NORAD COLLECTED REVIEWS

11/2023

Development Project Evaluation for Technical Humanistic High School (PD-BTH) in the municipalities of: Vallegrande; Educational Units, Buenas Nuevas B and D from Santa Cruz municipality (Santa Cruz Department); Rodeo Educational Unit from Vacas Municipality and Sicaya Municipality (Cochabamba Departament)

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ISBN: 978-82-8369-162-7
ISSN: 1894-518x

Published: 11.08.2023

Cover Photo: Ken Opprann

2022

Development Project Evaluation for Technical Humanistic High School (PD-BTH) in the municipalities of: Vallegrande; Educational Units, Buenas Nuevas B and D from Santa Cruz municipality (Santa Cruz Department); Rodeo Educational Unit from Vacas Municipality and Sicaya Municipality (Cochabamba Departament)

Content

Abbreviations

BTH	Technical Humanistic High School
CEDLA	Study Center for Labor and Agrarian Development
CPTE	Educational Production and Transformation Community
DD	District Directorate of Education
DIGNI	It is a cooperative umbrella organization formed by 19 Christian organizations working against poverty and for a dignified life.
EAT	Empowerment Assessment Tool
EE	Entrepreneurial spirit
FAUTAPO	Foundation Support to Universities of Tarija and Potosí– Development education.
FES	Foundation for Education and Services
FTT	Technological Technical Training
INE	National Institute of Statistics
NTP	Technological Productive Core
PD-BTH	Development Project for the Technical Humanistic High School
PDI-BOL	Institutional Development Project
PIB	Gross Domestic Product
PISA	Program for International Student Assessment Testing
PMF	Fathers and Mothers of Families (Parents)
PMF	Fathers and Mothers of Families (Parents)
MPN	Norwegian Pentecostal Mission
PNUD	United Nations Development Program
TTE	Specialized Technological Technique
TTG	General Technical Technology
UE	Educational Units
UNESCO	United Nations Educational, Scientific and Cultural Organization

Definitions

Technical Humanistic High School. Training modality in the humanistic and technological area, which the student takes during the six years of high school, articulated to the potentialities and productive vocations of their community or region**.**

Management Committees. This body is made up of community leaders who assume the responsibility of managing the implementation of the technical-humanistic baccalaureate. In this sense, they mobilize to reach agreements and obtain the necessary human and economic resources to implement this training modality.

District Directorate of Education. It is the local education authority that represents the Ministry of Education. It is responsible for granting items, managing human resources and regulating the educational process.

Technological Technical Training. As a training modality for the secondary cycle, it comprises two training areas: general and specialized.

General Technical and Technological Training. It is the space for the formation of general, technical and humanistic knowledge in different areas, which are studied in the first four years of high school.

Specialized Technical Technological Training. This is a specialized training program that takes place during the last two years of high school, where students receive the title of intermediate technician, according to their chosen specialty.

Productive Technological Core. These are the physical spaces that the Municipal Governments provide, refurbish, adapt or build and implement equipment for the different laboratories or workshops, where they house high school students from different Educational Units.

Ni-nis. Adolescents and young people who "neither study nor work".

Full Educational Units. They are those that comply with the technical requirements that the Ministry of Education demands for the implementation of the HTB (Management Committees, HTB Projects, Infrastructure, equipment, items and others). Therefore, they have the capacity to qualify their students as intermediate technicians.

Educational Units in Transformation. These are those that have available infrastructure and are in the process of adapting it for technical-technological training in a progressive and gradual manner.

Educational Units in Transition. They are those that do not have the technical conditions necessary for the implementation of the Technical Humanistic High School and must be gradually and gradually adapted to the study plans and time load.

1 Executive Summary

The final external evaluation of the "Development Project for the Technical Humanistic High School (PD-BTH) in the Municipalities of: Vallegrande; Buenas Nuevas B and D Educational Units of the Municipality of Santa Cruz (Department of Santa Cruz); Rodeo Educational Unit of the Municipality of Vacas and Municipality of Sicaya (Department of Cochabamba) - 2018 - 2022" executed by the Foundation for Education and Services - FES, was carried out by the consulting firm SEDFIT during the months of November and December 2022.

The methodology and the instruments applied were participatory in nature, and the analysis and interpretation of the information led to the following conclusions and assessments.

CONCLUSIONS

In the conclusive synthesis of the PD BTH evaluation, objective value judgments are presented at a general and empowerment level, and these conclusions are complemented with lessons learned, successful strategies and recommendations.

General conclusions

It is necessary to begin the general assessment of this educational process by stating that, beyond the contextual problems of approaching the BTH, its development has led to **successful** results; considering the short time involved in consolidating a process from its administrative management to the personal development of students after graduation with articulation to the community and promotion to the labor market.

In this context, one of the links to pay attention to are the management committees, seeking greater periodic functionality if a horizon or vision of the BTH (project) is outlined, defining roles and rules for its consolidation.

Another aspect is to follow up the graduates in the territorial context, understood as family, culture and productive activity.

Finally, a potential bottleneck in this context is the sustainability of the project in the different municipalities, an aspect that must be addressed in different dimensions, advocacy with the State, productive educational logics, broad visions of entrepreneurship, delegating responsibilities to local actors, maintenance, income generation, and having an accounting management regulation.

Conclusions at the empowerment level

a. Degree and level of empowerment

	Product 1	Product 2	Result
Resources	Formation of management committees	Equipment achieved with local contributions	More time is being allocated There is greater interest in the BTH from the educational community
Action	It is necessary to consolidate this instance	Satisfaction of students, parents and teachers.	Achieve greater interaction and exchange Strengthen the articulation of the GC (Management Committee)
Achievements	Institutionality must be provided, periods, continuity, goals	Attention to job placement: database, follow up, entrepreneurship	Improving entry and exit by means of a test or profile. Attention to labor advocacy, community entrepreneurship

b. Thematic areas of empowerments

Subject area	Impact goal	Performance targets
Strengthening civil society	There is a strong participation of civil society in change	Involvement, articulation and synergies between public/private authorities, educational and social sector around the BTH (until its implementation).
		Equal conditions for education TTE (Specialized Technological Technique)
Good Health	Influence their own relative health and well-being conditions	The BTH contributes to a "Community or Social Health" that makes TTE Education a "working" alternative.
		For students it is an option to project themselves in life
		Food processing is an option for healthy consumption
Peaceful coexistence	The groups coexist in a safe and peaceful environment.	The ETTE (Specialized Technological Technique Training), contributes to the articulation with the family, in its practices, articulates with motor sectors or context vocations
Environmental management	Actions that are friendly and responsible with the MA	It incorporates content oriented to environmental responsibility, which requires more time and depth.
		There is a career in Agroecology, which is an alternative to generate attitudes of analysis and environmental responsibility.
Quality education	Students receive relevant and high-quality education	It contributes to greater interaction among peers, with the family, and with the community
		There is evidence that the FTTE (Technological Technical Training) broadens capabilities and vision of the future. E.g., those who graduate from "Nursing" have a higher percentage of approval to the University of Medicine.
Economic empowerment	Women and men in the intervention area are economically empowered.	Broad opportunities for self-advocacy, access to jobs, further studies and/or mediated initiatives, especially for families living in poverty.
		The UEs (Educational Units) can generate income to improve equipment, replenish supplies or practice materials.
Gender equality	Generate greater equality for women and men	The BTH broadens the participation of women and men in ETTE (Specialized Technological Technique School) regardless of their status (more details are needed)

LESSONS LEARNED

- Emphasize that the BTH was a factor of articulation, which nevertheless requires the formulation of a joint short-, medium- and long-term vision with strategic lines and dynamics of continuous improvement of the FTTE (Specialized Technological Technique Training).
- The GAMs (Autonomous Municipal Governments) have contributed funds for the implementation of the BTH, which must be consolidated in territorial planning instruments such as the PTDI (Territorial Integrated Development Plan) and the POA (Annual Operational Plan).
- The BTH, while based on initiatives of the director (which is not bad), needs to be involved and take challenges from the parents.
- The Management Committee was "decisive" for the implementation of the BTH; however, this body must be consolidated with rules, periodicity, mission, tasks, roles for continuous improvement, evolution and quality control and sustainability in response to the environment.
- Gaps in Min.Edu. (Ministry of Education) regulations and implementation guide make it difficult to get teachers with ETT skills in practice and demonstration.

- The Ministry's curriculum, although it is a basis, is very general and teachers require interactive, practical and holistic training for a better practice.
- There is a need for greater articulation of the BTH experience with the State, in order to learn from the successes and failures of experiences such as the PD BTH in order to respond to the expectations of students, parents with greater relevance.
- Mobilization of experiences contributes to public policy advocacy: La Guardia case, deepening and broadening interactive learning within and outside the UE (Educational Units).

The BTH makes it possible to understand that the challenge does not end with the student's training and certification; it is necessary to see what happens with the graduates, how to provide support, follow-up, registration, etc.

SUCCESSFUL STRATEGIES AND BEST PRACTICES

- Developing a study for the definition of technical careers, with a productive socio-community approach, was very important, as it is relevant to the context.
- The BTH orientation, dissemination and awareness campaigns have generated motivation and commitment to form the Management Committee with the participation of municipal authorities, educational authorities, directors of educational units, teachers, educational councils, social organizations, student governments, and other stakeholders.
- Guaranteeing the conditions of infrastructure, equipment and hiring of external teachers has provided certainty and motivation for the continuity of the PD BTH.
- Motivate students with short Tik Tok, on knowledge, educational practices of the technical specialty they are studying.

RECOMMENDATIONS

At the institutional level:

- To complement with an Educational Project that contemplates a short, medium and long term horizon.
- Define the coordination spaces and instances, defining the functions and tasks of the Management Committee, according to the competencies defined by law or customary practices.
- Institutionalize it on the basis of clear rules of participation, quality control and follow-up, support and search for sustainability and management with public and private contributions.
- Incorporate maintenance, expansion, improvement and support to enterprises in strategic planning guidelines such as PTDI (Territorial Integrated Development Plan), POA (Annual Operational Plan) as part of the Education Sector.

