

## Community of practice and green learning. The case of a Permaculture Art Cooperative

### Comunidad de prácticas y aprendizajes verdes. El caso de una cooperativa de Arte Permacultura

### Comunidade de práticas e aprendizagens verdes. O caso de uma Cooperativa de Permacultura Artística

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#### ABSTRACT

This paper addresses the issue of communities of practice in an art and permaculture cooperative. The contributions of the situated theory of learning, the Social Economy and Permaculture, allowed to think of the cooperatives as spaces of social-community interactions that promote education and learning for the sustainability of life. In this context, the practice, cooperation and participation acquired transcendence for the co-construction of identities and for a shared development of mastery, interests and trajectories. The case study aimed to learn about relevant aspects of learning that contributed to understanding the emergence, development and consolidation of a cooperative understood as a community of practice; interviews were conducted with members of the art and permaculture cooperative "Reciclando Utopías", with its eco-productive headquarters, located in Rio Ceballos, Cordoba, Argentina. The organization develops its activities respecting the characteristics of the natural ecosystem, sustainable design, agriculture and permanent culture. In-depth interviews were conducted with four people who develop services in the cooperative. The analysis of the data made it possible to learn about the forms of participation, aspects related to the emergence and continuity of the cooperative as a community of practices, trajectories, identity and commitment, green learning and cooperativism. In this sense, within the cooperative it was possible to recognize a



diversity of learning trajectories in the cooperation practices and in the process of permanent and continuous green learning of permaculture.

**Keywords:** situated cognition; commitment; identity; participation; trajectories

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## RESUMEN

Este escrito aborda el tema de las comunidades de prácticas en una cooperativa de trabajo artístico y permacultural. Los aportes de la teoría situada del aprendizaje, la Economía Social y la Permacultura, permitieron pensar a las cooperativas como espacios de interacciones sociocomunitarias que promueven la educación y el aprendizaje para la sostenibilidad de la vida. En este contexto, la práctica, la cooperación y participación adquirieron trascendencia para la co-construcción de identidades y para un desarrollo compartido de dominio, intereses y trayectorias. El estudio de caso tuvo como objetivo conocer aspectos relevantes del aprendizaje que contribuían a entender el surgimiento, desarrollo y consolidación de una cooperativa entendida como comunidad de prácticas; se realizaron entrevistas a socios de la cooperativa de arte y permacultura "Reciclando Utopías", con su sede eco productiva, ubicada en Río Ceballos, Córdoba, Argentina. La organización desarrolla sus actividades respetando las características del ecosistema natural, el diseño sustentable, la agricultura y la cultura permanente. Las entrevistas en profundidad se realizaron a cuatro personas que desarrollan servicios en la cooperativa. El análisis de los datos permitió conocer sobre las formas de participación, aspectos relativos al surgimiento y continuidad de la cooperativa como comunidad de prácticas, trayectorias, identidad y compromiso, el aprendizaje verde y del cooperativismo. En este sentido, en el interior de la cooperativa se pudieron reconocer diversidad de trayectorias de aprendizaje en las prácticas de cooperación y en el proceso de aprendizaje verde permanente y continuo de la permacultura.

**Palabras clave:** cognición situada; compromiso; identidad; participación; trayectorias

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## RESUMO

Este documento aborda a questão das comunidades de prática numa cooperativa de arte e Permacultura. As contribuições da teoria situada da aprendizagem, da Economia Social e da Permacultura, permitiram-nos pensar nas cooperativas como espaços de interações sociocomunitárias que promovem a educação e a aprendizagem para a sustentabilidade da vida. Neste contexto, a prática, cooperação e participação adquiriram transcendência para a co-construção de identidades e para um desenvolvimento partilhado do domínio, interesses e trajetórias. O estudo de caso visou conhecer aspectos relevantes da aprendizagem que contribuíssem para compreender o surgimento, desenvolvimento e consolidação de uma cooperativa entendida como uma comunidade de prática; foram realizadas entrevistas a sócios da cooperativa de arte e Permacultura "Reciclando Utopías", com a sua sede eco-productiva localizada em Río Ceballos, Córdoba, Argentina. A organização desenvolve as suas actividades respeitando as características do ecossistema natural, o desenho sustentável, a agricultura e a cultura permanente. Foram realizadas entrevistas em profundidade com quatro pessoas que desenvolvem serviços na cooperativa. A análise dos dados permitiu conhecer as formas de participação, aspectos relacionados com a surgimento e continuidade da cooperativa como comunidade de práticas,

