

PERCEPTION OF TRAINING FOR RECIPIENTS OF THE PROGRAM FOR PRODUCTIVE PROJECTS IN THE STATE OF CHIHUAHUA, 2019-2020

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ABSTRACT

The demands of the present world require for those who establish businesses and organizations to have the skills that allow them to achieve a better performance in their spheres of action, and this is attained through training. As part of the program for productive projects of the period 2019 to 2020 in the state of Chihuahua, a training program was offered by University Technicians from Universidad Autónoma de Chihuahua during the period mentioned. Derived from this, the objective established was to analyze the perception of producers regarding the training obtained after starting the productive activities. The study with quantitative approach used a survey with questions carried out using a Likert scale as instrument. A total of 201 projects were approved, from which 162 participants were surveyed. The results showed that most of the survey respondents found that the topics addressed during training by University Technicians were enough to continue with the project in the long term; however, they manifested the need to have continuous training programs primarily in the areas of management, accounting and commercialization.

Keywords: microbusinesses, university technicians, entrepreneurship, social responsibility.

INTRODUCTION

As part of the incentive to open microbusinesses, the Productive Options Program was created, which is part of the Program for Promotion of Social Economy. It consists in providing economic support for the creation or strengthening of strategic productive projects that allow the reactivation and insertion of participants in economic activities. This program considers planning, elaboration, training and assistance for the beneficiary groups until the project is implemented. For this purpose, both the assistance and the training had to be imparted by staff specialized in the functioning of a microbusiness. Among the agencies authorized by the Operation Rules of this program, there are Higher Education Institutions (HEI), which ease the participation of University Technicians in the education of groups benefitted by the program (Ministry of Social Development, *Secretaría de Desarrollo Social* [SEDESOL], 2019).

To ensure that these projects can be carried out and survive the changes that occur in the environment, a selection, of the main knowledge that the members of the groups benefitted must have, was made. As mentioned above, one of the determining factors for a new company to achieve its positioning is the training of its members (Álvarez and Ramírez, 2021).

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However, training is limited when it comes to micro, small and medium businesses (*Micro, Pequeñas y Medianas Empresas-MIPYMES*) in operation. There is also the lack of experience of many entrepreneurs, which causes many businesses to not survive the first two years (Laitón and López, 2018). Because of this panorama, initial training plays an important factor for the businesses, and therefore the importance of the activity of HEIs in orientation, technical support, training (managing, sales, purchases, among others), and assistance until the implementation of the project. The Universidad Autónoma de Chihuahua (UACH) was commissioned to serve as the agency in charge of fulfilling this, which was achieved through the selection of expert University Technicians, who were in charge of conducting training and assistance of the groups benefitted by the Program for Productive Projects in the state of Chihuahua. This collaboration has been carried out since 2015 through the Projects Office of the Agrotechnological Sciences School (*Facultad de Ciencias Agrotecnológicas, FACIATEC*) and the Ministry of Social Welfare.

The objective of this study was to analyze the perception of the study conducted by the University Technicians during the training process, in addition to their impact on the implementation of productive projects. For this purpose, the hypothesis was established that trainees perceived in a positive way the topics, personal treatment, explanation of contents, in addition to having the need to carry on with continuing education through University Technicians.

These processes in which FACIATEC participates are one of the ways in which it carries out its commitment and social responsibility, which assumes the voluntary participation in the construction of a better and fairer society focused on respect and the participation of organizations in the integral development of the local and global community (Arras Vota, 2008). This implies for Higher Education Institutions to participate in the construction of a better society through the extension of their activities in various ways, one of them training for producers in the agriculture and livestock production sphere, as well as assisting in the establishment of productive projects (Andia *et al.*, 2021; Arras-Vota *et al.*, 2021).

Likewise, because in this study the analysis of the training offered was considered from the perspective of perception, it is important to suggest its concept with the purpose of having a common meaning for the interpretation of results. Perception is defined as "... one of the cognitive processes, a way of understanding the world, through the information it gives, and from the experiences of those who perceive (Moreno *et al.*, 2013 p. 445)"; it is the entrepreneurs' appreciation of productive projects regarding the performance of University Technicians in their training and implementation.

