

## Application of the Cooperative Learning Method in the formation of cooperative members: challenges and perspectives

### Aplicación del Método del Aprendizaje Cooperativo en la formación de cooperativistas: retos y perspectivas

### Aplicação do Método de Aprendizagem Cooperativa na formação de membros da cooperativa: desafios e perspectivas



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#### ABSTRACT

This article recovers the results of an action-research that included the planning, execution and evaluation processes of ten cooperative education courses, aimed at cooperative members of the same number of municipalities in Mexico City. The general objective of the investigation consisted of identifying the contributions that the Cooperative Learning Method can make to the formation of the members of the cooperatives, in their capacity as cooperators, when experiencing relevant changes in their associative life, among which we can mention: leaving individualism behind in order to assume the interest for the common good; practicing principles and values that facilitate the work in a collective and horizontal way; assuming a more solidary, tolerant and committed attitude with their association and the community and, valuing the importance of having a permanent education service for all the members. As part of the results, it is worth mentioning that, during the development of the courses, the participants managed to integrate and organize the diversity of knowledge existing in each of the groups, overcoming the limits of traditional individualistic education, as well as the behaviors and attitudes that prevent learning in a group. At the end of the training experience, it was confirmed that the practice of cooperation is the best tool to learn and train as authentic cooperative members, since it implies exercising inclusion, tolerance and mutual help, making group interests prevail over personal ones.

**Keywords:** learning; cooperative; education; educational model

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## RESUMEN

El presente artículo recupera los resultados de una investigación-acción que comprendió los procesos de planeación, ejecución y evaluación de diez cursos de educación cooperativa, dirigidos a cooperativistas de igual número de Alcaldías de la Ciudad de México. El objetivo general de la investigación consistió en identificar los aportes que el Método del Aprendizaje Cooperativo puede hacer a la formación de los socios de las cooperativas, en su calidad de cooperadores, al experimentar cambios relevantes en su vida asociativa, entre los que pueden mencionarse: el dejar atrás el individualismo para asumir el interés por el bien común; practicar principios y valores que facilitan el trabajo en colectivo y de manera horizontal; asumir una actitud más solidaria, tolerante y comprometida con su asociación y la comunidad y, valorar la importancia de contar con un servicio de educación permanente para todos los asociados. Como parte de los resultados, cabe destacar que, durante el desarrollo de los cursos, los participantes lograron integrar y organizar la diversidad de saberes existentes en cada uno de los grupos, superando los límites de la educación tradicional individualista, así como los comportamientos y actitudes que impiden aprender en colectivo. Al concluir la experiencia formativa, se confirmó que la práctica de la cooperación es la mejor herramienta para aprender y formarse como auténticos cooperativistas, pues ello implica ejercer la inclusión, la tolerancia y la ayuda mutua, haciendo prevalecer los intereses grupales frente a los personales.

**Palabras clave:** aprendizaje; cooperativa; educación; modelo educativo

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## RESUMO

O presente artigo recupera os resultados de uma investigação-ação que incluiu os processos de planejamento, execução e avaliação de dez cursos de educação cooperativa, destinados aos cooperativistas do mesmo número de gabinetes de presidentes de câmara na Cidade do México. O objetivo geral da investigação foi identificar as contribuições que o Método de Aprendizagem Cooperativa pode dar à formação dos membros da cooperativa, na sua qualidade de cooperativistas, quando experimentam mudanças relevantes na sua vida associativa, entre as quais podemos mencionar: deixar o individualismo para trás para assumir um interesse pelo bem comum; praticar princípios e valores que facilitem o trabalho coletivo e horizontal; assumir uma atitude mais solidária, tolerante e empenhada em relação à sua associação e à comunidade; e, valorizar a importância de ter um serviço de educação permanente para todos os membros. Como parte dos resultados, é de notar que, durante o desenvolvimento dos cursos, os participantes conseguiram integrar e organizar a diversidade de conhecimentos existentes em cada um dos grupos, ultrapassando os limites da educação tradicional individualista, bem como os comportamentos e atitudes que impedem a aprendizagem em grupo. No final da experiência de formação, foi confirmado que a prática da cooperação é o melhor instrumento para aprender e formar como autênticos cooperativistas, uma vez que implica o exercício da inclusão, tolerância e ajuda mútua, fazendo prevalecer os interesses do grupo sobre os interesses pessoais.

**Palavras-chave:** aprendizagem; cooperativa; educação; modelo educativo

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## INTRODUCTION

Cooperatives are formed by the free association of people and with the objective of improving the living conditions of their members and their community. For this reason, the cooperative offers cooperative education services to its members, with the purpose of training them as authentic cooperators, which implies, firstly, that they manage to understand the situation of the social, national and world context in which their organization is inscribed; secondly, that they cultivate their spirit, intelligence and convictions derived from the cooperative values so that in this process the personal and social transformation of the collective takes place and they can, thirdly, be proactive at the social level.