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trajetórias, identidade e compromisso, aprendizagem verde e do cooperativismo. Neste sentido, no seio da cooperativa foi possível reconhecer uma diversidade de trajetórias de aprendizagem nas práticas de cooperação e no processo de aprendizagem verde permanente e contínua da Permacultura.

**Palavras-chave:** cognição situada; compromisso; identidade; participação; trajetórias

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## INTRODUCTION

The present writing deals with the case of an artistic and permacultural cooperative, taking as a unit of analysis the construct of communities of practice in order to understand the relationships, participations and joint actions that its members deploy.

The studies on vegetation, agro-ecological culture, Environmental and Sustainable Education and the various forms of organization such as cooperatives and mutualism have gained attention and relevance in the current context, with practices oriented to cooperative organic agriculture (Suh, 2015) or permaculture in schools (Mukute, 2009), among others.

First, the theoretical referents of this research will be presented. On the one hand, those referring to communities of practice and cooperativism, and on the other hand, the practices of permaculture and learning. Secondly, reference will be made to the method of study, the participants and the materials of collection and analysis. Thirdly, the results of the study are presented, taking into account the narratives of the participants of the cooperative. Fourthly and finally, the discussions and conclusions of this study will be presented.

Next, as far as the theoretical constructs are concerned, in a first moment, reference will be made to cooperativism and communities of practice in relation to the possibility of glimpsing green professional mastery and learning, based on the analysis of the participations that take place in a cooperative that focuses on performing arts, socio-cultural animation and permaculture. And in a second moment, permaculture will be emphasized as a situated and shared practice.

### Community of practice and cooperativism

Although the studies carried out on the subject provide guidance in this respect, the truth is that they are scarce, mainly with regard to communities of practice in contexts linked to cooperatives.

A cooperative is an autonomous association of people, who join together to form a democratic organization as a form of participation that is actively deployed in the practices of social communities and in the construction of identities (Coraggio, 2011).

From INAES (National Institute of Associativism and Social Economy) of Argentina<sup>1</sup>, it is proposed that cooperativism is the expression of diverse associative initiatives that group people with common economic and social needs; the joint action to satisfy

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<sup>1</sup> National Institute of Associativism and Social Economy, Ministry of Social Development. Available at: <http://www.inaes.gov.ar>.

the needs is oriented to the collective good and is based on values of self-responsibility, solidarity, equity, democracy and self-help (Voutto, 2013, cited in Martín, Barrera Calderón and Anunziata, 2018).

Taking into account the international scope, the ILO (International Labor Organization) in 2002 it is made a recommendation number 193 regarding the promotion of cooperatives, encouraging development and cooperative identity (collective identity), based on the cooperative values of self-help, personal responsibility, democracy, equality, equity and solidarity and an ethics based on honesty, transparency, social responsibility and concern for others. It also complies with the cooperative principles developed by the international cooperative movement, referring to voluntary and open membership, economic participation and democratic management by the members, autonomy and independence, education, training and information, cooperation among cooperatives and interest in the general community (OIT, 2002). In turn, the ILO has maintained its support for the international cooperative movement, referring to the obligatory nature of the Education Commissions that should offer their members knowledge that facilitates the fulfillment of their duties and rights, identifying and satisfying training and information needs (García Pedraza et al., 2018).

Studies show the importance of considering the combination of economic, cultural and emotional aspects as factors shaping vegetation management practices, including trees, planting and protection of native vegetation (Gosling & Williams, 2010).