In the educational field:

- Generate educational administration instruments that respond to the particular dynamics of each unit, in order to have sufficient equipment, materials, supplies, learning guides, evaluation with a focus on promoting project fairs, and student initiatives at the conclusion of their training process.
- Manage the items of the state, with the sufficient hourly load that currently do not have.

In relation to the attention to **Interaction and development with the world of work:**

- To ensure that UE with the BTH not only replicate certification models, but also take into account the relevance, effectiveness and efficiency of training processes that respond to the challenges of technical and humanistic baccalaureate graduates.
- Expand spaces for inter-learning; fairs, internships, and spaces for internal "assessment, analysis and reflection" among students, teachers, parents, local and governmental authorities to see the level of satisfaction or expectations of students.
- Vitalize vocational orientation processes for young people before choosing technical training over technical/technological training, which should not be considered as a second option.
- Pay more attention to achieve the student's entry profile (vocational test), for greater certainty and evaluation of the graduation profile,
- Generate strategies to enable students to access the labor market with their own entrepreneurship or to continue higher education with this support.
- It is important to generate statistics on graduates and maintain contact with former students, as well as to follow up with them.

2 Introduction

This work reflects the evaluation of progress, experiences, successes, weaknesses identified in the territorial context of the municipalities of: Vallegrande; Buenas Nuevas B and D Educational Units of the Municipality of Santa Cruz (Department of Santa Cruz); Rodeo Educational Unit of the Municipality of Vacas and Municipality of Sicaya (Department of Cochabamba) in the implementation of the PD BTH, driven by the Foundation for Education and Service FES in the period from 2018 to 2021.

An analysis has been carried out under an integral approach, which visualizes institutional aspects of articulation, concurrence, participation and joint management for the implementation of the PD BTH.

Likewise, emphasis is placed on showing findings related to the educational process that may have an impact on the quality of education, the relationship with the rules and regulations of the BTH, the initiatives undertaken by the UE, which, according to their social and territorial context, have achieved learning that continues with a dynamic of consolidation and continuous improvement.

The aim is to strengthen institutional work by visualizing the impact of technical/humanistic training on high school graduates who need to broaden their opportunities and capabilities to continue their studies, to undertake enterprises and to contribute to community development through productive socio-community training.

The evaluation is part of the community participatory educational process that analyzes and assesses the integral and holistic formation of the participants, *to achieve social transformation. In this sense, evaluation is not an end in itself, but a necessary and important process to make decisions and contribute to the improvement of educational processes. Therefore, the proposed evaluation of the educational process contemplates different moments and educational spaces that go beyond the unidirectional conception of education*

Project context and description

The experience of promoting the PD BTH arose from a project executed by FES, formerly PDI Bol - Institutional Development Project Bolivia; based on an evaluation of this project, one of the recommendations regarding education and within the framework of Law 070 is recovered, the humanistic technical baccalaureate is to be strengthened; it is seen as an opportunity, for which a project is formulated.

With the technical team in Santa Cruz, a PD BTH project study is formulated considering the territorial areas of work that already existed with PDI BOL, giving continuity in the framework of relations, achievements, infrastructure and actors that had already been developed with the support of Norway, who saw the importance of not expanding the geographic area too much, rather focus on these regions to deepen impacts, and consider poverty criteria in the case of Sicaya and Orcoma, which were in the line of impoverished municipalities in the 2017 management according to INE statistical data; in this way the proposal is presented to Digni and MPN (Norwegian Pentecostal Mission).

On the other hand, starting in 2016, the national government implemented the plan called PATRIOTIC AGENDA 2025, which is based on 13 pillars. The project is related to this agenda through the following pillars:

1. Eradication of Extreme Poverty
2. Health, Education and Sports for the formation of an integral human being.

3. Productive sovereignty with diversification and integral development without the dictatorship of the capitalist market.
4. Environmental sovereignty with integral development, respecting the rights of Mother Earth.
5. Sovereignty and transparency in public management under the principles of not stealing, not lying and not being lazy.

2.1 National and regional context

The Technical Humanistic High School BTH, is a policy of integral and holistic training in the formative scope of the four dimensions: to be, to know, to do and to decide, is regulated through Ministerial Resolutions of 2014 and 2018, The program has been implemented throughout the national territory as an integral training process oriented to tangible and intangible production according to the productive vocations and potentialities of the context.

Although the BTH is being gradually implemented with successes and shortcomings, it has not been implemented in all the Educational Units of the Plurinational State of Bolivia, due to different general problems that were identified as follows:

- Lack of knowledge of authorities, educational community and principals to implement the BTH, given that the latter are in charge of promoting this process
- The UE does not have materials, guidelines and technical bases to specify BTH specialties, which on the other hand are very general with gaps according to the regulation
- 90% of the UE are not recognized as "full", to grant the Intermediate Technical Degree, due to the requirements and bureaucratic process involved
- Confusion in the nomenclature, contents, scope of specialties.
- Lack of training for teachers of Specialized Technological Techniques (TTE) and General Technological Techniques (TTG).
- Lack of adequate infrastructure for the specialty.
- Lack of equipment for technical workshops, among many others.
- Civil society has not assimilated the concept of BTH, lack of dissemination, etc.

The BTH Regulation of the Regular Education Subsystem approved by Ministerial Resolution 818/2014 aims to regulate its implementation in all EU of the Productive Community Secondary Education level, in which the Technological Technical training comprises two formative spaces denominated as areas:

- General Technological Technique (four years)
- Specialized Technological Technician (two years)

In order to do so, they must total 1,920 academic hours of training, comply with the training load of 1,920 academic hours of training, this means that the student must complete six years of uninterrupted technical training in secondary education to meet the training load. In fact, this aspect is hampered by the lack of items, allocation of the time load for it, etc.

2.2 Context of the municipalities involved

Within the technical education offer, an essential component to be considered is infrastructure and equipment, "…because technical training requires space, facilities and equipment that entail high costs". (Yapú, 2015).

For this reason, it is important to seek institutional support from the municipalities or some benefactor, since this priority is not yet incorporated in the municipal PTDI (Territorial Integrated Development Plan), by the Education sector, which reflects the usual items: refurbishment, expansion, new rooms, etc. But few emphasize BTH.

Based on the analysis carried out by FES and the donor entities and taking into account contextual aspects, the project was implemented in the following municipalities:

Municipality of Sicaya, third section of the Capinota province, a rural municipality in the department of Cochabamba. It has a population of 3,740 inhabitants (according to the INE 2012 Census). It has 20 communities, 18 of which are considered rural, is located 94 km by road from the city of Cochabamba and 24 km from the town of Capinota. Its productive vocation is agricultural: vegetables, crops and fruit trees, with good water sources, which year after year has been seriously reduced; another area that generates employment is limestone mining.

Municipality **of Vacas**, Second Section of the Province of Arani, belongs to the Southern Cone Region, is one of the oldest Quechua-speaking and purely rural populations of the Upper Valley, with scattered communities. Its productive vocation is agriculture, among the main crops are potatoes, oca, papalisa, wheat, barley, oats, beans, tarwi and peas; cattle, sheep, pigs and other domestic animals, as well as the raising of, silverside and trout fishing in the different lagoons of the municipal jurisdiction and lately with high incursion in pine forestation on the slopes where the puya raimondi predominates. In particular, Rodeo, where BTH UE is located, is on the main road to Cochabamba, Valle Alto, Mizque and Sucre. The municipality has 12,511 inhabitants.

Municipality of **Vallegrande**, is the first municipal section of the province of the same name in the department of Santa Cruz. The municipality has a population of 17,208 inhabitants and is located in the southwestern part of the department of Santa Cruz de la Sierra, in the sub-Andean sierras. The population is mainly engaged in agriculture, its main crops are: corn, potatoes, peanuts, vegetables and greens. Livestock farming is an important source of cheese production. The processing of agricultural products is not industrialized. The production of chicha is part of the traditions and is an irreplaceable element in the festivities or in the Vallegrandino carnival. In recent years, it has made strong inroads in fruit production, offering considerable volumes of apples and peaches mainly.

In the Municipality of **Santa Cruz de la Sierra**, the UE de Buenas Nuevas (morning and afternoon shift) is located in the Municipality of Santa Cruz de la Sierraen la Sub Alcaldía del **Plan 3000**, being a reference school at the time (35 years ago), which began as an industrial institute with infrastructure, environments built with the support of the cooperation of Sweden, Finland and Norway. In the face of this external effort, there is no support from the GAM (Autonomous Municipal Government) of Santa Cruz, for which reason efforts are currently being made to improve and maintain the facilities.

2.3 Project description

2.3.1 Background

In the last PDI-BOL meeting (October-2016), the participants: Educational and Municipal Authorities, Pastors, Principals, School Boards and Teachers, unanimously requested support to carry forward the process of implementation of the Technical Humanistic High School (THHS) Educational Units, arguing that it is a priority and that it would be of great benefit to all

high school students because they would learn a trade that would open up greater opportunities in their life projects.

After the presentation of the final evaluation report of the PDI BOL project, in March 2017, a needs assessment was conducted in 13 educational units in different municipalities, for this purpose, 7 workshops were held with the participation of representatives of the educational communities with whom ideas on the subject were exchanged, and surveys were applied to teachers, students and parents. Interviews were also conducted with education authorities, experts and directors of educational units. This study concluded that despite the existence of the legal framework and the interest of the different levels of government to implement the BTH, high school students were not receiving technical-technological training because the necessary conditions did not exist within the educational units, such as: Infrastructure, equipment, qualified personnel, projects, programs, among others.

The arguments in support of BTH in the different UE are mainly based on the possibilities of transforming the bachelor's life prospects, because when a student finishes high school, he/she has a general and shallow knowledge of the different sciences and arts; this preparation enables him/her to continue university studies (if he/she is able to pass the admission test required by the university); otherwise, as is the case with most of them, the student is in a vulnerable situation because he/she does not have the necessary training to perform in the labor market.