As a result, the cooperative must allocate resources and time for this educational work, which is essential for its proper functioning and success. However, a high percentage of Mexican credit unions do not carry out the education process properly with their members. Among the main weaknesses detected are: the lack of a commission specialized in these functions; the use of traditional educational methods; the lack of pedagogical and didactic preparation of the members of the cooperative education commissions; and the scarce budgetary allocation to execute educational tasks.

The fact of not giving cooperative education to the members or offering it in inadequate way, affect the Enterprise management processes since they are carried out apart from cooperative philosophy, making the members do not feel identified with cooperatives because they are far away from the social ends they pursuit. All of the above weakens the cooperative sector as a whole, impeding its progress and diminishing its contribution to the country's economic and social development.

Fortunately, the Cooperative Learning Method (MAC in Spanish), being based on the practice of cooperative values, constitutes an excellent alternative to provide an appropriate education to cooperative members. In fact, what is known today as MAC is the result of around 150 years of contributions from different fields of scientific knowledge such as pedagogy, psychology and sociology, although its most promising enrichment has come from the living experience of the international cooperative movement. According to Pujolàs (2001), its systematization and theoretical and methodological formulation occurred until the last third of the 20th century, when several authors, among which the brothers David and Roger Johnson stand out, as well as their collaborators in the Cooperative Learning Center of the University of Minnesota, managed to put together a theoretical-practical corpus that they called: The Cooperative Learning Method.

According to the MAC, working in small teams allows each member to maximize their learning and that of others, enables direct participation of those involved, and is governed by values such as mutual aid, solidarity, responsibility, and dialogue (Johnson et al., 1999). All this not only facilitates the acquisition of new knowledge, but also its generation and multiplication thanks to the synergy derived from collective work (Pujolàs Maset, 2004).

Furthermore, through cooperative learning, the aim is to manage the heterogeneity of identities, capacities, limits and interests present in every group of students in order to raise the performance of each one of them to the maximum degree of their potential and vocation. To achieve this, self-esteem, friendship, inclusion and group or cooperative work are encouraged. In this order of ideas, to reach a cognitive, psychic and social integral development that manages to educate in values for the collective work, essential in the interdisciplinary labor environment of our days, constitutes the final objective of the MAC (Johnson et al., 2004).

Currently, the MAC is used in the United States, Spain and Argentina at virtually all educational levels. In Canada, it is studied and analyzed, but is still little applied in formal education. In the case of Mexico, it is certainly not very popular in the academic environment, but it is beginning to be popular in the area of the cooperative movement. For example, the Cooperatives Union Tosepan Titataniske, located in the Sierra Nororiental of Puebla, is building its "Tosepan Educational Model" to provide education to its members and their children. This is a model that, although not strictly based on the MAC, does recover some of its theoretical postulates. Similarly, the National Network of Researchers and Educators in Cooperativism and Solidarity Economy (REDCOOP), established in 2009 and present in 18 universities and higher education institutions, located in 10 states of the Republic, has been developing, in recent years, various experiences of application of the MAC, both in the cooperative environment and in the country's universities, one of which is presented in this work.

However, if cooperative education, according to Ferreiro Gravié and Calderón Espino (2009), consists of

cooperatively addressing the same problem or issue; achieving relationship and interdependence between two or more people around an issue (synergy); actively restructuring the content through group participation; being responsible for their learning and that of their fellow group members; learning that everyone is a leader and learning to develop knowledge, skills, attitudes and values as a team.

Therefore, the application of MAC requires a radical change in the roles of teachers and students. To begin with, the teacher must abandon the methods and philosophy of traditional education, understood as that which is based on the assumption that the teacher "possesses" the knowledge and "transmits" it to the students through lectures. The student body remains passive and does not care about the development of activities within the classroom. The courses offer vast information to be memorized, but do not encourage people's ability to make decisions. In this way, the existing social order, with its inequities and hierarchies, is reiterated by encouraging individualism and competition for the best grades in the students. In contrast, with the use of the MAC, teachers, according to Garcia (2018), "we just have to forget about teaching concepts and focus on teaching skills, values and procedures. In other words, they should become from knowledge transmitters to facilitators, guides and mediators of their students' learning (Rodríguez García et al., 2017); while students should be active and participatory. In this way, an exchange is initiated in the teaching-learning process, which allows its two poles to learn, discover and build knowledge in horizontal conditions.

The spatiality of the classroom must also change. The furniture must be mobile, in order to facilitate the integration of work teams. And, in order not to lose visual contact between colleagues during the presentations, it is advisable to arrange the chairs in the shape of a "half-moon".

Likewise, the group should be divided into small heterogeneous subgroups and their coexistence should be governed by five fundamental elements, namely:

- a. Positive Interdependence
- b. Face-to-face promotional interaction
- c. Personal responsibility towards group objectives
- d. Use of interpersonal skills
- e. Processing of group action to increase future efficiency

All of these factors must be clearly perceived by students in an intentional and consistent manner, implemented by teachers (Johnson et al., 1999). The following will show what each of these factors.