With respect to communities of practice, understood as groups with a common domain or interest, the main contributions are based on the social theory of learning, where the interdisciplinary nature of contributions, which is recognized within them, is one of their main strengths. This theory has a broad consideration of learning understood as social participation. That is, participation not only refers to local events of commitment to certain activities and to certain persons, but also to a process of greater scope consisting of actively participating in the practices of social communities and in building identities in relation to these communities (Wenger, 2001). People seen as social participants focus on a participant who is building his or her meaning of the social world while developing his or her identity. The person is understood as a person of integrity, with relationships and aspirations. From this perspective, learning implies a certain person, a knower in a context that negotiates his or her regime of competence in a community (Wenger, 2010b). In line with the situated theory, García, García and Figueras (2018) understand the cooperatives as participation entities, mainly a multilevel participation.

Within the theory of situated learning, authors such as Collins and Kapur (2014) emphasize that learning at work is characterized by a particular interaction between master and apprentice, in which the expert provides close, personalized and immediate attention to the novice. The acquisition of work skills is achieved through a sequence of activities, where repeated observation of the expert, developing his work, training the apprentice with the necessary scaffolding and practicing tasks, are fundamental. The authors advanced in the study of apprenticeship, distinguishing the particularities of two types of apprenticeships: traditional and professional apprenticeships. The latter emerges in diverse contexts, pursuing a primarily pedagogical objective, which is why experts choose the tasks and problems to be worked on, as well as the techniques to be taught and the skills to be transmitted, plausible to be applied in a variety of situations. Specifically in permaculture, it is considered *the green professional learning*, although it is not a very developed term,

in the area of permaculture, it takes more strength, with emphasis on learning agro-ecological and cultural practices.

Rogoff (2003) proposes a model in which learning is a transformation of the person's participation in a practical or learning activity, shared by a community. From this conception, it is considered that the evidence of learning is the gradual transformation of participation that shows that the person becomes increasingly involved and assumes more responsibility in the activities in which he or she collaborates with others, while showing, in this way, greater mastery and knowledge of the activity in question. In this sense, when the participants manage to get involved in the action, there is an immersion in a social and cultural structure and organization where the activity being learned is relevant for the community.

Wenger (2010a) has an idea that approaches the interest of this research, he refers to communities of practice as a group of people who are involved in a collective learning process, in a shared domain of human activity. However, its definition is broad. Not everything that is considered "community" can become a community of practice, "communities of practice can be conceived of as shared stories of learning" (Wenger, 2001, p. 115) that differ from other communities in three main ways: domain, community and practice (Snyder & Wenger, 2010). Domain refers to a community of practice that has an identity defined by a shared domain of interest (collective identity). Membership of a community implies a commitment to mastery and a shared competence that distinguishes its members from others. With respect to the community, in the pursuit of mastery, members participate in joint activities, help each other and share information, building relationships that allow them to learn from each other. And in terms of practice, a community of practice is nothing more than a community of interests; it can be said that the members of a community of practice are practitioners who develop a shared repertoire of experiences, stories, tools, ways of addressing recurring problems, that is, in a shared practice people can be more or less conscious of themselves (Martin, 2019).

The concept of identity is probably one of the most interesting in the approach and construction of communities of practice and learning; in successive works Wenger (2001) addresses the issue of identity, considers that this, in community, gestures participation, commitment and, in turn, allows to know deeply the community. With regard to identity, Wenger (2001) considers it as a negotiated experience, where people identify themselves by their participation or lack thereof, in a group, as a member of a community, where people understand what is familiar and what is not, as a learning trajectory. In this sense, Martín (2019) adds that an important influence on the development of identity has to do with the places of participation, the materials and experiences with which the person constructs an image of the world and of him or herself, and the ways of influencing the world and making actions important.

Rinaudo (2019) postulates that the penetration of the sociocultural perspectives in the explanations on the construction of identity is explicit in the lines that considered the subject in the Second Handbook of Educational Psychology (Alexander & Winne, 2006) and adds that from the sociocultural approaches it is sustained that the mind, the I of each one and the capacities of agency and, in it, the identity, are not natural gifts but sociocultural acquisitions, that is to say, the people are constituted by their active participation in sociocultural practices.