The focus of this new model, from the State's point of view, is Socio-community productive and its main axis is the Technical Humanistic High School (BTH), the objective is that students receive technical-technological training during their secondary education.[1]

2.3.2 Project objectives

General Objective

The high school students of the target group, from the municipalities of Vacas, Sicaya, Vallegrande and Santa Cruz/Buenas Nuevas have access to the Technical Humanistic High School (THHS) and upon completion of their studies they receive a Certificate at the Intermediate Technical level according to the Technical Career they have chosen.

[1] The intention is correct; but after almost 7 years of application of the new law, very little has been achieved in practice, the process is progressing slowly. To date, there is no precise data, but it is estimated that the number of educational units that have achieved accreditation as PLENAS (Full meaning100%) does not even reach 5%. The challenges to be overcome to achieve implementation are great and no less complicated: it is necessary to build appropriate environments, equip workshops, train teachers, create new workloads and, above all, make the educational communities and society in general aware of the importance of technical-technological training for students.

Specific objectives

- Students and Parents are informed and sensitized on the importance and benefits of BTH.
- Contribution to the implementation of the Technical Humanistic High School in the educational units of the municipalities of Sicaya, Vacas and Vallegrande.

2.3.3 Beneficiary population

The target group has been selected following technical criteria related to: Poverty index, vulnerability; access and viability; interest of the educational community and authorities, among others, reaching a population of 3,516 in the first year directly and a student population that is entering and leaving on an annual basis.

GENERAL TARGET GROUP – DIRECT BENEFICIARIES

Municipalities	Educational units	Students	Teachers	Directors	Parents
SICAYA	Orcoma	117	8	1	59
	Sicaya	190	11	1	95
VACAS	Rodeo	144	10	1	72
VALLEGRANDE	Liceo Isabel V.	268	15	1	134
	Vallegrande	147	15	1	74
	Manuel M Caballero	281	15	1	140
	Monseñor Julio Terrazas.	260	14	1	130
	Enrique Quintela	110	13	1	55
	Mcal. Sucre	181	12	1	90
	Emilio Finot	240	15	1	120
	Enrique Meneses.	68	10	1	34
	Obra Josefi.	227	16	1	114
Santa Cruz	Buenas Nuevas B	517	18	1	259
	Buenas Nuevas D	469	24	1	235
TOTAL:		2233	154	12	1117

There is no doubt that there is an indirect beneficiary population that is gradually assimilating and understanding the importance of the BTS, such as neighboring municipalities, social organizations and productive guilds.

As can be seen in the General Target Group table, 3 municipalities were covered with specific attention (Sicaya, Vacas and Vallegrande), and in a reference establishment such as Buenas Nuevas in the city of Santa Cruz, totaling 12 Secondary Level Educational Units, which will be grouped in 4 Productive Technological Nuclei, as shown in the following chart.

Municipality	Specialties
Sicaya	Food processing and industrialization, automotive mechanics
Vacas	Gastronomy, auto mechanics
Vallegrande	Civil construction, carpentry, food processing and industrialization, agro-ecology, integral beauty, gastronomy, automotive mechanics, cutting and sewing.
Santa Cruz de la Sierra	Gastronomy, integral beauty, nursing and first aid, industrial electricity, etc.

The aforementioned specialties were defined based on the analysis of the context, labor opportunities, service requirements, vocations and analysis with local actors. Most of the students in the target group come from households living in rural areas and make a great effort to continue their secondary education. When they finish their studies, they have two options:

to continue higher education or to start a workshop, salon, or both, to work and study based on their technical training.

Teachers are professionals who have been trained to carry out humanistic education, with some complementary training for the teaching of technical education, and in several situations, since there are no teachers with a technical specialty, independent professionals are allowed to teach.

2.3.4 Project strategies

For the implementation of the project, the following strategies were carried out, with slight differences in some municipalities, but in general, the aim was to achieve conditions of infrastructure, interest, commitment and legal conditions:

1) Evaluación institucional PDI-BOL, lectura de una oportunidad para fortalecer el BTH, o la formación técnica frente a las estadísticas sobre las limitadas opciones de los estudiantes de las zonas rurales para acceder y continuar la educación superior.
2) Formulation of the PD BTH Project in areas of intervention and with interest in participating in the process.
3) Generation of alliances, signing of agreements and institutional management before educational instances for the accreditation of UE.
4) Socialization, information, awareness raising in meetings, workshops and communication with stakeholders or prioritized areas: Authorities, students, parents, society in general.
5) Generación de un plan de fortalecimiento y apoyo institucional; Equipamiento, adecuaciones ambientes, inscripción y preparación de procesos administrativos y pedagógicos.

3 Evaluation objectives

3.1 General Objective

Evaluate the achievement of the objectives and results of the Development Project for the Technical Humanistic High School in the municipalities of: Vallegrande; Buenas Nuevas B and D Educational Units of the Municipality of Santa Cruz (Department of Santa Cruz); Rodeo Educational Unit of the Municipality of Vacas and Municipality of Sicaya (Department of Cochabamba). Likewise, systematize findings related to Social and Political Advocacy, which the project has generated in the municipality of La Guardia.

3.2 Specific objectives

- Based on the indicators of the Logical Framework, evaluate the results achieved with the implementation of the PD BTH Project, evaluate the level of empowerment of the social subjects participating in the PD BTH Project.
- By means of a longitudinal study of achievement, through a sample that takes into account gender, minorities and municipalities, to find out how technical training has influenced the personal development of students during the time of their training and how this has contributed to generate opportunities for them to enter the labor market. Determine also the importance for BTH graduates of the transition to higher education provided for in Article 11 of the BTH regulations.
- Determine to what extent the productive technological module of the Municipality of Vallegrande has served as a model and inspiration for the authorities and civil society

leaders of the Municipality of La Guardia and the commitment they have assumed to implement the BTH in this Municipality.

- Systematize the impact on the change and allocation of funds to the BTH of the Municipality of La Guardia, based on the mobilization that FES has carried out with these actors.

4 Scope and approach of the evaluation

Participatory Evaluation of Educational Processes" is understood as the integral evaluation of the educational process; it is democratic, participatory, continuous, integral, comprehensive, cooperative, systematic, qualitative-quantitative, diagnostic, formative and result-oriented. It permanently evaluates and records, through integral and community procedures, the process of appropriation of knowledge and construction of new skills and abilities. (MINEDU (Ministry of Education), 2014)

It is based on spaces for multi-actor reflection, oriented to deepen the development of capacities, abilities and skills in young men and women for their application in life according to their needs and aspirations in their challenges and development with relevance, emphasizing productive socio-community values, strengthening positive attitudes towards social transformation, in a complementary relationship with Nature and the social and territorial environment.

4.1 Approach

The evaluation is based on a broad and dynamic qualitative approach to the humanistic technical training system of the BTH, starting from the relationship between the vocations and needs of the social and territorial context, definition of the training processes, from the synergies between the actors of the productive sector and the educational institutions, social representation in a systemic way and visualizing the management of change brought about by the PD BTH.

This approach was enriched by incorporating into the evaluation methodological strategy the Empowerment Assessment Tool EAT which is applied in projects financed by Digni. This tool measures the degree of empowerment achieved in the projects. Specifically, it measures the degree of empowerment to live a dignified life achieved by the target group. The evaluation was based on people's own analysis, through interviews with representatives of the target groups, either individually or in groups.

The evaluation focused on assessing the model developed and the results achieved in order to be considered as an experience to be incorporated in the technical education area, which we consider to measure:

- Relevance, sustainability and possible changes in relation to the context (vocations, labor market and skills or potential of the environment, local, regional and/or national)
- See articulation with planning levels (micro, meso and macro) PTDI (Territorial Integrated Development Plan), PDES (Economic and Social Development Plan). (Transmissibility, adaptability and improvements in the process).
- Analyze the entrepreneurial and innovative spirit and its impact on proactive attitudes and the generation of own opportunities.

Special attention was given to the representative segments of the "Educational Community" with attention to the gender and generational approach (women and men) beneficiaries of the project:

- Students participating in the project
- Parents involved in the Project
- Teachers Facilitators, educational administrative authorities
- Local educational authorities, civil society leaders and other stakeholders that make up the management committee that have been key in the implementation of the process.
- Representatives of FES, representatives of local communities that had knowledge of the Project, and representatives of the local communities that had knowledge of the Project.

This process is interactive, with the involvement of FES institutional actors, **generating internal capacities** in similar evaluation and monitoring processes

4.2 Methodology and instruments

The proposed methodology incorporates a qualitative analysis of the progress, achievements and challenges of the different components of the project, based on:

- ***Documentary review*** of information provided by the FES, from which the level of progress in relation to indicators of the logical framework of the PD BTH is read. (Systematization documents, PD BTH project, progress reports, strategies, among others).
- ***Review and analysis of available educational information, materials, guides, PDC (Curriculum development plan),*** provided by the UE management, in order to verify which have been the main inputs, materials and contents that contributed to the changes in the training conditions of the beneficiaries, under the criteria of effectiveness and efficiency.
- ***Collection of primary information,*** through the application of participatory methodological instruments, from different stakeholders and for different objectives.
- ***Analysis of the perceptions, experiences, reflections and opinions of key actors***, educational community, students, authorities, social organizations, Parents educational board, among others. To gather perceptions, attitudes, knowledge and practices in relation to the criteria of: relevance, pertinence, effectiveness, efficiency and sustainability, interviews (by Zoom and face-to-face) were conducted individually or in groups, as well as workshops with teachers and students of the ITTs (Information technology and telecommunications) and CEAs (Alternative Education Center) visited, according to the work plan presented.

Instruments applied

The following instruments were used to gather primary information:

- Checklist, to directors
- Scale of assessment, to teachers
- In-depth interviews: principals, management committee, teachers, ex alumni, actors of La Guardia
- Focus group, parents, students
- Evaluation round, students
- • Timeline, students
- Empowerment Assessment Table (EAT). Evaluation team.