Positive interdependence is the backbone of cooperative learning. Relationships among team members are positive if they encourage responsible collaboration in order to achieve the educational goal together. In this way, an environment is promoted in which each student benefits his or her teammates with his or her knowledge, skills, and attitudes, that is, they benefit each other, exercising mutual aid through shared experiences (Johnson et al., 1999).

By making a dual commitment to learning and ensuring that peers learn as well, a situation is promoted in which it becomes customary to put one's skills and knowledge at the service of others in order to achieve a common goal. Each learner has the opportunity to understand that his or her success depends on the success of his or her teammates, as well as to recognize that the part each one plays is necessary and complements the whole. Such a way of working strengthens the sense of belonging and identity with the group, as well as with the purpose pursued by all.

On the other hand, the promotional interaction must take place face to face. This happens when teammates encourage and support each other when collaborating. This factor aims to provide efficient support; facilitate the exchange of resources and data processing; give each individual the necessary feedback to improve, allowing the teams to meet the challenge of drawing their own analytical and organizational conclusions; defend and demand the effort of all in relation to the common goal and implement an environment of confidence in the performance of each member, stimulating him/her proportionally to his/her possibilities (Pujolàs Maset, 2001).

In turn, personal responsibility increases group efficiency, since it refers to something vital: the formation of values in the student to fulfill the activities entrusted to him, thanks to the clarification of the rules for cooperative work. An implicit purpose in the didactics of the cooperative teams is to make each student a person capable of exercising rights and duties. The aim is not simply to do something among several, but rather that each one learns the tasks according to his or her abilities and possibilities, preparing him

or her to carry out similar tasks outside the team, when needed (Pujolàs Maset, 2001). For Azorín (2018), the MAC is based on the idea of reciprocity of effort, which puts the focus not only on individual progress, but also on the collective.

To ensure that everyone collaborates in the group task and no one takes advantage of another's effort, the teacher should evaluate group and individual activities. The latter are those that promote personal responsibility and contribute to the formation of groups based on respect and trust. The most common ways to promote them are to organize small work teams; assign the role of knowledge "checker" to one member of the team, with the instruction to ask the rest to explain the collective reasoning; give oral tests, in a surprising way, to any student to present the work of the team or ask the members of the small group to explain to each other what they learned (Johnson et al., 1999).

Similarly, frequent use of interpersonal skills in small groups is essential. This is because when someone starts learning cooperatively, they usually do so from the modes of action that were instilled in them during their previous formal and informal education, which formed them as individualistic and competitive beings. Therefore, he does not know how to interact positively together, since the old prototypes are deeply rooted in his person. The teacher therefore needs to plan the teaching of skills for solidarity work, persist in instilling them and recognize those who make good use of them (Pujolàs Maset, 2004).

For all of these reasons, interpersonal skills are considered one more content of any course, in the form of attitudinal objectives, which must be clearly explained before each collective activity and reviewed or evaluated at the conclusion of the activity, with the intention of showing students their academic, social, personal and group advantages. In this way, when reinforced with clarity and persistence, they allow each small group to become authentically cooperative since its members, by sharing and communicating their concerns, manage to resolve their conflicts in a creative, constructive and horizontal way (Pujolàs Maset, 2001). Consequently, "for the MAC to be effective, it must be developed in an atmosphere of solidarity and support" (Rodríguez García et al., 2017). This climate of trust, by facilitating dialogue, responsibility in the equitable division of tasks and unification after dissent, motivates the continuation of learning to cooperate.

Finally, constant group processing refers to the fact that the teacher must plan, at the end of some activity or unit, a meeting of the teams to self-evaluate their performance, asking them to identify which social and group skills favored their work, as well as the factors that obstructed it. On this periodic reflection, depends the possibility of progressive improvement of the team performance, because for the students, only by making explicit their successes and failures, it is possible for them to agree on a way to overcome themselves, which educates them in the search for the common good (Pujolàs Maset, 2001). Therefore, it is recommended that, once the behaviors and attitudes that optimize teamwork have been identified, the students establish in writing their commitment to continue practicing them in future activities.

In sum, meeting the five essential elements of the MAC is a sine qua non for the successful application of the method, also known as "learning together". Therefore, it is recommended that educators gradually incorporate it into their classes. Constant practice will allow them to gradually improve and optimize their performance.

As can be seen, the application of cooperative pedagogy requires a greater effort from teachers, compared to traditional pedagogy. This is because, in the capitalist context, learning to cooperate is a delicate task of awareness, both of the student and the educator (Freire, 1985). In this sense, the key is that teachers must know theoretically the benefits of the OMC and be persevering in the face of the apparent ineffectiveness of the first attempts to use it, take up experiences again, and make adaptations to the specific conditions of their students and the social context. The improvements will come little by little, as long as they maintain an experimental, reflexive, dialogical, horizontal and celebratory attitude towards the advances and achievements reached collectively.