As for another aspect of the community, commitment to learning is seen as a multidimensional construct that involves behavioral, emotional and cognitive aspects,

understood as a flexible state open to contextual conditions, which can be influenced by interpersonal and contextual characteristics. Committed people demonstrate this not only by attending different places, but also by striving, persisting, self-regulating their behavior towards goals and enjoying challenges and learning. Commitment as a multidimensional construct is interesting because it requires an understanding of the affective connections within the learning context (positive relationships between participants) and the active behavior of each person (attendance and participation in assemblies or meetings, effort, prosocial behavior).

The processes of people's participation and the construction of a collective identity are central to the construction of communities of practice and important conditions for a community of practice to have the potential to grow and strengthen, just as transformative agency goes beyond the individual and situational actions of the here and now, is produced and sustained in collective change efforts and evolves over time (Haapasaari et al., 2016; Sannino et al., 2016).

Within this panorama, communities of practice as dynamic learning entities, focused on social participation, are units of analysis that allow the study of cooperatives as a particular type of community, from their constitutive theoretical dimensions, such as participation, trajectories, collective identity and commitment.

### **Permaculture and learning practices**

Currently, studies on permaculture communities of practice are gaining ground. Ingram, Maye, Kirwanm Curry and Kubinakova (2014); Maye (2018) and Mukute (2009) point out that permaculture is a holistic system of design, based on direct observation of nature, learning from traditional knowledge and the findings of modern science. Understood as an eclectic and adaptive approach, which emphasizes the local, bi-regional and practical perspective, based primarily on observation and experimentation (Ingram et al., 2014).

In a broad sense, permaculture is a global development that is philosophically based and considered a sustainability movement that encompasses a set of ethical principles, design guidelines and techniques to create sustainable environments, permanent culture and ecological agriculture. In fact, permaculture is an agglomeration of these three words: permanent, culture and agriculture. That is, permaculture models its designs for agro-ecosystems, buildings and communities in patterns observed in nature, but perhaps most importantly, permaculture sees humans and their creations and activities as part of the natural world (Ingram et al., 2014).

Permaculture is an approach to designing community and agricultural systems according to principles that mimic ecological systems, which has three main components: underlying ethics, a set of design principles and a set of tools. A central aspect is the design of ecological landscapes that produce food; since the emphasis is on design principles, there is no specific method of food production, although it is often known as agro-ecological agriculture and is commonly associated with perennials, agro-forestry, organic systems, with forest gardening and polycrop and are popular systems. The permaculture approach creates common ground, inspires members to participate and guides their learning (Ingram et al., 2014).

Maye (2018) focuses on permaculture food production, but specifically examines attempts by the permaculture community in England to interact with and influence

conventional agricultural systems. It seeks to observe how permaculture communities of practice have evolved and have been oriented to develop their agroecology and influences on the food regime, creating networks with stakeholders outside the community.

Mukute (2009) comments on how the theory of historical-cultural activity was used to identify and analyze contradictions, model and implement solutions in the learning and practice of permaculture in a school and its community in Zimbabwe. The paper focuses on how contradictions were used as sources of learning and development leading to "real life expansions"; reflecting on the value of interventionist research, with theory and methodology used in the study to enhance participants' agency in sustainable agriculture.

Ingram et al (2014) use the communities of practice framework to explore learning processes among a group of permaculture practitioners in England, specifically examining the balance between core practices and frontier processes. The empirical basis of the article is derived from three workshops and 14 interviews with permaculture practitioners, distributed in England. The research found that permaculture practitioners are linked informally by shared values, experience and passion for permaculture joint venture. In turn, the core practices, such as situated learning, mutual engagement, joint venture and shared repertoire, are strong, allowing for the learning and interaction that takes place with other learning systems. The research provides an interesting critique for further study of permaculture communities of practice, emphasizing the use and value of the theoretical references provided by communities of practice in a new context and offering ideas on how learning takes place in permaculture.