THEORETICAL DISCUSSION

Presently, entrepreneurship has generated an increase of the establishment of new Micro, Small and Medium Businesses (MIPYMES). In Mexico, a microbusiness is an organization that has maximum 9 people, occupies 92.9% of the economic segment of MIPYMES, and contributes the greatest generation of jobs and number of businesses in operation.

Increasing these has the strategy of supporting local development and providing economic stability, through the generation of jobs and the economic spill to reduce poverty and what is lacking in the community where they are established (Baltodano-García and Leyva Cordero, 2020). This is how strategies have been implemented to promote the creation and the establishment of MIPYMES, with the support of programs focused on the development of productive projects. Through the use of government instruments and strategies that allow the development of microbusinesses by granting economic funds for the acquisition of infrastructure, productive incentives, among others, which have an impact on the development and benefit of society (Franco and Canela, 2016; Remilien *et al.*, 2018).

However, even with the economic importance represented by most of the MIPYMES, there is a lack of specific adequate training plans which are generally required to perform the functions of a position. Throughout time, this causes for the worker to learn empirically what he needs to complete the task through trial and error, generating losses of inputs, time and deterioration of the equipment used to be able to perform their task, causing low productivity and in some cases feelings of frustration in the employees (Caballero *et al.*, 2015; Molina *et al.*, 2016; Rosales-Córdova and Llano, 2021).

Therefore, training is the continuous effort to improve skills and abilities of the staff that makes up businesses and organizations, with the aim of having a favorable impact on the performance and the productivity. This action can be carried out through different means such as courses, workshops, conferences, practices, among others (Granados and Banda, 2021).

In this sense, training can be understood as an auxiliary process of high impact in the work and personal life of workers that has a direct impact on the business productivity, since pertinent knowledge can be transmitted through it for the efficient and correct development of the activities necessary for the organization's good functioning. Therefore, it can also be seen as an educational process that takes place in the short term and whose purpose is the acquisition of abilities, knowledge, attitudes, aptitudes, and skills by the trainees. This is because it takes into account the teaching-learning processes where the trainer has the role of teacher and the trainee of student, which implies an adequate planning of contents, evaluations, assertive communication, classroom culture, practices, case studies, among others (Ávalos-Monge and Murillo-Méndez, 2013; Granados and Banda, 2021).

Good or bad training is a factor that influences the survival of businesses, primarily of MIPYMES. A common problem in these is the scarce or inexistent professionalization of directors and workers, since they make decisions based on their experience, common sense, and personal-family needs, inexistent strategic planning, all of which results, in turn, in bad organization (Molina *et al.*, 2016; Obando, 2020).

The aforementioned leads to suggesting that training is an essential tool to achieve positive changes or improvements in the MIPYMES, both in functioning and in the new enterprises,

and for this it is necessary to know the main needs for training and updating present in the environment, as well as within the organization (Ávalos-Monge and Murillo-Méndez, 2013; Pedroni *et al.*, 2020). In addition, for the training to be pertinent, the deficiencies that may come up during the execution of activities with the aim of increasing the skills of those who make up an organization must be studied, which will allow defining the main areas of action to achieve a positive impact on productivity (Obando, 2020). Likewise, training implies a process of planning, execution and evaluation of results (Bermúdez, 2015). From this the importance of conducting this study, which is set out to evaluate the results of the training process in which recipients of the Program for Productive Projects in the state of Chihuahua 2019-2020 participated.

METHODOLOGY

This study was carried out through a quantitative-descriptive approach by Hernández *et al.* (2010), which measures independently the concepts or variables it refers and is focused on calculating with the greatest accuracy possible the data obtained through the techniques used. The quantitative methodology uses the collection and analysis of data to respond research questions and to test previously established hypotheses, and trusts numerical measurement, counting and, frequently, the use of statistics to accurately establish behavior patterns in a population (Hueso and Cascant, 2012).

To carry out the training, University Technicians were selected who had minimum experience of two years working with groups, and who had the curriculum of having graduated from undergraduate programs related to the topics of business administration, finance, human resources, agriculture and livestock production, accounting, commercialization, agrotechnological administration, horticulture, and agricultural information systems; in addition, some of the selected technicians were still studying or in the process of graduating from a graduate studies program related to the subjects mentioned before. Among the variables measured to understand the acceptance of training, the following were determined: perception of each recipient about the treatment received, clear and timely explanation of contents, communication during and after the development of the themes, and willingness to continue being trained through the University after their participation in the study.