5 Evaluation results, analysis and findings by municipality

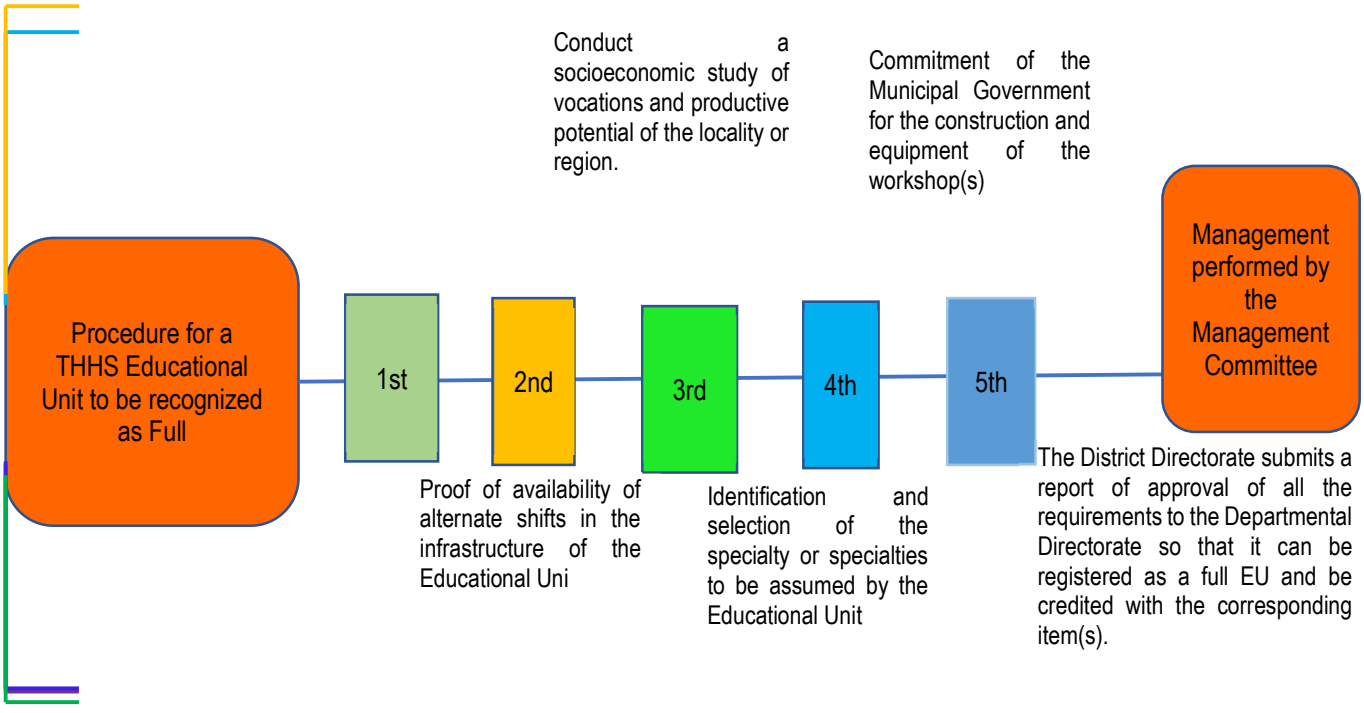
From the quantitative and qualitative analysis of the primary and secondary information, it can be seen that the actions carried out within the framework of the project contributed to the achievement of the results proposed in the design, in spite of the difficulties and challenges posed by the quarantine imposed by COVID 19. In the opinion of the groups approached by the project, the intervention promoted by FES was totally pertinent.

The project promotes opportunities to achieve technical training by supporting the implementation of the necessary conditions for the UE to opt for accreditation as full BTH as indicated in the Regulation established by the Ministry of Education, which proposes a universe of 24 specialties[2]

In this sense, it can be affirmed that the secondary level educational units participating in the project have been accredited as Full Educational Units. Clarifying that, in the case of Vallegrande, following the BTH regulations that establish that, in order to facilitate the accreditation of the Educational Units in terms of infrastructure, equipment and other requirements, a Productive Technological Module is defined, creating the MTP- BTH Ernesto Che Guevara, which includes eight Educational Units of the municipality[3].

The educational units participating in the project have achieved full BTH accreditation through the formation of their Management Committees, which followed a series of bureaucratic procedures to achieve their objective.

Steps to follow for full THHS Recognition



[2] Technical Technological Specialties – BTH Secondary: Business administration, agro-ecology, agriculture and livestock, integral beauty, wood and metal carpentry, civil construction, educational communication, accounting, graphic design, electricity. Electromechanics, electronics, environmental management, gastronomy, food industry and transformation, automotive mechanics, industrial mechanics, marketing, secretarial work, computer systems and networks, textiles, fabrics and clothing, tourism and hotel management, veterinary and zootechnics, viticulture.

[3] The module is Ernesto Che Guevara, the UE Julio Lairana implements the BTH.

Source: Based on focus group of Management Committees of educational units participating in the project.

5.1 Experience developed in the municipality of Sicaya

The communities of Sicaya and Orcoma, being in the rural area, have seen the need to promote technical and technological training, which, in the words of mothers and fathers of families, will enable male and female students the opportunity first to continue with their technical training based on the knowledge acquired and secondly, the possibility of having the knowledge to be able to start a business and join the workforce as skilled labor.

Based on the common interest of the different stakeholders of the Management Committee, these educational units have achieved full accreditation in 2019 with the capacity to offer specialized Technical Technological Training such as a Technical Humanistic High School (BTH), Automotive Mechanics in Sicaya and Food Transformation in Orcoma.

5.1.1 Evaluation findings

Institutional

At the institutional level, the educational units of Sicaya and Orcoma were accredited as full BTH in 2019, accrediting their graduating students with an intermediate technical degree.

A management committee was formed, headed by the Municipal Mayor, the Municipal Council, the District Directorate, the Director of the Educational Unit, the Parents' Council and social organizations, all of them aware of the importance of technical-technological training for the community's young people. Consolidating the environments, equipment and teachers' items for the technical career.

The BTH of Sicaya and Orcoma, in order to start with the technical-technological training, had to make a financial contribution from the parents to hire free profession teachers specialized in automotive mechanics and food processing engineering, as indicated by a mother "…*to start our children's education we had to make an effort and hire free profession teachers because of the difficulty of finding teachers with this specialization" (Mother of Sicaya)*

Sicaya and Orcoma have so far accredited 72 students with the title of intermediate technician.

Educational

In the educational field, Sicaya and Orcoma as a full BTH, as of March 2022 has a curricular offer, item for teachers, for automotive mechanics and for food processing. With a workload of 32 hours and 3 teachers for TTG (General Technical Technology) training and 96 hours for TTE (Specialized Technological Technique) per specialty. With the capacity to certify students at the intermediate technician level.

Curricular proposal

Regarding the curricular proposal offered by the Ministry of Education for technical-technological training in the specialties of Automotive Mechanics and Food Transformation, a series of theoretical contents have been decontextualized, ambiguous and extensive in relation to the time load foreseen for the training of students. Therefore, when they are developed by teachers in the classrooms, they have been adapted according to the characteristics and needs of the communities, in order to promote a productive education.

… I have seen that, specializing in food processing, I have had to review a lot of documentation, ..., because it was very ambiguous, ... what I have proposed is to emphasize some things, because it is a remote community, there are things that are not easily available ... I would propose to modify some things that we have been given in the syllabus. (Prof. Lucero, Orcoma)

... the contents are very complete, but it seems a lot to advance in such a short time, I have tried to dose the contents as much as I could. The contents are not in accordance with the progress, so I have had to elaborate my own content that is in accordance with the students.... (Prof. Marcelo, Sicaya)

A critical point that is pointed out about the subject of Specialized Technological Technique is the amount of content and the distribution of the time load, which is sometimes inadequate and produces unsatisfactory results, likewise, the teachers indicate that "*it would be good if they passed the subject of specialized technological technique earlier because more hours are needed to cover everything, maybe from fourth or third grade would be better, we would see more results...*" (Prof. TTG, Orcoma).

Another difficulty that has been seen is that students have not been able to articulate the contents of General Technological Technique, with an important time span of 4 years of schooling, with the contents of the Specialty. This could be due to the fact that the teachers who take this subject do it to complete the hours they lack without being specialists in the subject. Likewise, the subjects of Specialized Technological Technique, as a rule, must be a normalist teacher, who has been trained in the area of the specialty.

In the case of Sicaya and Orcoma, they are teachers who have recently been trained in the specialty, so they are learning together with the students. "... I am a mathematics teacher, I specialized in Oruro as an automotive mechanic, it is my first year teaching this subject, but we are learning and we are learning more..." (Prof. Automotive Mechanics)

Didactics

The pedagogical practice carried out by the teaching staff of Sicaya and Orcoma in relation to technical-technological training is closely linked to the curricular offerings in each specialty.

A theme that is highlighted in the focus groups is the relationship that should exist between theoretical content and practice. The time spent putting theoretical content into practice is appreciated by students and parents. As indicated by a student from Sicaya: "...Everything is based on practice, we like to practice more, not so much the theory", highlighting the fact that learning by doing is a very important part of the learning process.

The food processing teacher indicates:

… I try to change the methodology, almost every trimester, because the kids get tired, it is a little complicated to teach in the afternoon when the kids have already had classes in the morning. That is why I always try to make the classes as practical as possible, and the theory I have prepared a booklet where they can read and see the links and kr, so they can watch the videos, then let's say they read it a little for a class and in the class, we explain while we are doing it, because I see that while they are doing it they are more active? (Prof. Lucero, Orcoma)

Regarding teaching-learning strategies, the teachers point out that they use technological resources (such as audiovisuals), didactic exposition, demonstration, experimentation and practice. The teachers insist that more practice activities are needed in the BTH training process, as indicated by the Sicaya automotive mechanics teacher

> *… Once we advance the theory in the classroom, we go to the workshop and there both the young people and the young ladies carry out the practice, and they are more interested because they are seeing the theory in practice and they can touch and see.... With the support of FES we have been able to advance more, because since there is equipment we can see and observe what we study in theory (Prof. Marcelo Sicaya)*

Learning by doing has been seen as a requirement of technical-technological training, both by parents and students themselves. Those who indicate: "*At the beginning we as parents have hired a teacher of automotive mechanics who has his workshop here and is a free profession, he did more practice with the students, now he has changed, he gives more theory with the new teacher, we would like him to give more practice, this is a weakness when the teacher is not a specialist..." (Mother of Sicaya).*

Environment and equipment

Workshops are appreciated as spaces that allow the application and integration of theoretical knowledge in practice, learning by doing. Therefore, the fact of having adequate environments and equipment facilitates the teaching-learning process of the automotive mechanics specialties in Sicaya and Orcoma with food processing.