In line with this, Krzywoszynska (2019) argues that social learning is gaining in popularity as a tool for understanding and designing interactions between experts and farming communities to improve the uptake of sustainable products and for the development of innovative agricultural practices. To date, the literature has focused primarily on the technical role that scientists and researchers play in social learning as sources of co-producers of knowledge. Social learning, however, involves a dynamic between creating knowledge that can be done and creating meaning that is considered worth doing. This paper addresses this research gap by exploring the role that expert actors and their narratives play in the creation of meaning. The scientific community thus needs to work with the agricultural community, not only to co-produce technical solutions, but also to share future agricultural visions.

These antecedents and constructs, in incipient development, allow us to deepen and give an epistemic framework to the present study that seeks to know those features of collaborative learning that contribute to understand the emergence, development and consolidation of an art and permaculture cooperative analyzed as a community of practice.

## **MATERIALS AND METHODS**

In this research, the interest in studying communities of practice is based on the idea of bringing together the theory of situated cognition, learning and agro-ecological practices. From these theoretical and methodological frameworks, a change is proposed that moves away from a theory of situated activity, in which learning is

objectified as a type of activity, and towards a theory of social practice in which learning is seen as an aspect of all activity, as a basis for arguments about the relational character of knowledge and learning, about the negotiated character of meaning, and about the committed (problem-oriented) nature of the learning activity of the people involved.

The research presented here is a case study (Stake, 1998); it should be clarified that this type of study is not a sample research, but its primary objective is to understand a particular case. Here the ethnographic case study is an instrument to achieve something different, an understanding of the concrete cooperative, that is, it tries to know relevant aspects of learning that contribute to understanding the emergence, development and consolidation of a cooperative understood as a community of practice. Among the data collection tools, observations and interviews were carried out with members of the artistic and permacultural work cooperative "Reciclando Utopías", with its eco-productive headquarters, located in Río Ceballos, Córdoba, Argentina. The organization, since 2013, develops its activities, respecting the characteristics of the natural ecosystem, agriculture and permanent culture; it is unique in its kind in Argentina and is composed of six members. The organization is dedicated to a variety of productions ranging from a pancake with agro-ecological dulce de leche to a house with permaculture design.

Three types of services are performed:

1. Artistic: with entertainment for parties through murga or painting, in turn, the events are accompanied by proposals for agro-ecological catering services, with the use of the bicycle juicer for natural juices in some cases.
2. Bio-construction: with the construction of permaculture gardens, ecological sanitation advice, workshops for various spaces and open to the public, for example composting workshops, bio-pools and dry toilets.
3. Products for fairs, with premix multi-recipes for cakes and soups, combination of seeds, wholemeal flour and natural sugar, seeds for agro-ecological gardens, reusable and washable bags, made of fabric, for shopping, eco-banks, made of ecological bricks.

The interviews focused on the life history, asking the person to relate the outstanding experiences and the meanings that he or she attributed to those situations, considering topics about the life of each member of the cooperative, their trajectories in the labor and educational environment; that is, their training experiences, their experiences in labor insertion in general and in the cooperative in particular. Four people were interviewed: the president, the treasurer, a member and an external participant who serves in the cooperative and is recognized by the members of the cooperative as a member, although in the formal documents of the organization she does not appear as such. The interviews with the president and the secretary of the cooperative were conducted in their working contexts; the headquarters are located in the Ñu Porá. The member, on the other hand, was interviewed at the Agroecological Fair held every Wednesday in a neighborhood of the city of Córdoba, Argentina. And the external participant of the cooperative, in a museum of the city of Córdoba, where he was studying for his work that is oriented to the realization of audiovisual material for the cooperative and the fairs.

While the observations were made in different activities and meetings of the cooperative, such as the work in the different agro-ecological fairs and activities in the headquarters of the cooperative. Field notes were made during the tour and the



knowledge of the cooperative's headquarters, which is located in a mountain and shows an organization open to the community in a natural environment (Fig. 1).



**Fig. 1** - "Reciclando Utopías" Cooperative Headquarters, Ñu Porá, Córdoba, Argentina

Source: Photograph by Ana Cugini, 2019.