In accordance with these MAC postulates, a course was designed called: "Use of the Cooperative Learning Method in the Education of Cooperative Members", aimed at the cooperative environment of Mexico City (CDMX). The course was executed and researched with the objective of identifying the contributions that the Cooperative Learning Method can make to the formation of the members of cooperatives as cooperators, by experiencing relevant changes in their associative life, among which we can mention: leaving individualism behind in order to assume the interest for the common good; practicing principles and values that facilitate work in a collective and horizontal way; assuming a more solidary, tolerant and committed attitude with their association and the community, and valuing the importance of having a permanent education service for all the members.

In relation to the above, the structure of the document was integrated with the following sections. In the first section, the materials and methods used are presented; in the second, dedicated to results and discussion, the process of the course is reviewed, highlighting the attitudinal, organizational, and cognitive results obtained; and finally, in the third section, the scope and limitations of the educational experience are presented.

## **MATERIALS AND METHODS**

In parallel to the use of Participatory Action Research, in each of the four face-to-face sessions of the course, the five basic elements of the MAC, outlined above, were incorporated by carrying out the following activities:

- a. Collective learning of two topics per day, accompanied by different group techniques
- b. Cooperative group play
- c. Group integration technique
- d. Processing or self-evaluation by each of the work teams

In the last session, the technique of "role-playing" was used, which allowed them to develop the learned didactic skills. Within this educational framework, the teacher and the observer were free to speak in order to reinforce knowledge, encourage positive interactions and, in general, interact with the group to get to know its members better.

The instruments used to collect the data that would allow us to capture the process of change in the attitudinal and organizational development of the participants throughout the course were divided into two processes. The first one was constituted by four types of processing of the tasks in the classroom:

- a. Initial diagnostic evaluation
- b. Self-evaluations of work teams regarding their performance
- c. Individual evaluations on the effects of group integration activities, conducted by teachers
- d. The evaluation that each participant made of the teachers at the end of the course. The second one consisted in the creation of a logbook

Thus, through the use of the four evaluation instruments indicated above, it was possible to find out the participants' opinions regarding their group organization and their criticism of the performance of the teaching duo, while it was possible to record some adoption or persistence of values, recognized by them or inferred from their words. In this way, it was possible to generate a wealth of testimonies from the participants, which made it possible to trace the obstacles and opportunities derived from cooperative learning.

The data were processed through the method of based theory, which is used in qualitative research to rescue the voice of the subjects studied, by explaining and conceptualizing certain social processes in which they participate. The theory emerges based on the concrete information and is ordered in concentrating tables and coded for analysis. After that, categories are inferred that are defined in the light of the data obtained, which must be codified at a next "level" that relates them in themes, patterns and theories. The handling of these testimonies was complemented with a review of recent scientific production. Under this understanding, the information provided by the evaluations and self-evaluations was contrasted with the observer's logbook, in order to verify if there was coherence between the acts and the statements of the students.

It should be noted that the logbook instrument is very ductile. It consists of a descriptive record of the events, with the responsibility to comment on:

- a. The problems caused by some process
- b. Support materials that are used or could be used
- c. Possible meanings of the phenomena
- d. The method of analysis or collection of information

In this aspect, the purpose was to build a database on the expressions and attitudes of the participants, anticipating some possible explanations. In practice, the use given to the logbook corresponds to that of an educational ethnography, which is used to investigate the patterns of behavior, beliefs and expectations of those who participate in specific contexts, with their personal interactions.



## RESULTS AND DISCUSSION

The methodology used in the study was that of Participatory Action Research, which does not wait for the processes to be completed to analyze them, nor does it expect researchers to be passive with their environment. The information it provides serves to understand the specific community in which one acts, opening up the possibility of intervening more adequately in it. What was sought was to investigate and act in a cyclical pattern with the aim of solving pedagogical and investigative problems, as these were presented and also as an induced way of making students aware of the coeducation proposed by the MAC.

The research was carried out in parallel with the course "Use of the Cooperative Learning Method in the Education of Cooperative Workers", which was carried out within the framework of the collaboration agreement signed between Chapingo Autonomous University and the Ministry of Labor and Employment Promotion of the Mexico City government, under the coordination of the Directorate of Employment and Training. It was a package of ten courses that were given during the months of September to November 2015, in ten Political Delegations (Álvaro Obregón, Benito Juárez, Coyoacán, Cuauhtémoc, Iztacalco, Iztapalapa, Milpa Alta, Tláhuac, Venustiano Carranza and Xochimilco). Each one of these courses lasted 25 hours, distributed in 20 face to face hours and 5 working hours. The four face-to-face sessions lasted five hours. Each of the courses was coordinated by a teacher with experience in the practice of the MAC and with documented executions in the education of the cooperative sector, which had the support of an observer, responsible for the logbook of the sessions.