The population taken for this research was the total of projects approved by the Ministry of Social Welfare during the 2019-2020 period, in the municipalities of Guerrero, Juárez, Chihuahua and Bocoyna (Figure 1), which were managed by the Administrative Office for Projects of the Agrotechnological Sciences School (FACIATEC) of the UACH. In total, 201 productive projects were approved in the entire state (Table 1).

To determine the sample size with a confidence level of 95%, a formula for finite populations was used, since the total population is 201 productive projects. To calculate the sample, a value of $Z_{\alpha}=1.96$ was used (Aguilar, 2005; Reyes *et al.*, 2013). The adequate size of the sample with a confidence level of 95% was 132 surveys, taking into account the result from the formula:



Source: INEGI. Marco Geoestadístico, December 2018.
Figure 1. Location of the municipalities of Ciudad Juárez, Guerrero, Bocoyna and Chihuahua in the state of Chihuahua, Mexico (state code 08).

$$n = \frac{z^2 (pqN)}{EE^2 (N - 1) + z^2 pq}$$

where n : Size of the sample to determine; Z : Coefficient of the confidence level; N : Size of the universe or population; p : Probability in favor; q : Probability in other; EE : Margin of estimated error.

The technique used in the study was the survey designed *ex profeso*, using the Likert scale, which included general information such as name of the productive project, number of

Table 1. Productive projects benefitted and addressed by the Administrative Office for Projects of FACIATEC.

Municipality	Participation in projects
Juarez	120
Guerrero	39
Bocoyna	26
Chihuahua	16

Source: prepared by the authors from data about their participation in productive projects.

registration number, locality, representative of the social group, trade, jobs generated or proposed, sector to which the project belongs (agricultural, industrial or services); this is for the purpose of avoiding the duplication of surveys. The survey was made up by three sections, the first related to general data of the project, the second to inquire about the performance of the University Technicians, and finally, the third section deals with the detection of training needs of the business in operation (Hernández *et al.*, 2010).

Cronbach's alpha was calculated, which is a tool used to give statistical support in the use of the Likert scale, since it allows measuring the reliability of the questionnaire used. This analysis was carried out with the statistical software IBM SPSS. For this purpose, a pilot test was carried out to define the reliability of the complete instrument before its application, from which a level of reliability of 0.81 was obtained, meaning that the instrument is reliable. As part of the analysis for this study, the questions referring to this research were asked and a Cronbach alpha of 0.74 was observed. Among the scales used by different authors, the values that range from 0.70 to 0.90 were considered as acceptable and reliable instruments. Values lower than 0.69 are considered of low reliability among the reliability scales (Rodríguez-Rodríguez and Reguant-Álvarez, 2020; Arras-Vota *et al.*, 2021).

As a result of the sanitary contingency in the country and state due to the COVID-19 (SARS-Covid-2) pandemic, it was not possible to apply the surveys in person to the participants, and also because some projects are located in towns of difficult access. Therefore, the researchers used telephone calls to apply the surveys.

RESULTS

General aspects of the projects

The diversity of economic activities could be seen in the responses given by the recipient groups. In those devoted to the primary sector, the ones focused on sheep breeding, poultry production and farming stand out. When it comes to offering services, the following were found: musical groups, motley rentals, beauty shops, tire repair shops, recreation centers, furniture rentals for events, physical therapy, and dental services. In the sale, production and distribution businesses, were promoted such as candy shops, woodshops, food manufacturing, handicrafts, clothes shops, sewing workshops, bakeries, stationary shops, blacksmith's shops, facial cream making, make-up sales, photography, grocery shops, and cleaning products. With an average employment generation of four employees per project, there is an approximate of 644 people hired.

Performance of University Technicians

As part of the regulations of the call for productive projects, the recipients had to take different courses both to elaborate the business plan and for the strategic administration, purchase process (estimates, selection and acquisition), and establishment and implementation of the project (Secretaría de Gobernación [SEGOB], 2019). Training had a length of four

weeks during which the University Technicians were in charge of offering different themes related to business management and administration. In general, during the teaching of courses and workshops offered by University Technicians, they were focused on achieving a pleasant and trusting environment where all the participants would feel free to express their doubts, by answering questions, exchanging ideas, in addition to showing interest for the different projects through direct communication with each of the participants, both inside the classroom and by email or phone call. When communication was not possible by any of the means mentioned, government agents in the zone were asked to make contact to follow up on the development of the productive project. This was reflected in the perception of participants with regards to the treatment they received and the communication they managed to establish with the University Technicians, describing it mostly as very good in both cases (Table 2).