## RESULTS AND DISCUSSION

Among the results, it is important to recover some categories that are typical of communities of practice and that are important to consider and analyze in the construction and strengthening of cooperatives, such as: trajectories of participation, collective identity and commitment. In addition, from the different registers - interviews and observations- categories of analysis emerge with respect to situated learning, with emphasis on green learning and learning about cooperativism.

### Participation trajectories

As for the trajectories and processes of participation of the members of the cooperative, it can be expressed that they are varied, some of them are of beginning; others, of contour like the external non-member participant that gives services and others, trajectories, are more permanent and are developed by the founders of the cooperative, who have more experience on the own domain of the community.

In the speeches, two forms of participation can be analyzed that delineate the diverse trajectories; among them, that of the experts, who created the cooperative, the secretary and the president, who give origin to it from a first work in scenic arts; visualizing themselves as the most knowledgeable of the group. And another form, developed by the newcomers, who progressively enter into the practice.

It is necessary to mention that the trajectory of the beginning of the cooperative -as a whole- was diversified and extended in its domains. Before the origin of the cooperative, there was a process of co-construction by means of artistic services on the part of the founders, who gave a start and continuity to the cooperative project. Below, we share two fragments which, in response to this type of qualitative research focused on narratives, illustrate how the participants experience and narrate their beginnings:

"But well, coming as it does from a lot of work within the area of the artistic that with the E we have labored, we are 22 together and we have labored the scenic art... but from a time to this part when we armed the cooperative that our idea was to arm an artistic cooperative and of recycling. At that time we came here to Rio Ceballos and unwittingly transformed into a permaculture cooperative because just then we get the concept that is permaculture (...) And the coope arises from working as many years as Cuarto Creciente, because we were previously called Cuarto Creciente artistic services. After working for years, years, years, many people told us that they don't work as a civil association, as a foundation, etc... and we said no because it takes too long, and one day we realized that we had been working for 15 years and we said "What if we do it? (...) We began to think about what format we would like (...) That was the point of emphasis that made us think about a cooperative, we also worked a lot on popular education and we began to see it as much more holistic, etc... it closed with our ideals much more what is the logic of cooperativism. And finally when we got into the whole permaculture thing we said wow! we couldn't have chosen a better format than the cooperative because it really is permaculture... or at least it can be". (RU Cooperative Secretary)

"The artistic, the pedagogical, the recreational, we have been profiling ourselves with a search for symmetrical relationships and it is good to know that participatory theatre is good, participatory dance is good, any type of participatory artistic exhibition is good. In the same way, the educational aspect, to be in the loop, to be a criterion of teaching-learning, to teach and learn at the same time. The other has a wealth of knowledge that will enrich everyone. Permaculture talks about cooperation and cooperativism if or if they have to have those same principles, although it is true that not all cooperatives can have them". (RU President Cooperative)

Adding to what was postulated by the secretary and the president, one of the members of the cooperative adds about his trajectory of participation in the cooperative and the different environments or places of contribution and meeting that were generated.

We were in Ríos Ceballos in front of the terminal with a permaculture space -I'm telling you this because it's important, that's when the cooperative was born- we came from the artistic side, from there we started. We do animations of birthdays, events, cultural relations in general, recreation works in schools, in different environments, in private events, in birthdays, artistic make-up. We have made projects from the smallest to the biggest, being twenty or thirty artists or two or one and we are forming from there (...) C -secretary- has been working for many years with this that I tell you, they start with the folk dance in the street (RU Vocal Cooperativa).

On the other hand, the trajectory of the external participant, in relation to some activities of the cooperative, is more contoured, staying on the periphery about some specific activities, but starting with their approaches to the community.

Yes, it can be, sometimes we go to spaces that I propose, generally it is only with M, for the moment the situations that occurred were here in the city and it was not necessary that they all went and if they do not appear events that can be like Peperina, which is a big fair in Alta Gracia that was for Easter as three days and well, we all moved there (...). Proposals are appearing and they decide whether to do it or not, what to take... (External participant, not a member of the RU Cooperative).

