategic alliances

Within the framework of the research and extension project, financed by the Research and Extension Revolving Fund of the Francisco de Paula Santander University (UFPS), entitled "Appropriation of ICT for the integral development of women in the urban area of the municipality of San José de Cúcuta", the UFPS and the Vive Digital Lab, in alliance with the governmental entities, developed the implementation of an inter-institutional strategy, based on the participatory action research method, with the active collaboration of the entities involved in the strategy, which benefited 492 women creators of productive initiatives to promote and transform their businesses. The conclusion is the need to follow up the digital transformation of the productive initiatives benefited and identify new training opportunities to continue expanding the digital skills of this population of women.

1. Introduction

In the digital era, technology, the Internet and the digitization of information have significantly changed the working practices in organizational environments (Sahut et al., 2021; Kasperovica & Lace, 2021; Nwankpa et al., 2021; Sousa & Rocha, 2019; Alfonso, 2010).The development of digital skills is a fundamental pillar to increase productivity in companies (Chetty et al., 2017; Olsson & Bernhard, 2020; Oggero et al., 2020). Although traditionally a practice for large companies, with the rise of cutting-edge technologies and their exponential growth, a very favorable ecosystem has been created for startups that have taken advantage of the opportunities offered by the digital world to scale and grow rapidly (Lahera, 2019; Pérez & Mejía, 2018).

Starting a business idea or creating a productive initiative in an art or craft requires finding a sector and a group of consumers to market the productive project, which requires the study of supply, needs and consumption patterns, in addition to the challenge of the digital world and the new technologies that have been developed on the Internet, to create the positioning of the company in cyberspace and achieve prestige, visibility and trust before customers. In this sense, the role of women is increasingly relevant and allows emerging economies to transform into economies based on technology and knowledge for great social change, mainly in the most vulnerable sectors (Domínguez, 2019; Ayala et al., 2021; Chatterjee & Ramu, 2018; Al-Absy et al., 2020).

In the opinion of the Global Entrepreneurship Monitor (GEM), conducted by an international consortium of researchers to monitor entrepreneurial activity in Colombia, it can be concluded that Colombian women are now more prominent in the activation of the economy, as they are generators of income and employment as entrepreneurs (Ismail et al., 2017).

Moreover, in recent decades, important advances have been made in the evolution of women's empowerment, such as the incorporation of women in the labor market (García et al., 2022; Syed & Ali, 2019; Ballon, 2018; Anderson, 2022; González et al.,2017). According to Giménez (2007), women's empowerment refers to increasing the contribution of the female gender in decision-making processes and access to power, the latter with greater emphasis on the recovery of women's own dignity as persons. In this aspect, it is necessary to develop three stages for women to achieve empowerment, as noted by Kabeer (1999): first an internal empowerment that allows a work of self-knowledge, then empowerment through others for the potentiality of collective action, and finally empowerment to share resources in favor of other people for whom they are valuable. In relation to technologies, there is a moderate degree of empowerment of women and it varies according to age (Rubio & Escofet, 2013; Del Prete, 2013; García, 2022; Abuchar & Cañón, 2019; Del Prete et al., 2013).

Likewise, Castaño (2009) in her study refers to two digital divides, the first one based on access to the Internet and the second one based on the intensity of Internet use, so the author highlights the need not to be limited to the study of the first digital divide, but to go a step further and engage in the analysis of the second (Bohórquez-Aunta et al., 2021; Cruz, et al., 2019; Basco & Garnero, 2020). Thus, the technological infrastructure offers opportunities that depend more on its use and the way it affects the professional development and personal life of women entrepreneurs (Tejero et al., 2021; Pitre & Bolívar, 2019; Slotnisky, 2016).

Furthermore, in Colombia, the Ministry of Information Technologies and Communications (2020) states: "To empower women in the use and appropriation of ICT, which in turn promotes the generation of strategic entrepreneurship. This project aims to enable Colombian women to take advantage of the potential of ICTs to access development, fight poverty, and promote the defense and exercise of their rights".