On average, the courses were attended by 8 people, 80% of whom were cooperative members and the remaining 20% were people interested in becoming cooperative members; 30 were men and 50 were women; 65% were between three and six decades old, while 17.5% were over 60 and the rest were young people between 20 and 30 years old. Most of the attendees had, on average, a basic educational level and only 20% had university studies. With this diversity of attendees, the ten working groups were formed in such a way that their composition was heterogeneous in terms of interests, origins, gender, ages, schooling and organizational experiences, although most of them were cooperative members interested in learning cooperatively and bringing to their organizations the experiences acquired to contribute to the education of their peers, directly benefiting their cooperative, their families and the community.

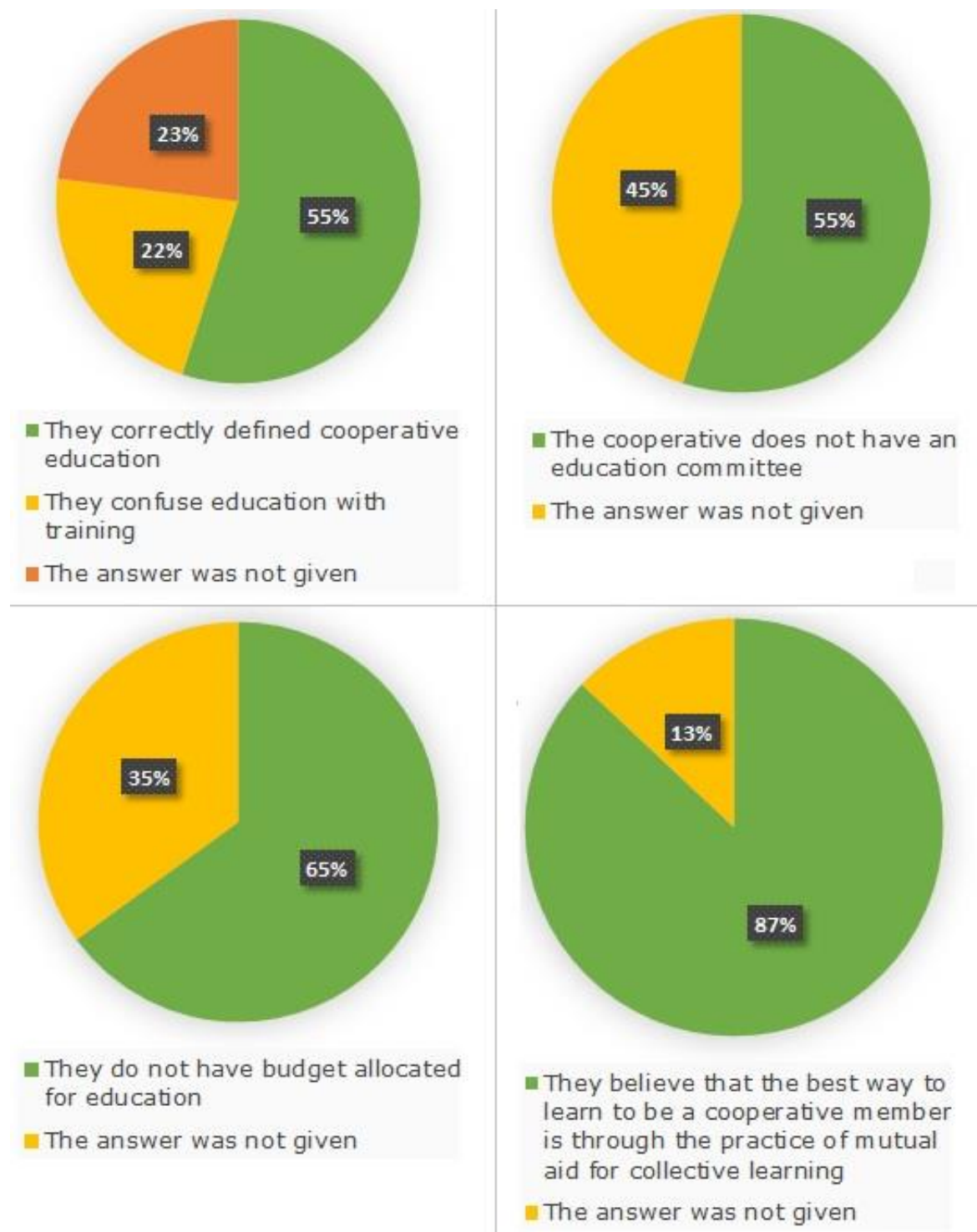
In accordance with the technical requirements of the MAC, before starting the practice of the courses, the teaching group prepared all the required material, that is: the didactic planning of each of the courses, the exams, the structure of the logbook, the self-evaluation or team processing formats, the book of readings, the selection of activities and tasks and the choice of group integration techniques. As Durán and Oller (2017, p. 40) point out:

The role of the teaching staff begins with proactive actions (preparing for cooperation), designing the interaction between team members. Without this structuring of the interaction, through the adjusted use of cooperative learning methods, cooperation would not emerge.