In the case of the member, his or her inclusion is fuller, while the external participant acquires experience in the cooperative's own domain as he or she participates gradually and peripherally.

The trajectory of the cooperative, based on the different personalities of its members -six- and non-members, is diversifying, generating and envisioning not only new products such as the Timbo<sup>2</sup> line, which is about to be launched, but also future educational actions.

In the co-construction of individual and collective trajectories of the cooperative, it is interesting how each member recognizes his individual trajectory and visualizes the trajectory as a whole with his own domain and recognizes shared experiences of learning and growth in the community.

The permaculture approach, together with the cooperative as a form of management, creates a terrain that inspires members to participate and guides their learning.

### **Collective identity**

In correspondence with the co-construction of trajectories, another dimension of the communities is found, this is, the collective identity that is developed in the participation in different environments, by means of the design of activities, with the creation of services and the elaboration of products. The following are some narratives shared by participants in the cooperative community:

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<sup>2</sup> Timbo is a line of solid cosmetics, which includes shampoo, deodorants and natural soaps, among others.

"Some people tell us *che* but, they talk to us in plural, because we live in plural and I find it hard not to talk in plural because as much as it is something I did, with my body, the bra and everything that implies, it allows me to suddenly be turning all the material around, garbage for other people. Many people question that we should focus more, dedicate ourselves to just one thing because if we embrace a lot we're going to squeeze a little, and if we don't want to squeeze anything! We want to cover a lot, yes. Actually, yes, what's wrong with wanting to do a lot?" (RU Cooperative Secretary)

"What particularly attracted me was that combination of all the work they bring in the artistic part, of recreation, of play, of knowledge of dynamics. C makes music, E makes poetry, and they make instruments based on recycling. Above all when people go to the workshops, always from everyone who participates is generated as an approach. People end up being relaxed, wanting to come back and taking more than the training they went to take. They know the space and the experience of this sharing as they put it together, with an openness, perhaps with a small round (...) What attracted me most was that, the way of transmitting, receiving and sharing everything that has to do with recycling, that they live it every day so that others can see what it is like to live from there or... to have this relationship with the environment whether it is in the urban area or now more in the mountains, and it is good that people can experience at least what they live every day" (External participant, not a member of the RU Cooperative)

"When this work resounds again, which is Portal Earth and Life, it is a very strong theme related to the same thing, of how garbage is generated and how it can be destroyed or not, permaculture appears as a word and there it seems to be formed in something wider, which was not only being socio-cultural animators, but saying "let's see, we have to generate something, what to generate"; which was a concern of E and C, who are very creative, searchers and always designing track systems and do not stay still. Then, there appears the figure of the cooperative." (RU Cooperative Member)

The tasks carried out in the cooperative generate a collective identity among the members, who recognize each other in the development of their activities. In turn, the identity is projected beyond the cooperative, involving other people who give them recognition.

In the case of the member of the cooperative, the identity of the socio-cultural animator appears to be underlying at the beginning, being distributed and extended to that of the cooperative member, that is to say, that the participant, at the beginning, in relation to the artistic services and his actions identified himself only as an animator in socio-cultural spaces, that with the strengthening of the cooperative as a democratic space and through his participation he began to visualise and identify with the collective of the community and as a member of the cooperative.

An important influence in the development of identity is related to the places of participation, the materials and experiences with which each cooperative member builds an image of the world and of himself or herself and through permaculture as

a tool and cooperativism as a democratic way of influencing the world and making actions important (Wenger, 2001).

### **Commitment**

Commitment in the cooperative refers to those affective connections that represent the relationships and emotion that predominate, which in this case is hope coupled with an attitude of solidarity. Behavior is active in every action of the cooperative, whether it is participation in assemblies or in activities that are generated from the cooperative, such as bio-pool workshops, construction with canes and applied permaculture.

The format of association according to the narratives of its members seemed to be the best form of solidarity and socially participative organization, since both the cooperative and permaculture are lifestyles that aim at collaboration rather than competition.

The shared commitment of the people who make up the cooperative can be seen in the distribution of work and in the assumption of joint responsibilities.