Regarding the response obtained by the participants, it was seen that most managed to assimilate and understand the topics offered by the University Technicians; among the most repeated comments, there were the following: “they explained very well”, “they were very patient with me”, “they always answered my questions”, “they helped me a lot with the work, I didn’t even know where to begin”, “I learned the importance of good administration and finance”.

In general, good results were obtained on the perception of the survey respondents regarding their experience with the explanations from University Technicians, which eased content learning by the participants and fulfilled the training’s objective. The environment achieved in the classroom was also part of this result, where the majority considered a very good environment and a smaller number mentioned that it was good. Likewise, the participants mentioned that they trusted the University Technicians, in addition to them always showing a respectful and friendly treatment with all members of the group; they mentioned that “they always say hello”, “they encouraged me to ask what I didn’t understand”, “they listened carefully to everything we said”, “they never laughed at us for not knowing something”, “I liked it because they motivated us to participate and not to feel shame about doing things”.

Table 2. Personal treatment and communication during and after the training between the University Technicians and the trainees.

Trainer Questions	Perception of the trained persons		
	Regular	Good	Very good
The treatment of the University Technician during the training		22%	78%
Communication during and after training	10%	30%	60%

Source: prepared by the authors based on the survey data, 2021.

Training courses

As part of the training of the program's participants, the following topics were offered: development of production initiatives, market of the productive process, and financial structure. As the result observed at the time of implementation of the project, it was found that most of the trainees mentioned that the contents selected for the training were useful, while the minority did not agree; the reason for their answer was that they did not consider that they contributed to their training needs. Table 3 shows the relationship between the percentages of approval of the topics from the perception of each participant on the dominion of contents.

Detection of needs of the business in operation

Regarding this issue, the 162 survey respondents were asked about their wish to continue to be trained in courses or workshops led by teachers from UACH, taking as reference their experience with the University Technicians. A high percentage of the survey respondents discussed previously about the development of the topics, which ones they liked and considered very good, and from this total it was obtained that 96% of the participants were interested in continuing to be trained with the University, while the others refer that they do not have interest in receiving further training and, finally, some wish to postpone it because of the health contingency.

To understand the needs for training that the recipients detected after the implementation, survey respondents were asked about the most relevant topics for them. One of the main themes they suggested is related to business administration. In this area, they requested contents that refer to finance, accounting, human resource management, estimates, purchases, exports and administration in general. Another category was the one related to commercialization, suggesting topics that range from the distribution to the final consumer. Another topic of interest was the technical support focused on issues related

Table 3. Dominion, development and usefulness of the topics offered to the trainees by University Technicians.

Trainer Questions	Perception of the trained persons		
	Regular	Good	Very good
Mastery, development and clarity of the topics by the University technician	1.0%	7%	92%
The topics were useful for the trainee	0.5%	6%	93%
The topics were not useful for the trainee		0.05%	

Source: prepared by the authors based on data from the survey, 2021.

to animal nutrition, safety and hygiene, elaboration of foods and various products, in addition to management of information and communications technologies (ICTs). Finally, there were questions about the current situation of the business due to the health contingency from COVID-19. Of the survey respondents, 98% mentioned that they were working under the safety measures established, such as the use of face masks, antibacterial gel, safe distance, sanitizing mats, and social distancing. In addition, they reduced their hours open to the public, and the capacity of the businesses was decreased according to what the epidemiologic guidelines signaled. However, a part responded that although they had what was necessary to work normally, they could not do it because the activities they performed were not essential. An example of this was businesses that offered services.

DISCUSSION

The establishment of new businesses through productive project planning allows the creation of new sources of jobs, stemming from the configuration of work groups regardless of their academic education, gender and ethnicity (Alvarado *et al.*, 2018). This is important, because the unemployment present in marginalized and rural zones increases the economic instability of the families; in addition, the lack of academic preparation generates a lower possibility to gain access to positions with adequate remuneration, and finally, the job offer is limited in comparison to the demand there is in the labor market (Hernández, 2020).