Despite having adequate environments, there are no adequate signage in the workshops. There are no regulations or standards for working in the workshop environments, and there is a lack of organization of equipment in the environment and a lack of attention to industrial safety

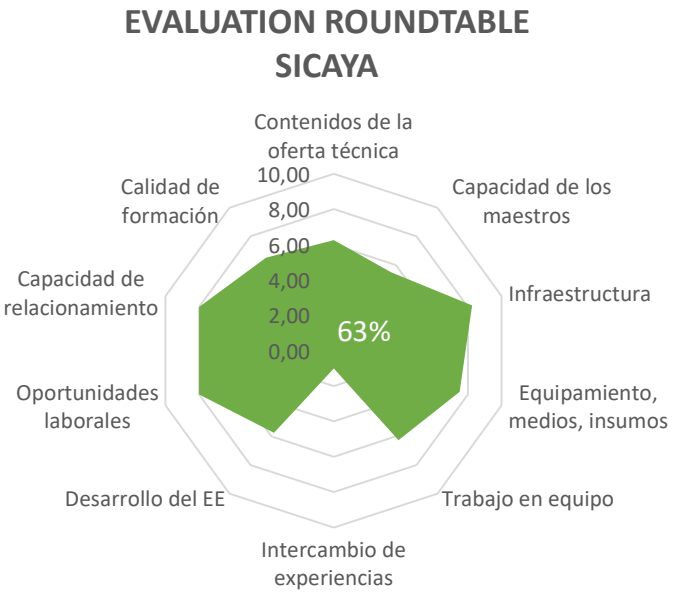
Evaluation

The evaluation applied in both specialties is procedural and seems to be the appropriate way to assess students' achievements in the different technical baccalaureate programs.

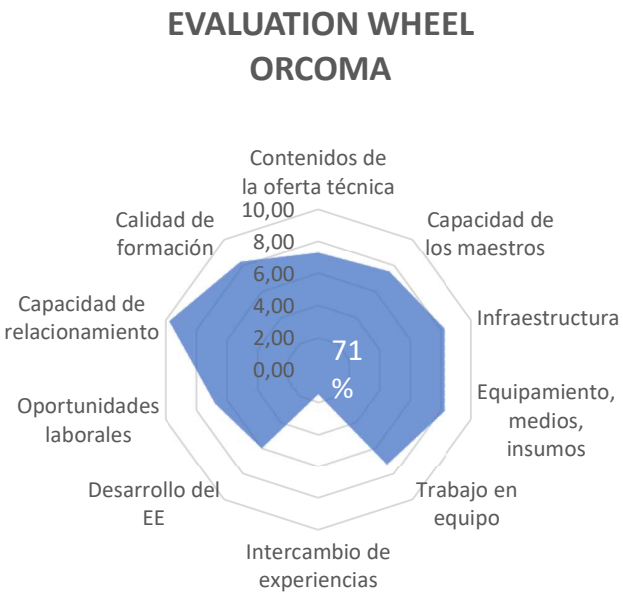
In the case of Sicaya, the evaluation was carried out through demonstrative activities, the assembly of engines and the oral presentation of the characteristics of an automobile and the practical presentation of a welding product. In the case of Orcoma, the practices and research carried out by the students for the presentation of their degree projects have been didactic strategies that allow linking theory with practice and achieving knowledge that can be applied to the solution of problems and the development of projects in the technical field of high school.

Student perception of the educational environment at BTH Sicaya and Orcoma[4]

Regarding the perceptions that 6th grade high school students have regarding the training they receive at BTH, the following can be visualized.



Sicaya values advances in infrastructure and job opportunities, but pays little or no attention to the exchange of experiences to strengthen the processes of integral human formation

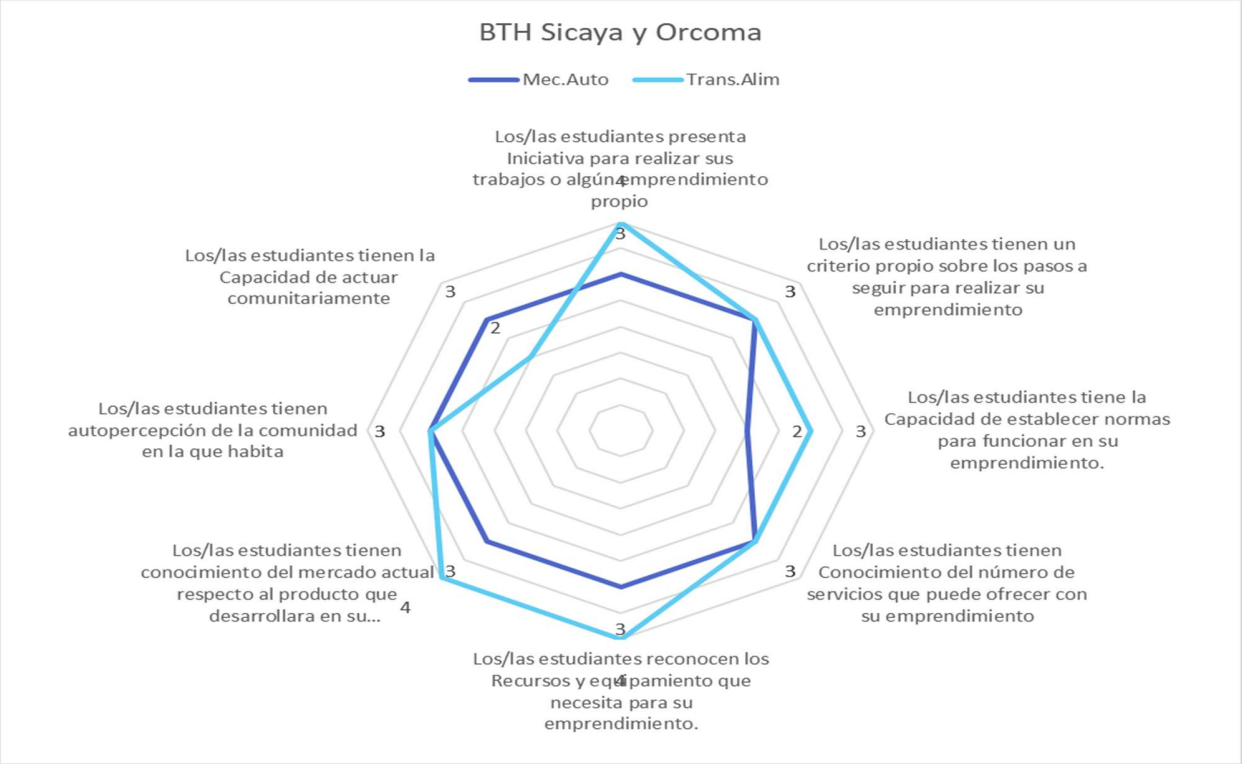


Orcoma values advances in relationship capacities, infrastructure and equipment, with little or no attention to the exchange of experience to strengthen the processes of integral human formation

Scale of evaluation of the students developed abilities

The teachers of Sicaya and Orcoma were surveyed on the capabilities developed by the students in the entrepreneurial spirit and their impact on their environment, with the following results.

[4] This technique was applied to students in all the municipalities. It should be noted that this graph, in addition to showing restrictions and progress, shows the potential of each training offer.



In Automotive Mechanics, there is regularity in their vision of entrepreneurship, although with a certain weakness in regulations. In Food Processing, there is greater satisfaction, although with little capacity to influence their environment.

5.1.2 External influencing factors

External influencing factors:

Positive external factors

- Law 070 "Avelino Siñani - Elizardo Pérez", enacted in 2010, establishes that all educational units must adapt to the new educational model so that all high school students obtain an intermediate technical degree in one of the specialties to be taught.
- The support of FES in advising on the administrative management to meet the requirements for recognition as full BTH.

Negative external factors

- The COVID 19 pandemic, which in 2020 led to the premature closing of the school year. And 2021 with distance learning did not allow to address the theoretical and practical content of each specialty in its entirety.
- The bureaucracy at the time of completing the procedures for recognition as full BTH and allocation of Government teacher´s contact for teachers of the specialty
- Access to external inputs for internships in the food processing specialty.

5.1.3 Internal influencing factors

Positive internal factors

- The formation of the Management Committee, which allowed continuous monitoring for the recognition of full BTH, the provision of infrastructure and equipment for the workshops.
- The contribution of parents to the hiring of teachers when needed.
- The proactive attitude of teachers to build their own learning guides, to continue training, and to seek strategies for dialogue between theory and practice
- The supportive attitude of the students when sharing and carrying out practical work in groups.

Negative internal factors

- The timetable means that students have to attend classes once or twice a week continuously in the morning with humanistic training and in the afternoon with specialized technical training, which means that students arrive tired to class.
- Ministry curriculum content unsatisfactory to student requirements.
- The limited economic resources of parents when acquiring external inputs for the practices.

5.2 Experience developed in the municipality of Vacas

The Rodeo community received support from the funder since the construction of the Rodeo School. Being in the rural area, it saw the need to support this educational unit to become a full BTH, for two reasons: First, because of the long distances that students have to travel to receive technical training in the urban part of the municipality of Vacas, putting the safety of young people in the community of Rodeo at risk. Second, to promote technical and technological training for the students as a tool to face the challenges of the labor market.

The Management Committee, due to the perseverance of the local actors, has achieved that the UE is accredited as fully capable of offering specialized Technical Technological Training such as a Technical Humanistic High School (BTH), Automotive Mechanics and Gastronomy.

5.2.1 Evaluation findings

The Rodeo educational unit has been accredited as a full BTH in 2020, with the capacity to offer specialized technical-technological training in automotive mechanics and gastronomy, being this year 2022 the first promotion to be accredited with an intermediate technical degree.