"I don't know if it is delegating, but not as the one who decides... in this, it is as if, within the trust that they have as a group, it makes it work that way, I don't know if it will be a characteristic of everyone, of all the cooperatives, because maybe in good cooperatives there are assemblies or someone in particular makes the decision. (External participant, not a member of the RU Cooperative).

Although the external participant claims to know the cooperative peripherally, assemblies are held annually and the internal communication channels are through instant messaging, mainly because of the distance of the members.

### **Green and participatory learning**

Three basic aspects that are promoted from the cooperative in which the idea of education and learning translated into actions is rooted are:

1. The construction of the headquarters at Cerro de Ñu Porá in Río Ceballos, an environment of continuous learning, a school space, where the premise is "the school is the mountain".
2. The participation in various fairs such as the Environmental Education Fair in Río Ceballos, with various talks, aimed at students from local schools.
3. The possibility of developing content, teaching through the transmission of what is done in the cooperative, teaching how to make eco-bricks, for example, or through the permaculture workshop for daily life.

From the cooperative, mainly, the idea of community is promoted, thinking that all the people are part of this plot, taking responsibility for what each one does in the families, in the works, in the institutions, in the communities, in the towns and in the cities; with the conviction that as community it is possible to relearn and to recover ancestral knowledge in harmony with the nature.

The following is an excerpt from the secretary of the cooperative that narrates the theme of learning.

"From a more informal environment, in fact we want to shape this space as a school of permaculture from a name that is: "the school of the mount", that is the mark. Among things of work in the garden, production of agro-ecological seeds (...) Especially in this practice of not throwing garbage, the impact is very strong when one begins to see the chaos, there is no other way to cross it (...) Much design of practical things for everyday life, simple, no extravagant things or engineering. Permaculture is also about bio-construction and I'm doing bio-construction work, also about natural medicine so I'm telling you that it's the whole life, the whole life with all that it includes; social issues, health, and of course art that goes through everything and is part of our life. (RU Cooperative Secretary).

In the practice of the cooperative, ways prevail that transmit knowledge from member to member, based on the knowledge that the founders of the organisation have and through the incorporation of new members.

García, García and Figueras (2018) propose that the forms can be formal or informal; the former -formal- are those that are carried out through courses, training and master's degrees, mostly carried out by people outside the cooperative. And the informal ones would be those that predominate in the organisation, through workshops and debates that contribute to the development of socio-emotional and specific skills in the members.

To reflect on some points, in this incipient research process, we think it is important to pay attention to what Lave (2002) proposes about social mediation and those people involved, seen as an integrated and situated system where they interact as a vehicle of social and shared thought; in this sense, the learning achievements of the cooperative are built together and are distributed throughout the whole social system.

As can be seen, the "Recycling Utopias" cooperative can be thought of as a community of practice, a set of people who are involved in a process of collective learning and work, having a shared domain of activity, sharing a concern for something and interacting regularly. In other words, giving rise to what Wenger (2001) says, to the generation of a community competence that transcends.

According to studies, the community of practice provides a relevant framework for understanding the learning processes in the group of people who practice the permaculture approach. Members of the cooperative experience shared values, experience and passion for joint enterprise, sharing ideas, solutions and learning collaboratively towards a common goal (Ingram et al., 2014). In this case, the group demonstrates distinctive characteristics of a community of practice, having a legitimate organizing authority -cooperative- around which the community is cohesive; their learning means an act of social participation, with an emphasis on the competence and practice of each subject.

Most of the knowledge is built and circulates within the community; therefore, in accordance with the proposals of García, García and Figueras (2018), the processes of formation, organization and consolidation are very relevant, which must be

accompanied by a process of sensitization, where the principles and values are highlighted, with a democratic co-construction that generates association between the diverse actors linked to the cooperative sector, generating diverse spaces of encounter and dialogue.

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#### **Conflict of interest:**

Authors declare not to have any conflict of interest.

#### **Authors' contribution:**

The authors have participated in the writing of the paper and the analysis of the documents.



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