Paz and Espinosa (2019) mention the need for educational institutions to participate actively in the creation and development of new microbusinesses, since most of them start their activities with scarce or null knowledge and prior skills in accounting, marketing, administration, finance and sources of financing, which causes low productivity and in the short or medium term will have an impact in their closing. Therefore, the intervention of University Technicians who adequately resolve the shortcomings of entrepreneurs at the time of planning and implementing their productive project is necessary.

Thus, as University Technicians become mentors, they should be able to transmit their knowledge and skills to the trainees. However, many times this work is affected by various factors; one of the main problems that University Technicians face at the moment of training was the heterogeneity of participants, since they have basic, middle and higher education levels in a single group. Paz (2018) mentions that the university staff should be arduously prepared to understand and tend to groups with a diversity of students, and this would allow them to establish adequate communication with the group, through the use of a common language that is easy to understand, and without technicalities or terminology that make learning difficult. In addition to this, there is a reflection about the importance of a good environment in the classroom and how this impacts directly the development of the teaching-learning process, since group participation is eased when there is trust and respect among all the participants, which enriches the knowledge acquired; in addition to this, it can be mentioned that teachers ought to be empathetic, responsible, committed,

to achieve appropriate communication channels and to be respectful with each of their students (Rodríguez-Santos *et al.*, 2020). This was all attained in the training offered to the recipients of this project, about which the results have been set out.

When a good environment and a trusting relationship between the parts involved in the training process are achieved, it is convenient to analyze the knowledge and skills needed for a business to be successful in the long term, and these understandings and abilities are generally related with entrepreneurial development; among them, the ones that stand out are administrative, countable and financial, in addition to marketing. Among the notable personal characteristics that an entrepreneur should have, there are the need for achievement and autonomy, propensity to risk, tolerance of uncertainty and trust; and when all of these are combined there is a greater possibility for success and permanence of the new businesses (Tajeddini and Mueller, 2009; Arias-Arciniegas *et al.*, 2020; Morales-Jiménez *et al.*, 2020). However, even with the importance of these themes, Bermúdez (2015) found in a study conducted with 120 MIPYMES results that agreed with those that are presented in this study, which is that most producers lack knowledge of the administrative, financial, marketing process, the product's life cycle, and the use of countable software; because of this, their survival will depend on adequate training for employees and business owners in an early manner and with assistance from government institutions, associations and universities. Mexico, at the global level, shows a very high failure index of MIPYMES, and this is because only 7% of the new businesses manage to surpass 3 years, and this is due mainly to the lack of adequate leadership, unclear objectives, deficient administrative processes, low inventory control, lack of liquidity and financing (Lima-Vázquez and Duana-Avila, 2020). Training becomes a tool that will allow businesses to have a greater possibility for survival if it begins from the planning of the new business.

MIPYMES present a great deficiency at the time of designing and programming training for the whole organization. However, owners or managers are capable of detecting insufficiencies that come up during the development of daily activities. The need for training is reflected when a person is not capable of fulfilling the requirements of his/her position from lack of knowledge, abilities, or attitudes (Bonilla Jurado *et al.*, 2018; Valdivia and González, 2022). One of the main problems that MIPYMES face regarding the planning of training is because its benefits will be reflected in the long term, and the higher authorities focus on fulfilling their immediate commitments such as payroll payments, supplier payments, fixed costs, acquisition of work material, among others (Cabanillas, 2011; Montalvo *et al.*, 2021). Theoretical learning (knowledge), practical learning (skills) and a change in attitude are the main aspects of training; when all of the elements are united, the development of specific skills of the members of an organization is attained. One of the issues that takes on relevance for MIPYMES is to develop training programs that allow aligning the interests of the individual with those of the business, in search for the common good (Montalvo *et al.*, 2021).

An example of this is the study carried out by Saavedra and Camarena (2020), in which the authors describe a study conducted with 272 businesses led by women in Mexico City, where the businesswomen recognize the need to have continuous training both for them and for the staff they lead; among the needs for training detected, they mention those related with administration, accounting, commercialization, marketing, finance, taxes, human resources, production, safety and hygiene, environmental, in addition to the use and management of ICTs. In a previous study, Camarena (2018) mentions that the courses taken in the areas of administration, commercialization and accounting are the most useful for the businesses, according to the perception of 272 businesswomen in Mexico City, who detected that these understandings are essential for the survival of their businesses. These results, in general, show the importance of detecting training needs in the different areas of the organization, which would allow the adequate selection of programs and appropriate contents that respond to the real problems that take place during business functioning (Saldivar *et al.*, 2020).