In the general technical-technological area there are 32 hours and three teachers, in the specialized technical-technological area there are 96 hours and one free profession teacher with training in automotive mechanics engineering, and one free profession teacher with training in gastronomy.

The BTH was launched in its beginnings, with the hiring of teachers with the contribution of parents. As of March 2022, there will be items for the master and teacher of specialized technical technology in automotive mechanics and gastronomy, respectively. And there will be a first promotion with 16 students who will obtain their intermediate technical degrees.

Institutional

At the institutional level, a management committee was formed under the leadership of the Mayor of Vacas in continuous coordination with the director of the Rodeo Educational Unit, who with the support of the regional Central of men and women (Bartolinas) of the Rodeo Farmers' Central, parents of the Educational Council and FES have managed to raise awareness among the Municipal Council and the Vacas District Directorate of the importance of technical and

technological training for the male and female students of the Rodeo Farmers' Central and their communities.

- This management committee had the particularity of being headed by the social organizations together with the director of the educational unit managed to coordinate with the Mayor, together they achieved their accreditation made a great effort in:
- Follow-up of the procedures to achieve accreditation.
- Obtain the support of the Vacas District Directorate.
- Obtain the counterpart from the Mayor's Office
- Contribute with its own counterpart of approximately 10,000 Bs, to enable adequate environments for each workshop.
- With the support of FES achieve the equipment of both environments.
- Obtain Government teacher´s contract for teachers.
- Increase the equipment of its workshops with resources generated by the BTH itself.

The dynamics of the Management Committee focused on the accreditation of the BTH, achieving the environments, equipment and teachers' items for the technical career. Once this was resolved, the management committee continues, despite the entry of new authorities, who are encouraged to continue supporting the BTH in order to achieve its self-sustainability.

Rodeo's educational environment

With regard to education, the following points have been made visible:

Curricular proposal

Although there is a curricular offer elaborated by the Ministry of Education, the teacher of the educational unit indicates that the contents are disorganized, which is why the curricular contents have been reorganized according to the demands of the labor market in the case of automotive mechanics.

> *… there is the curricular content from the Ministry, but they are ... a bit messy there are parts where the student has to know first what is the base, but ... it jumps to the top, and the part of the base is even further back. So, in order to develop it, I have done it according to what corresponds, so first what is the base, the suspension part, for example, then comes what is part of the engine, then from the engine part comes the electrical part and so on, according to what must be learned, so that part I have ordered (Prof. Automotive mechanics)*

Didactics

The teaching methodology applied in the automotive mechanics specialty, moves between practice and theory, allowing all students to participate in the practices. Starting from the practice motivates the student to want to learn more.

Another characteristic of his work methodology is that he has managed to involve the community by offering his car repair services for pedagogical purposes so that students learn by doing.

As the teacher is a freelance professional dedicated to the BTH specialty area, he has demonstrated that the training given to the students is relevant. He has the initiative to reorganize the theoretical content proposed by the curricular content of the Ministry according to the requirements of the practical training of automotive mechanics.

> *… the students themselves said that they don't like a lot of theory, that they are not learning anything, so seeing that, I have made my own initiatives to rescue more students. So, we are going to do more practice, we have asked for cars, I have even had my own car disassembled and assembled so that they understand, so that they will like it … Then the students said that if every day was practice then we could come every day, they said… Then we requested cars through the director, we advertised, saying that parents could bring their cars, we would fix them for free. I only asked for patience so that with that car I could explain the parts, the system, how it works...for each class we had up to two cars, one was not missing, for that I planned myself at the beginning… If I had two cars, I would go straight to practice; if I have one car, theory is fine, but I have to advance as well. Theory and then I would come to the car and with that I would fix it... (Prof. Automotive Mechanics)*

In the case of Gastronomy, the didactics focused on practice at the same time as theory, where the teacher explained by doing, motivating the participation of the young ladies to apply their knowledge continuously, participating in municipal fairs and even offering a snack service at activities carried out by the Mayor's Office. This is what a student says: "I have learned a lot about gastronomy and now I can make national food, we have also learned to innovate with the products we have here...we have participated in several events and we have learned a lot" (Student, Rodeo).

A disadvantage between the advancement of curricular content and didactics is time, the time load is a disadvantage because it is not enough to achieve better training.

> *…In the case of the BTH for example my contract is for 48 hours, ... then, for me the time is not enough, until I call the attendance, check papers, the time passes, and within that I have very little time left for the students, they are also tired because from the morning they are studying until 13:00 in the afternoon and then other classes, they are already tired. Time is not enough for me, that's a weakness... (Prof. Automotive Mechanics)*

Environments and equipment

The necessary infrastructure for the different specialties has been key for the students to have an appropriate space to carry out their practices, this was possible with the support of the municipal government, students, parents who contributed with a counterpart in economy and labor.

The technical equipment necessary for the specialty, makes it possible to have access to the necessary tools at the time of teaching the technical classes, this was achieved with the support of the municipal government, FES and contribution of the parents and own resources generated by the BTH. Such as: Purchase of an automobile for the students to practice, the purchase of two engines, and the purchase of a new car for the students.

Although there are adequate environments, they lack signage and management and biosafety standards detailed in each of the workshops, as well as a perimeter wall around the classrooms, as a safety measure for the care of the tools and automobiles used in the practice.

Evaluation

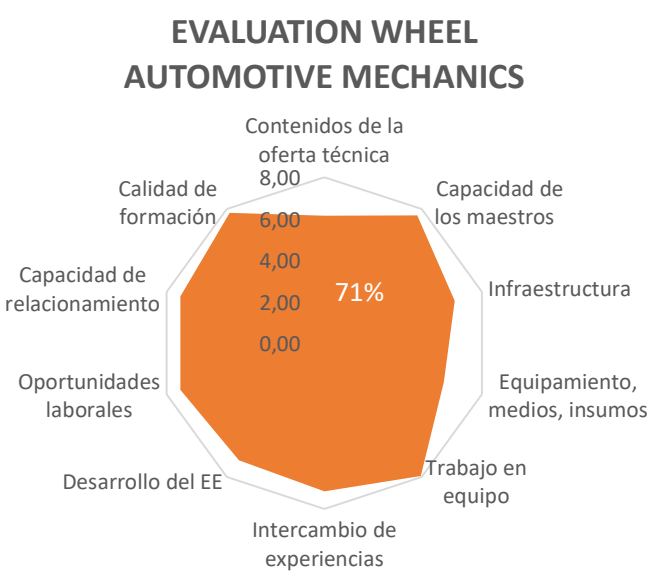
As the automotive mechanics career is a response to the needs of the community, it has motivated the evaluation of the learning process to be based on undergraduate projects where the student reflects his/her entrepreneurial spirit.

Thus, the students have managed to build a Bugui as their final project and this has motivated the fifth-grade students to set high goals for their education.

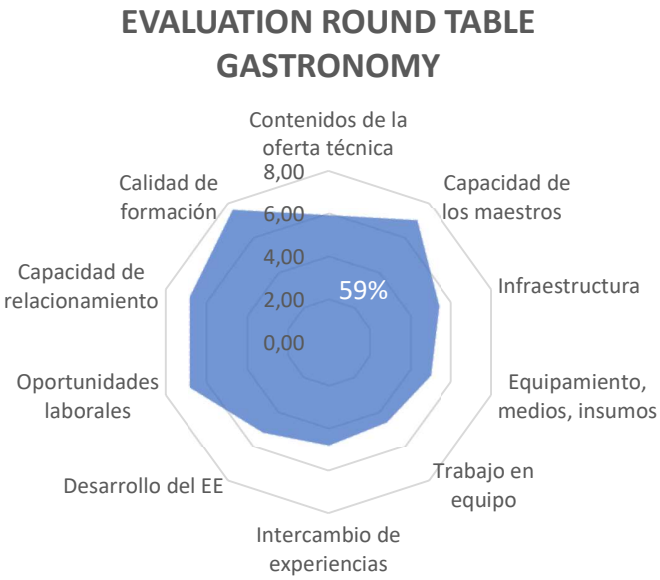
In the area of gastronomy, the ladies have demonstrated their ability to serve refreshments for the municipality's mayor's office, generating their own resources for their supplies.

At each step, there has been a continuous assessment where students have demonstrated their learning.

Students' perception of the educational environment at BTH Rodeo

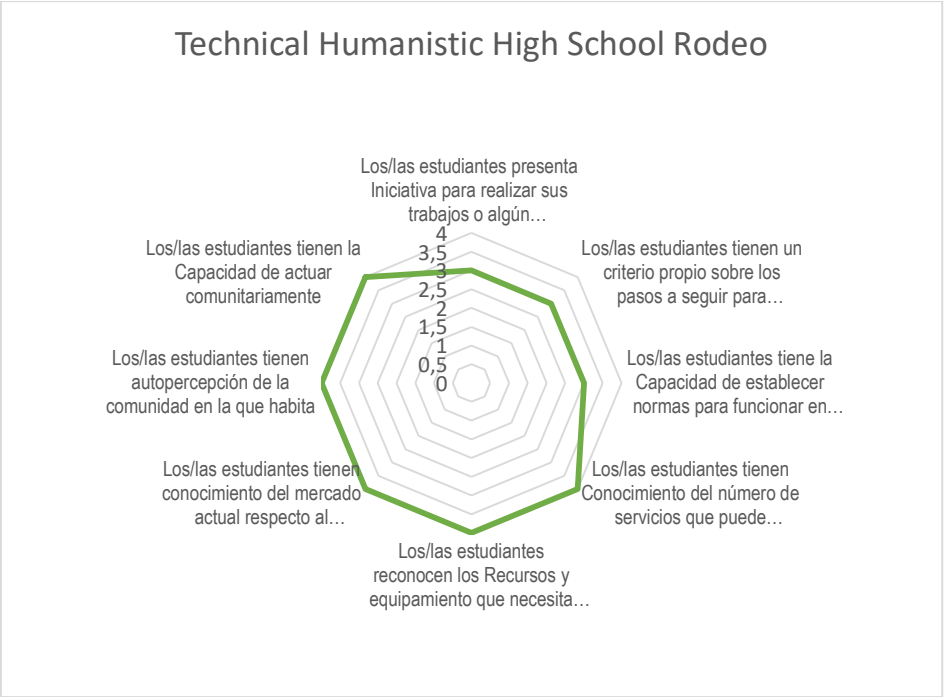


Rodeo shows 71% satisfaction or progress and requires attention to improve the thematic content focused on greater application of knowledge for the provision of services



In the case of Gastronomy, there is a 59% satisfaction rate, with a higher valuation of the job opportunities offered by this specialty, and a demand to improve the contents, which must surely be adapted

Rating Scale of Capacities developed by Rodeo Students



In Rodeo, there is a regularity in its vision of entrepreneurship, although with a certain weakness in generating entrepreneurial initiatives and the necessary steps to implement them.