The city of Cúcuta is no stranger to this situation; the lack of knowledge of technology is reflected in the failure to take advantage of the benefits of ICT to carry

out transformations related to entrepreneurial skills and the work and family conditions necessary to enable the effective empowerment of women in society. For this reason, several interdisciplinary research groups of the UFPS and the Julio Perez Ferrero Educational Institution are interested in formulating a project to promote the development of CTIAM (Science, Technology, Engineering, Arts and Mathematics) skills among women through strategic alliances involving local and departmental governments in the region, secondary and higher education institutions, nonprofit organizations and communities in general, which can help women creators of productive and entrepreneurial projects to develop digital skills through training and appropriation actions in entrepreneurship and innovation to take advantage of them in the transformation and strengthening of their productive initiatives (Gómez, et al. , 2021).

With the projection of strengthening the appropriation of ICT and entrepreneurship, the governmental entities of the region included new technologies as a commitment to productivity and ICT services to ensure the competitiveness and innovation of the industry of Norte de Santander. In the same sense, the Secretary of Women of Norte de Santander seeks to contribute to equal rights and opportunities, to the reduction of discriminatory practices that threaten the economic, social, political and cultural development of women.

Finally, the Universidad Francisco de Paula Santander, within the framework of the institutional research and extension project for the use of ICTs for the integral development of women in the region and the training center specialized in digital content Vive Digital Lab, an initiative of MinTic in Colombia, in strategic alliance with the Governor's Office of the Department of Norte de Santander, Designed and implemented the program with the aim of promoting the use of ICT for the integral development of women in the region, designed and implemented the program with strategies for entrepreneurship and digital skills training for women members of associations linked to the Women's Secretariat of the Department, benefiting 492 women creators of productive initiatives to promote and transform their business ventures by 2020.

2. Materials and Methods.

Women's unequal access to the Internet and digital technologies is a factor in their low participation in the digital society and in the opportunities of the Fourth Industrial Revolution. This problem, called the "Digital Gender Gap", includes the following dimensions: 1) access to the Internet and digital tools, 2) the development of digital skills, and 3) the participation of women and girls in science, technology and innovation (Ramirez & Basto, 2022). Therefore, the gender digital divide contributes to deepening the inequalities faced by women in all sectors of the economy (Conpes 40-80, 2022; Acosta & Pedraza, 2020).

Likewise, a digital divide strategy is defined as a scheme that includes a series of actions or steps to be followed for the development of results and objectives defined through digital means (Cabero & Ruíz-Palmero, 2017; Gil et al., 2012; Zapata et al., 2017). For the project, the strategy contributes to the strengthening of competencies and the development of digital skills in the design and socialization of the content of productive initiatives, based on the use by the beneficiary women of social networks, instant messaging, collaborative tools, blogs and websites. For the development of the strategy of entrepreneurship and training of digital competences in women, the project is based on Participatory Action Research (PAR), which according to one of its most recognized exponents Fals (1985) defines it as

A process that combines scientific research and political action to radically transform social and economic reality and build popular power for the benefit of the exploited. This complex process involves adult education, situation diagnosis, critical analysis, and practice as sources of knowledge to delve into the problems, needs, and dimensions of reality (p.74).

The PAR methodology seeks to contribute to social change and, through research and action, to help individuals and groups address a practical problem in context (Walker, 2018; Hubert et al., 2021; Ratner