However, what happened during the pandemic from the Covid-19 virus has had an impact not only on the health of the people, but rather has also impacted the economy, affecting the businesses mainly because of the closing imposed on non-essential activities, which caused instability and uncertainty in the subsistence of many MYPIMES (Sánchez-Juárez and Aguilar, 2020).

It should be mentioned that as a strategy to survive the pandemic, some businesses used ICTs with emphasis in digital marketing, which allowed them to continue their sales. However, the lack of training in these areas is a limiting factor for many of the MYPIMES (Ochoa, *et al.*, 2020); in general, participants do not have the necessary knowledge to implement the use of digital marketing, since in their majority they do not have the equipment, software and trained staff, which made the operation of the businesses difficult, which makes more relevant the need to be trained in this area through training institutions and/or programs.

Therefore, it can be said that training is a mode of convergence between Higher Education Institutions, represented by the University Technicians and the actors that make up MYPIMES and in this process, it is important to consider the importance of the theory of human capital, which translates into being aware that each person, has an education that is based on the knowledge and abilities acquired throughout time during the development of their educational stage and their experience, and these skills can be general or specialized. This theory also argues that greater human capital will be reflected into a higher salary and at the same time an increase in productivity of the organization. Training is one of the ways that businesses can provide their employees with specialized skills to develop their function and increase the possibilities to gain access to salary increases, as well as to improve their job performance, which at the same time will be reflected in higher productivity; for that reason, training and an increase in human capital are directly related with success and survival of an organization (Didier *et al.*, 2013; Pérez-Fuentes and Castillo Loaiza, 2016).

Thus, stemming from the consolidation of the concept of quality education, learning and training stand out as an essential economic link in the growth of welfare.

For training to be adequate, the needs present in the different environments in which the business participates should be analyzed, with the purpose of selecting consciously and effectively the themes that will be planned with the purpose of offering contents and relevant practices regarding workers' needs and quality. Quality is defined as the perception of the value there is of a service or product received, which exceeds previous expectations (Huerta-Dueñas and Sandoval-Godoy, 2018). For quality education to be offered, five dimensions must be fulfilled. The tangible dimension can be seen in a material way, and is everything that can be touched during the duration of the service. Reliability is the truthfulness of the institutions and their staff to offer and teach different topics with the conviction that they are developed by experts. Capacity is reflected in the fast and timely attention of problems that emerge in the process. Safety is the perception from the person who receives the training that the institution and the instructor have the ability to solve their doubts and problems. Finally, for there to be educational quality, there is a need to generate empathy between the actors involved and this could be created based on the particular knowledge of the needs of participants (Barragán Vázquez *et al.*, 2021).

CONCLUSIONS

From the perspective of people who received training from University Technicians during the education processes and implementation of the productive projects approved from the call issued by the Ministry of Welfare in the 2019-2020 period, regarding the responses and contributions made by participants, most agreed that both in the topics and in the participation of University Technicians they complied with their function in the training process, reason why they considered the knowledge acquired as sufficient to start and continue with their business. Also, most showed interest in continuing to be trained, recognizing that they lack adequate knowledge for the management and survival of their businesses; therefore, for them it is a viable alternative to participate in courses, workshops or certification programs offered by the university. In general, according to most of the survey respondents, the objective of providing basic tools to achieve functioning of the project was achieved, and in addition the need to continue to be trained was detected in the topics of administration, commercialization and technical support. Therefore, the hypothesis set out at the beginning of the study was proved, which agrees with the results obtained, since the perception of the trainees was positive in relation to the topics and their explanation, the treatment of university technicians, and the need for continuous training regarding business management. This is also in addition to the search for strategies that allow the survival of MIPYMES with regards to the COVID-19 pandemic.

Finally, the participation of the UACH through FACIATEC strengthened the relationship between the social sector served and the university, through the training carried out for the beneficiaries of the program. The social responsibility of the university focuses on the

commitment to contribute to the sustainable and economic development of society, in addition to respecting ideas, beliefs and cultures. The proximity to the productive systems, allows to know the problems that they currently face and this, in turn, is reflected in the relevance of the university educational programs to give a prompt response to society.

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