Likewise, according to MAC's pedagogical norms, in the first session of each of the courses, a diagnostic test was carried out on the participants, in order to determine the level of knowledge that they had of the cooperative subject, to identify the degree of attention given to education in their respective cooperatives and to know if the participants had any study method.

The answers given to the diagnostic questionnaire yielded interesting data, where the following stand out: although 55% of the participants consider that education in the cooperatives is a permanent process, 22% of them estimate that it is necessary to train and make the business work efficient, which shows that there is still a conceptual confusion because they do not manage to differentiate between the processes of cooperative education and technical training. In fact, when asked about the difference between the concepts of education and training, only 47% of the participants answered, stating that education is formative in values and knowledge, that it is school-based and universal; while training is a process to improve practice, skills and abilities and is specific to production or management. From the above, it can be inferred that the rest, 53%, have no clarity about the concepts or there is confusion, so they did not answer. In addition, it was found that only 35% of the course attendees knew that the fifth principle of universal cooperativism is that which establishes that cooperative societies must provide their members with education, training and information.

In addition to the above, 55% of the attendees stated that in their cooperative they do not have an education commission and 65% acknowledged that there is no budget allocated to meet the education needs of the members; from this, it can be inferred that one of the most serious problems of the cooperatives, in the CDMX, is that they do not value the importance of cooperative education as an essential element for the formation of their members as true cooperators. Nevertheless, it is important to recognize that if there is interest among the participants of the courses in learning to be cooperators, it is because 87% of the people examined stated that the best way to do it is through the practice of mutual help for collective learning, as shown in graph 1.



**Graph 1** - Results of the diagnostic questionnaire  
Source: Own elaboration based on the collected data

Regarding previous knowledge of learning methods, half of the students referred to the traditional method, emphasizing that it is oral, behavioral, banking, competitive and theoretical. The other half said they knew of some method of group learning, practical, playful, meaningful in values and only two students claimed to have some notion of MAC. This balanced the groups in terms of openness to accept new collective forms of learning.

Immediately after the application of the diagnostic questionnaire, the general program of the course was framed, with the intention of including the interests of the students and not imposing its contents (Freire, 2009). However, the students arrived with the traditional passive and vertical attitude, so they expressed their immediate consent to the proposal of thematic content offered to them, agreeing on everything, without proposing or objecting to any aspect.

Subsequently, a technique was applied that allowed a group commitment to be reached for the adequate development of the course. Gathered in a general assembly, they were asked to establish the agreements with which they were committed as students, which should be set down in writing and duly signed by each of them. A summary of the agreements made by the ten groups can be expressed as follows:

We commit ourselves to learn, to work cooperatively, to help each other to learn, to be self-critical and to acquire the necessary conscience to transform reality and to be able to achieve independence and the cooperative utopia.

In addition, they expressed that they hoped that the course would provide them with elements to develop their cooperatives based on the values and principles of universal cooperativism and, in a special way, they expressed their commitment to educate their coassociates with the MAC. This commitment revealed that the participants were very committed to their organizations and eager to stick to the cooperative philosophy, being aware that this implied the adoption of a different lifestyle, in which they had to abandon individualism and put the collective welfare first.

Finally, teams were formed at random to ensure heterogeneity in the composition of the work groups, which facilitates interaction and feedback on the contributions and expression of different points of view.

In the four face-to-face sessions, the following activities were carried out:

- a. Collective learning of two topics per day, accompanied by different group techniques
- b. Cooperative group play
- c. Group integration technique
- d. Processing or self-evaluation by each of the work teams

In the following paragraphs, the results obtained in each of the four working days of the ten courses are detailed and, at the end, the results of the group evaluation carried out by the participants are presented. The narration will be accompanied by information provided by the students and some extracts from the logbook.

During the first session, the participants were surprised by the way the work was done, since they had very much internalized the traditional educational processes in which the teacher exposes and the students listen passively. When they were asked to be active and to try to learn and get all the members of their team to also assimilate the topics discussed, they did not know how to proceed and some of them reproduced old negative behaviors such as protagonism, imposition and verticality, as was noted in the Iztacalco logbook:

Perhaps, because they were not used to this kind of dynamics, they all took a while to react and get together and get down to business. One participant showed a lot of commitment, but badly channeled, monopolizing the word, diverting the conversation and monopolizing the organization.

Fortunately, others did see the opportunity to learn and tried to follow the instructions, practice the suggested roles, and begin the journey of collective learning. Thus, the thematic activities of this day can be "summarized in a good spontaneous organization, a lot of dialogue and related attitudes or at least not hindering the solidarity cooperation".