et al., 2017; Eisenhart & Allen, 2020).Also according to Park (1992) and Carrera-Hernández et al., (2020), PAR as a research method considers two processes: knowing and acting, taking into account the population under study, with the aim of understanding the needs, capabilities, problems, allowing the development of strategies and actions to improve them. Considering the importance of the strategy formulated as an input for the institutional project "Appropriation of ICTs for the integral development of women in the urban area of the municipality of San José de Cúcuta", and taking into account its basis in participatory action research, the strategy is developed in four phases that cover the two processes of the PAR method: knowing and doing, as shown in Figure 1.
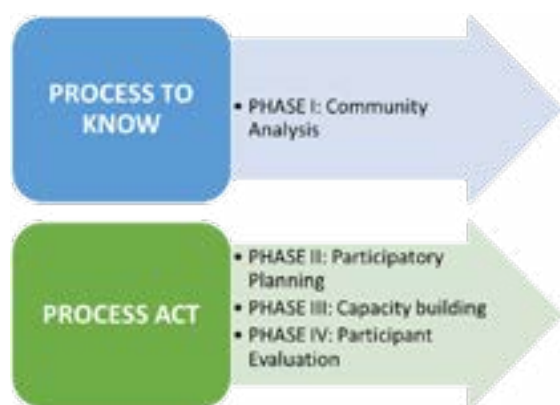

Figure 1. Participatory Action Research Method (PAR)
Source: Own elaboration

In the first phase, called Community Analysis, an analysis of the group of women's associations attached to the Women's Secretariat of Norte de Santander, the first ally of the strategy, is carried out with the aim of understanding the specific needs of women in the different municipalities of Cúcuta and the metropolitan area, They were selected using a non-probabilistic sampling technique by convenience according to their geographical distribution, and qualitative data such as age, class and current occupation, vulnerability, access and use of ICTs were obtained from them through a questionnaire that highlighted their needs and the identification of the following groups of characterized women

● Older adult women, heads of households who seek their financial freedom and economic justice in their households through their productive initiatives or entrepreneurship and who have low prior knowledge in ICT management.

● Women who are migrants who have returned to Colombia in this border area and who belong to a group of people at risk of social exclusion.

● Women from the different communities of Cúcuta and the metropolitan area who are very distant from the technological environment and who do not have productive initiatives, but who want to improve their level of employability.

According to the PAR methodology, in the second phase, called Participatory Planning of the Process to Act, with the results of the initial diagnosis of the first phase, the research groups of the UFPS, the Julio Perez Ferrero Educational Institution and the Vive Digital Lab developed a work plan for the program for the training process called "Digital Strategies for Women Creators of Productive Initiatives". This program is made up of a theoretical component, which was taught in the different class sessions, and another practical component of the knowledge acquired, which corresponds to activities carried out with the computer and technological tools in the public domain, allowing the learning, awareness and application of the tools by the women in their independent work outside the classroom. The training program considers that digital skills are key in the working environment of these productive initiatives and also demanded by the labor market, as Yuni et al. (2003) alludes to the relevant role of training in the processes of adaptation of older people to the changing environments that characterize our reality, giving them confidence and security to interact with other generations.

In the third phase, "Capacity Building", the training program "Digital Strategies for Women Creators of Productive Initiatives" will be carried out at the headquarters of the Punto Vive Digital Lab and with

the human resources of specialized professionals from the Universidad Francisco de Paula Santander, with these resources, planned in the previous phase, two courses have been developed for 25 groups with a maximum of 30 participants per group. This program, initially developed with the call and collaboration of the Departmental Government, was joined by two strategic allies corresponding to non-profit organizations of the municipality: "Fundación Deredez y Mujeres Compromisarias", the first entity to join efforts to promote training strategies and appropriation in entrepreneurship, innovation and technology in women victims of the border and the second entity corresponds to a group of women leaders of Norte de Santander, committed to social action and entrepreneurship.

The women creators of productive initiatives convened by the aforementioned strategic allies were trained in the topics of digital content design, digital marketing, sales strategies with applications such as Whatsapp Business, business transformation in the pandemic and post-pandemic and the use of spreadsheet tools for the financial management of companies. These trainings allowed a group of 492 women leaders of productive initiatives in the municipality of Cúcuta and the metropolitan area to improve their access to the Internet and public domain technological tools for the development of their digital skills.

Similarly, the training strategy carried out allowed the empowerment with ICTs and the need to expand the use of social networks to improve the competitiveness of the businesses of the participating women entrepreneurs.