External influencing factors

Positive external factors

- At the fifth call that is declared deserted, a free professional who is accredited with training in the specialty can be hired, whereby an annual contract can be made so that he/she can practice as a teacher.
- Distance and relationship with the town center of Vacas, due to the dispersion of communities and routes that students must travel.

Negative external factors

- The COVID 19 pandemic, which in 2020 led to the premature closing of the school year. And 2021 with distance learning did not allow to address the theoretical and practical contents of each specialty in its integrality.
- The bureaucracy at the time of completing the procedures for recognition as full BTH. The Ministry of Education´s delay on of granting a government teacher´s contract for specialized teachers.
- The disinterest of some authorities in getting BTH accreditation on track.
- Few Education teachers, with relevant training in the area of specialty.
- The hiring of freelance teachers on a one-term contract.

5.2.2 Internal influencing factors

Positive internal factors

- The formation of the Management Committee together with the social organizations made it possible to carry out continuous monitoring for the recognition of full BTH, the provision of infrastructure and equipment for the workshops. And to obtain the support of the municipal government and the District Directorate.
- The contribution of parents to the requirements of the BTH environment, hiring of teachers when necessary.
- Teacher's proactive attitude to build their own learning guides.
- Teachers seek methodological strategies that start from practice and are complemented by theory.
- The supportive attitude of the students in carrying out a common project.
- The proactive attitude of the director of the educational unit.
- Openness of the teacher to motivate students' entrepreneurial spirit.
- Visualized the possibility that the THHS can be self-sustaining.

Negative internal factors

- The distribution of the timetable means that students have classes once or twice a week continuously in the morning with humanistic training and in the afternoon with specialized technical training, which means that students arrive tired to class, or late.

5.3 Experience in the municipality of Vallegrande

The experience developed in the municipality of Vallegrande, with the Ernesto Che Guevara Module began in 2018, has 8 educational units concentrated and recognized as full educational units, it has been a process of joint construction headed by the management committee formed by social actors, have so far managed to consolidate the specialties: integral beauty, automotive mechanics, carpentry, food processing, gastronomy.

This process began with the district director as chairman of the management committee and as a module of BTH, going through the path of socialization and awareness of parents, so that they can visualize the advantages of technical and technological training in the lives of young people.

As a result of the actions carried out by the Management Committee, we have been able to provide the appropriate environment for the Module, which operates with 7 specialties equipped with the necessary tools and machinery to provide practice spaces for the students. Regarding the Government teacher´s contract of the teachers: there are 3 qualified teachers ™, 2 of Superior Level, 2 of free profession. Currently, 1,500 hours of the 1,920 hours they should have been covered. By 2023, it is already guaranteed to complete the remaining hours from the Ministry of Education (Prof. Jimmy, Vallegrande)

5.3.1 Evaluation findings

Institutional

An industrialist was in place, which has facilitated the articulation of workshops for the BTH. The formation of the Management Committee has been key to achieve the recognition of the educational units as full BTH, the provision of the Module environment, the equipment of the 7 workshops, the items and the hourly load for the specialties.

Currently, there is an educational council of parents, which is now called the Parents' Community Social Board, and a student government.

Education

Curricular proposal

The contents are important because they establish the learning to be achieved by the students, as long as they are complemented with the general knowledge required to develop skills and abilities specific to the specialized technical training being studied.

In this sense, it has been shown that although the Ministry of Education proposes a basic curricular content, there is a need to enrich it with content that the teachers investigate. Thus, they indicate:

> *… we work with documents from the ministry, as teachers we look for information to elaborate our contents. In some quarters there is only one content, in the dairy part, and I see how to adapt it... (Food Processing Prof.)*
> *… The contents that come from the ministry are insufficient; we must increase them according to the specialty. I look for and must incorporate, remove or merge information … (Agroecology Prof.)*
> *… I have adapted the contents, according to the requirements of the student (Carpentry Prof.)*
> *…. The agenda presented by the Ministry of Education has disorder in the correlation of topics, there are topics that should be taken in the last year are in 5th grade, so we have adjusted, ordered the contents given by the Ministry. (Automotive Mechanics Prof.)*
>
> *…We have adapted it according to our criteria, we have adapted it to our reality. For example, in the international context there are no inputs to teach young people, so we have first taught the reality here.… (Gastronomy Prof.)*

Based on the support provided by FES, the teachers were also in the process of constructing guides for each specialty for both the fifth and sixth grades of secondary school.

Didactics

The methodology organizes the knowledge, skills, abilities, values and attitudes that are indispensable for the development of the skills of the specialty. Therefore, the methodology followed by the teachers follows the same guiding thread, which is the continuous dialogue between theory and practice, as follows:

> ***....** It is not always theory, we arrive, we have 15 minutes, we greet each other, we talk, I explain how we are going to do the practice, I organize them in groups, or they work among colleagues … (Integral Beauty Prof.)*
>
> *When there is a heavy practice, the theory is done at the beginning when fatigue sets in, I try to put a dynamic in between...so that the students are encouraged… (Gastronomy Prof.)*
>
> *When I see that there is a lot of theory, I talk to them about why the theory of the subject. Then we go to practice by explaining (Carpentry Prof.)*
> *A little bit of theory at the beginning, basic concepts, theory is fundamental, then the practical part, he made demonstrations, we see some videos to reinforce the topic. In*

the final part we do the practice of how the work should be done. (Automotive Mechanics Prof.)

The theory and practice must go hand in hand... we have a plot where we work, we go to the plot for a while and then we do the theory. (Agroecology Prof.)
If there is a lot of theory, we do a little practice and sometimes if the practice takes more time, we give less theory. (Food processing Prof.)

Likewise, the students request that there be more practice when advancing the contents of the specialty. At the time of practice, teamwork and solidarity among the students is also encouraged.

The characteristic of the Valle Grande BTH is that 6 of the specialties are administered by the UE Julio Lairana, each of the workshops in the Ernesto Che Guevara Module, each specialty has the appropriate environments and equipment to carry out an adequate teaching and learning process.

It should be noted that, although there are adequate environments, they lack signage and handling and biosafety standards for each workshop.

Evaluation

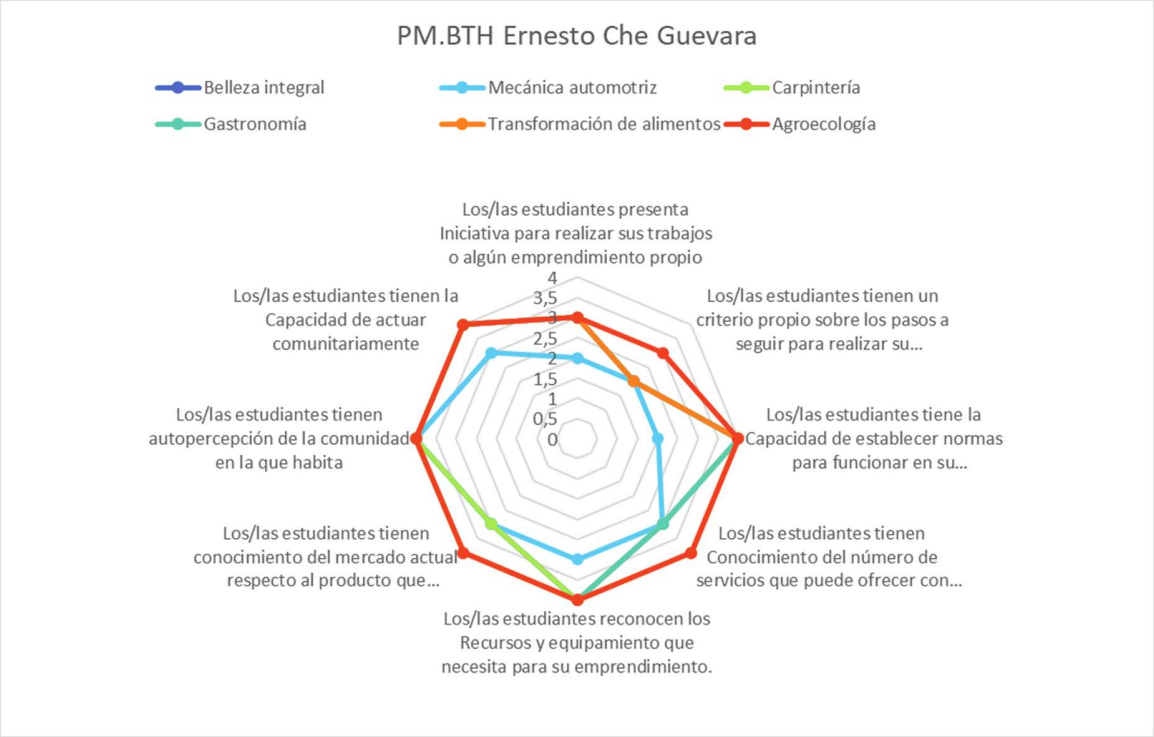
It is a continuous evaluation, the practices that are continuously performed are evaluated, taking into account theory and practice. In addition, group work is evaluated and assessed, valuing the individual participation of each member.