The cooperative game, which is usually carried out with the aim of giving a playful stamp to the learning process and to reinforce the integration and practice of the cooperative values of solidarity, mutual aid and responsibility, requires for its correct execution the collaboration of all the participants of the course; it was evaluated in Tláhuac in the following way: "the rewarding thing, when collaborating and contributing in a collective work, is that everybody contributes with different resources".

After the cooperative game, an integration technique was carried out with the intention of helping the students to break with old behaviors that are contrary to cooperation and to facilitate the processes of unity, acceptance, tolerance and inclusion of all, in order to voluntarily contribute their personal capacities and abilities for the development and collective learning. At the end of this activity, a self-evaluation process was carried out, where the students answered what provoked a lot of interest in them by deciphering the others and, at the same time, making themselves known in front of the group. For more than one, it was emotional to have to reveal their personality. At the end, the overall reaction of the participants was as expected: they recognized that the activity served to integrate the group.

On the second day, during the execution of the conceptual activities, an advance was observed in the level of collaboration of the participants around collective learning, although individualistic and imposing attitudes were still present in some of them; however, this circumstance was used to discuss how to improve. The value of following instructions in the area of teamwork was discussed. The atmosphere of acceptance and understanding created allowed no participant to feel hurt or discriminated against for not having understood something.

The presentations were distinguished by seeking positive interaction with the rest of the group. All of them gave way to relatively deep discussions, with a high participation rate.

For example, in Xochimilco, "a colleague commented that "there is a lack of cooperative education" largely because the cooperatives themselves are not interested in the pretext that there is a lot of work. It is only the second day and this participant is already able to notice the importance of cooperative education. In the same vein, when commenting on what they thought of the dynamic: "one student said that it was not only useful for them to learn conceptual objectives, but also to 'learn to listen to others'". His testimony reflects an attitude that contributes to learning from everyone.

The participation in the cooperative game of this day provided the learners with important lessons to put into practice the cooperative values in order to achieve a common goal; therefore, when evaluating the game in Iztacalco they admitted that "this is the only way to achieve common goals". In Xochimilco they reported that they learned: "to agree, to err and to retry, and to be willing to make sacrifices for the sake of unity". And, in Iztacalco, they indicated that the game allowed them: "to join forces and skills to overcome a challenge together".

Similarly, participation in the second group integration technique brought significant benefits to the participants, as they were pleased to have had to practice here and now cooperative organization with creative demands. Full of satisfaction in Iztacalco, they said that the activity was a challenge: "'being free... there is a crisis'; having to improvise 'in a team... there are different visions' and at least, at the beginning, there is the 'difficulty to determine what to do'; however, despite the improvisation and confusion 'we collaborated to create something'".

In the conceptual learning of the third day, there were important moments of epistemic discussion, with the participation of all the assistants. Perhaps for this reason, when evaluating which attitudes should be practiced to improve collective learning, in Iztacalco they declared themselves to "improve the internal organization of the teams, have clarity of objectives, fulfill cooperative roles and learn by doing".

In this session, the cooperative game was also well received and executed by the participants, who expressed that it gave them a sense of belonging, that they were satisfied for having been inclusive and having participated in a difficult activity, but that by joining forces they were able to do so. In Cuauhtémoc, "They recognized that they were able to verify that many obstacles are only apparent or, at least, solvable if they cooperate in solidarity. Others highlighted the pedagogical importance of this and other games by allowing them to experience values as practical organizational tools, while facilitating group integration.

The activities of the fourth day were focused on the preparation and teaching of a cooperative class by the students, using the technique of "role-playing", in which they would try to use all the knowledge acquired in the course, with the expectation of one day offering similar courses in their organizations. By assuming the role of teachers, in addition to confirming their knowledge, they were able to practice the skills of analysis, criticism, oral and written communication and to strengthen confidence and group identity (Martínez Sala & Alemany Martínez, 2017). For this purpose, they prepared their topic in advance and invited their fellow cooperative members to participate as students so that the class would become an absolutely real experience, which would represent a

challenge when trying to motivate the guests to use the cooperative learning techniques and to make use of the cooperative values.

Contrary to all expectations, the students' presentations, in general, were very good, since they managed to incorporate the basic elements of the MAC and were distinguished by being playful and integrating. Nevertheless, it must be admitted that in some cases certain authoritarian and vertical practices were reproduced, in addition to the understandable nervousness, product of the inexperience of most of the students. At the end, a self-evaluation session was carried out in which teachers and students offered criticism so that the students would improve in future performances. As a result of this assessment, there was consensus in Cuauhtémoc that "their learning in cooperative pedagogy was just beginning and that they would try to take it into their daily lives. Therefore, it was suggested that they form learning communities to promote the practice and dissemination of MAC not only in their cooperatives, but in the entire city's cooperative movement. Furthermore, as Schlemmer Alcántara et al. (2018) point out, these courses encourage a proactive attitude towards action, as they strengthen the motivation for cooperative revitalization.