In the last phase, called participatory evaluation, the trained entrepreneurs socialized and shared their learning in the visibility space: "1st Business Showcase of Women Creators of Productive Initiatives", which sought to promote entrepreneurship and business interest through the presentation of initiatives that evidenced the process of creating and strengthening their productive bets with the knowledge acquired and embodied in the corporate identity and image and the dissemination of their products and services through social networks implemented during the training process and the local media that covered the event.

3. Results and Discussion.

The strategy of entrepreneurship and digital skills training for women creators of productive initiatives, proposed by the UFPS researchers, was approved and launched at the beginning of 2019, for its implementation, the contributions of the different roles of all the actors involved in the development of the strategy are shown in Table I, the compliance activities were carried out in an executive chronogram, with which the follow-up was done during the scheduled time.

Table I. Roles of the actors in the entrepreneurship and digital skills training strategy for women.

Actor	Job Roles
Strategic allies: Government of the Department of Norte de Santander, Fundación Deredez and Mujeres Compromisarias.	Registration process and call for women with registration of productive associations. Course opening and closing (logistics)
Research groups GIDIS, TARGET, GICOM, CHILDREN PROGRAMMING research group	Definition of contents and pedagogical strategy. Monitoring and evaluation process. Process of Application of Instruments of the Project: **"Appropriation of ICT for the integral development of women in the urban area of the municipality of San José de Cúcuta"**. Opening and Closing of the Course (Logistics).
Vive Digital Lab	Contribution of Infrastructure and User Service. Development of the Course with the professionals (Instructors). Report of Approved Hours of the Course, for certification of the enrolled population.

Source: Own elaboration

During the development of the training strategy, the following lessons were learned:

● The content of the training process was modified, taking into account the difficulties that some of the participants had in using the technological tools at the time of the delivery of the different work sessions.

Considering the importance of this aspect, an action of improvement and adaptation was proposed in the work plan of the course, with the inclusion of a "Basic Informatics" module, as shown in Figure 2, which contributes to the leveling of the skills of the participants in the development of the other contents.
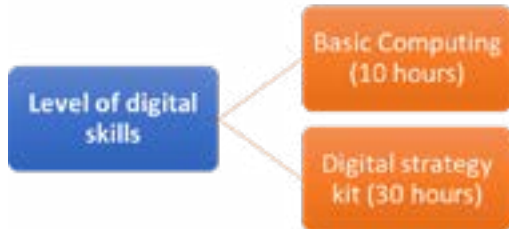

Figure 2. Adjusted phases of training
Source: Own elaboration

● The courses, which initially targeted the population of women belonging to the productive initiatives, expanded the beneficiary population, considering the integration of other members of the participants' families in subsequent editions of the program. In the cases identified, the reason was the low level of knowledge of women in the basic use of ICTs. This decision in the development of the strategy allowed these productive initiatives with this limitation identified early, the appropriation of technological tools to carry out innovative processes in digital marketing, sales and positioning of their corporate image through digital skills acquired by the members of their families.

● The training program "Digital Strategies for Women Creators of Productive Initiatives" fulfilled the purpose of certifying a group of 492 four hundred and ninety-two participants, in the different editions of the training rooms, achieving the implementation of an inter-institutional strategy to consolidate this community of women leaders with the appropriation and significant experiences in entrepreneurship, innovation and technology

to promote and transform their productive initiatives. In addition, it constituted a contribution to the fulfillment of the objectives of the Departmental Development Plan "A Productive North for All 2016-2019" (Laguado, 2016), included in the presentation of the Management Report 2019, in July by the Office of the Governor of the Department. Finally, Table II shows the different indicators of each of the programs or plans of each entity participating in the Strategy, as well as the products achieved:

Table II. Strategic Allies Management Indicators

	PROGRAMS AND/OR PLANS	PERFORMANCE INDICATOR
GOVERNMENT OF THE DEPARTMENT OF NORTE DE SANTANDER	""Departmental Development Plan, A Productive North 2016 - 2019".	1 Agreement signed for Interinstitutional Alliance UFPS, Secretary of Women, Governor's Office NdS
SECRETARY OF WOMEN	"AXIS OF ACTION NO. 3: ENTERPRISING, SELF-SUSTAINING INDEPENDENT WOMEN". ACTION PLAN 2019: 2.10.1.1 Training in Productive and Competitive women. 2.10.1.2 Tics and Productive women.	1,400 potential women from Cúcuta, Patios and Villa Rosario programs.
		Two courses held for 20 groups convened by the Secretariat for Women.
		Visibilization of 5 life experiences of the creators of productive initiatives.
		427 women certified in the Digital Strategies program.
FUNDACIÓN DEREDEZ BORDER VICTIMS	Agreement of wills to join efforts and promote training and appropriation strategies in entrepreneurship, innovation and technology for women victims of the border.	A course held for 2 groups of the Deredez Foundation
		29 women certified in the Digital Strategies program.
MUJERES	Agreement of Wills for the Appropriation of ICT in the group of Women Leaders of Norte de Santander, committed to social action and entrepreneurship.	A course held for 3 groups of the organization "Mujeres Compromisarias".
		36 women certified

	PROGRAMS AND/OR PLANS	PERFORMANCE INDICATOR
RESEARCH GROUPS: GIDIS, GICOM, TARGET AND ROBOTICS GROUP JULISTA	General Objective of the institutional project **"Appropriation of ICTs for the integral development of women in the urban area of the municipality of San José de Cúcuta".**	1 "Digital Strategies" training program carried out.
		(2) Training course curricula implemented
		25 groups formed
		5 digital contents of life experiences produced
		Business Show organized and carried out

Source: Own elaboration

● Another important contribution to the strategy was digital communication to make visible the experiences of the Mujeres que se formaron collective. Through digital stories in image and video format, the stories and ventures of those women of the collective who decided to bet on training in digital media to strengthen their businesses on the Internet were shared through social networks and the project's website and allied entities.

4. Conclussions

The activities developed within the framework of the Interinstitutional Agreement UFPS-GOVERNMENT OF THE NORTHERN DEPARTMENT OF SANTANDER, fulfilled the objective in the development of the Strategy of Entrepreneurship and Training of Digital Skills that allowed promoting the use and appropriation of ICTs for the integral development of a community of women leaders in the urban area of the municipality of San José de Cúcuta.

The training strategy contributed with contributions to the institutional project with the application of the basic instrument to the profiles identified and that were the subject of the project study, managing to determine the degree to which ICTs are used for the integral development of women at home, in their undertakings and productive initiatives in the urban area of the municipality of Cúcuta.

This initiative, based on the signing of the inter-institutional agreement, promotes and consolidates a network of strategic allies made up of public and private entities of the city in favor of economic and gender equity for the women of Cúcuta who are creators of productive initiatives.

The results obtained from the significant experience of women participating in the training program, promotes the appropriation in the use of ICT by Cucuteña women and constituted an input to the fulfillment of the objectives of the Departmental Development Plan a Productive North for All 2016-2019.

The productive initiatives will strengthen their business with the dissemination through social networks and it is necessary in the future to monitor the digital transformation of the productive initiatives benefited and identify new training opportunities to further expand the skills of this group of participants, as well as the development of their businesses, with the digital tools applied.

For the research groups GIDIS, GICOM and TARGET, this product of the training process, is carried out as a research activity, in compliance with the objective outlined in the institutional project called: "Appropriation of ICT for the integral development of women in the urban area of the municipality of San José de Cúcuta".

Finally, the digital content of the life stories in image and video format was the result of the digital communication strategy applied to the group of trained women. This content was focused on making visible the significant experiences of the participating women, their businesses and also serve as references that empower and encourage other women to train, create their businesses and strengthen them with digital tools on the Internet.

In future studies, it is recommended that the partner organizations follow up on the digital transformation of the group of women who benefited from the project

in order to identify new training opportunities and continue to expand the digital skills of this population of women.

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