The day's session concluded by asking students to fill out a general evaluation questionnaire about the course and the teacher's performance. Afterwards, a plenary meeting was held, in which some of the answers were read and analyzed. This evaluation yielded valuable data, of which the following are worth noting:

The 83.75% of the attendees indicated that the course met their expectations, 3.75% said it did not and 12.5% did not answer this question. Among the reasons why the majority stated that their expectations were met, the following are the most important ones reproduced from the participants' answers: "On a conceptual level it exceeded them, all the cooperative members should take this course, since, before the knowledge is theoretical, it is necessary to begin by practicing cooperation and solidarity for the achievement of the objective".

The fact that the course had led to a change in the learning paradigm was expressed in the following words: "to have the opportunity to know a new method with effective and practical mechanisms, which allow to assume a better attitude towards the cooperative problem. Now we have learned to work as a team and in harmony".

The acquired capacity to differentiate the cooperative education from the traditional education, was expressed as follows: "MAC is an interesting and effective method, very different from the traditional methods, because it achieves the integration and the teamwork through the application of values and attitudes that allowed to integrate a cooperative and inclusive group".

A last relevant element, derived from this study, is that most of the participants stated that after having received the MAC course they have been able to appreciate changes in their thoughts and attitudes in relation to other people with whom they live in their daily lives and, especially, with their fellow cooperative members. Thus, 85% stated that they

did experience changes, 2.5% stated that they did not experience changes and 12.5% did not answer this question, as can be seen in graph 2.



**Graph 2** - Results of the final evaluation of the course

Source: Own elaboration based on the collected data

Reaffirming the above, it has been documented that the consequences of the use of MAC, in students, are positive, "by enabling the creation of high-quality relationships between peers and providing basic strategies to develop appropriate interpersonal interactions" (Polo del Río et al., 2017).

Obviously, this set of testimonies reflects the students' feelings at the moment of concluding an experience that was unprecedented for them; however, in order to really fulfill the purposes and aspirations expressed, constancy is required in cooperative education and in the practice of the principles and values that support the philosophy of their organizations. Certainly, a course of 25 hours is too short to expect and check significant changes in the participants. However, this difficulty was compensated for by the fact that they work with an audience that is already sensitized to the practice of economic cooperation and, consequently, eager to improve their organizational practice.

### Scope and limitations of the educational experience

In spite of only having four days, the educational experience outlined here allowed for some of the benefits of the MAC to become evident. The most important one was that most of the students were concerned about transcending the individualistic, competitive, hierarchical and passive attitudes typical of traditional education to start exercising



values such as solidarity, tolerance, dialogue, inclusion, non-violence and mutual help. Obviously, these results are ambivalent, since changing the attitudes formed, in traditional education, requires time, however, it is worth emphasizing that the testimonies of the participants show the potential of MAC to induce such a process of change.

Another evidence of the transformative potential of the MAC is that, despite the short duration of the course, all the groups managed to integrate. Negative attitudes towards cooperation, which some participants expressed on the first day of work, subsided on the following days and criticism became more constructive, leading to increasingly positive interaction among participants. It is likely that these results are due to the cooperative and adult nature of the students, which facilitates their free, autonomous and responsible participation when the conditions are right. Unlike students in the school environment, it was not the qualification that motivated them, but the desire to prepare themselves to better serve their associates.

Within this framework of reflection, the MAC is confirmed as an alternative educational method, based on ethical values that, although it does not completely eradicate selfish outbreaks or boycotts, it does allow freedom, initiative, mutual help and respect to be established as the horizons and limits of educational work.

Another evidence of the transformative potential of MAC is that, thanks to it, the groups managed to put the collective welfare before the individual interest and, in such context, it was clearly perceived that the cooperative work provided efficiency to the interdisciplinary collaboration. Similarly, it was confirmed that sharing knowledge and resources enriches learning, filling it with examples, doubts, nuances and different visions. Therefore, it can be said that training in values is the best investment a cooperative can make in order to optimize the practice of cooperation and mutual aid at all levels of the associative and entrepreneurial life of this type of economic enterprise.

In the immediate future, it is fundamental to multiply the number of experiences of the application of the MAC in the cooperative sector, so that, one day, the representative organizations of the Mexican cooperative movement adopt it as a privileged method in the formation of their partners and leaders. The initial commitment of the students participating in this experience, in the sense of replicating what they have learned in their own cooperatives, can be a good beginning to advance towards greater levels of adoption and popularization of the MAC in the country's cooperative environment. In the medium term, it is expected that the extended use of the MAC will allow to ensure the doctrinal and philosophical education of the members, to reinforce the technical preparation required for the best performance of the entrepreneurial and associative functions and, above all, to trigger innovation as an essential element in the current conditions of the globalized world.

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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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