In the case of the evaluation of the undergraduate projects, students in groups of 4 to 6 students presented their undergraduate projects, both the theoretical and practical parts:

…The presentation of the degree works we have done exposing our research topics, which we have worked during the third quarter, we have put everything we have learned, demonstrating with photographs, we have also made the Bioles (organic foliar fertilizers) … (Agroecology student)

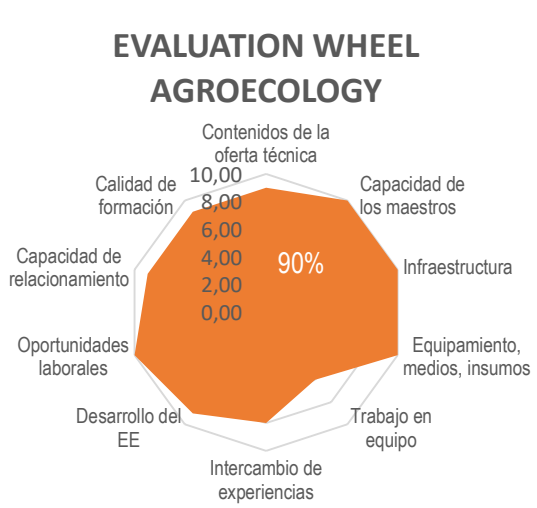
From what has been analyzed, it is possible to indicate that the students have succeeded in sowing the seed of entrepreneurship in the students.

Scale of evaluation of the skills developed by the students

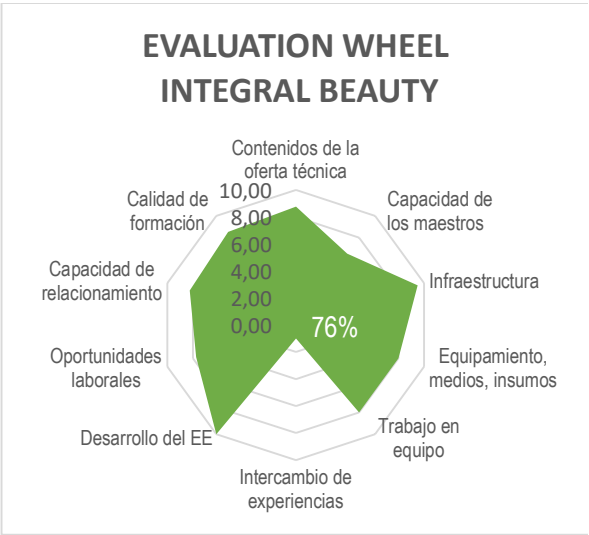


Source: Prepared based on the focus group of teachers of the MP(Public Ministry) -BTH Ernesto Che Guevara. It will be evaluated on a scale of 1 to 4. (Where 1 Never, 2 Sometimes, 3 Often and 4 Always)

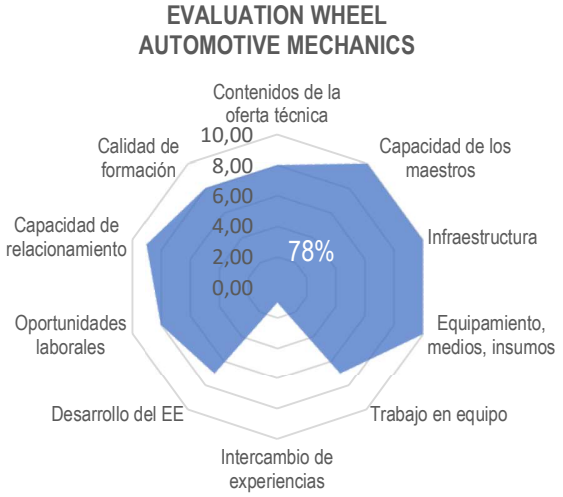
The module shows that the Agroecology career has a higher degree of satisfaction and the automotive mechanics career has less development in terms of students' expectations, noting the need to work on aspects that generate security in decision making to guide their projects and initiatives.



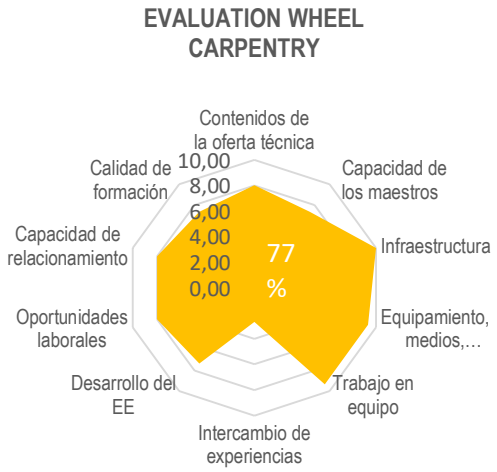
This race is operating at 90% progress and satisfaction, and the factor that requires the most attention is teamwork to achieve synergies.



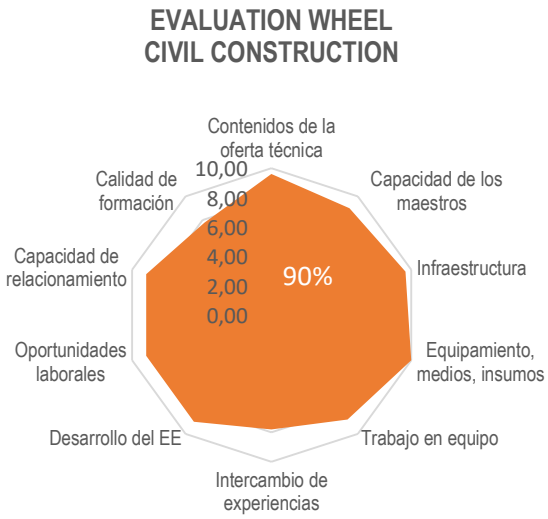
In this career there is a 76% satisfaction rate, and the factors that merit high attention are the possibility of generating exchanges and strengthening the teacher's capabilities



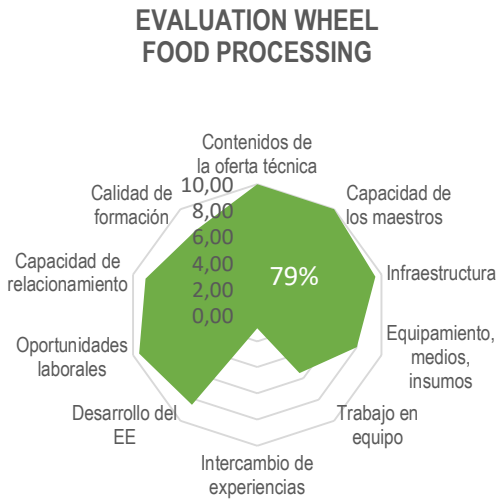
There is 78% progress, but aspects such as exchange, teamwork, EE development and attention to the quality of training will be at a good level.



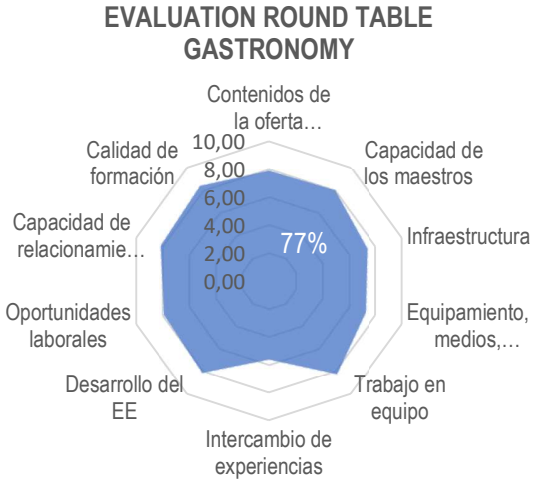
77% of progress is visualized, showing high infrastructure factors, equipment, teamwork and high attention to the exchange and mobilization of experiences.



It is the offer that has an operation at 90% with high regularity in its factors that if it pays attention to quality training to the details, it will achieve good progress.



We see a 79% satisfaction rate, with advances in job opportunities, content and teacher capacity, lacking attention to the exchange of experiences, teamwork and equipment.



Gastronomy visualizes a 77% regularity with developing criteria and if the exchange or mobilization of experiences is improved, it will be more successful.

5.3.2 External influencing factors

Positive external factors

- The support of FES to organize the Management Committee and to support with the equipment of the workshops of the specialties
- Support from authorities such as: District Directorate, Mayor's Office, Municipal Government.

Negative external factors

- Bureaucracy at the time of processing the recognition and registration of specialties in the system.
- The COVID 19 Pandemic quarantine that did not allow for adequate training of students.

5.3.3 Internal influencing factors

Positive internal factors

- The predisposition of the actors of the educational community to carry out this Project.
- To have the rooms and equipment to enable 7 specialties.
- Pre-eminence of equity principles.
- Promote interaction between students from different schools, generating a spirit of solidarity.

Negative internal factors

- The participation of parents in the education of their children.
- The schedule is too heavy which makes students tired when it is time to attend classes.
- The number of hours in the specialized should be higher.
- Lack of maintenance policies and long-term sustainability of the module.

5.4 Experience developed in the Department of Santa Cruz

The experience of Buenas Nuevas, at the beginning was like a reference, it had already been working for many years. Buenas Nuevas, Santa Cruz started with technical careers in hairstyling, mechanics, carpentry, and they already had these degrees with their agreement. These educational units of the project had to see how Buenas Nuevas worked, it was like a reference at the beginning and then it was seen that they requested a renewal of their fixed assets, and there they entered again as beneficiaries, in the 3rd year that they started.

It is important to mention that Buenas Nuevas is a school that has been constituted from a flood since there were houses and they built an urbanization, from which Plan 3000 is formed on the banks of the Piraí river, with the management of the Brazilians who achieved the support of the cooperation of Sweden, Finland and Norway who with the support of an agreement supported the constitution of the UE, which at the time was a unique model in Santa Cruz. This school is 35 years old and it was really a reference at the time for technical training, it had all the infrastructure, now it is falling apart, there is no maintenance, there is no one to take responsibility, there is no support from the municipal government, and it deserves an administration in this regard. In this period, they took an exam to the students, to see their aptitudes, what career they were good for and the training was by areas.

The educational unit was initially constituted with 14 technical careers, among which we can mention: mechanics, electricity, welding, carpentry, craftsmanship, gastronomy, dressmaking, beauty, secretarial work, among others. At that time, these careers were only certified as skilled labor and were classified as a training institute; they were not accredited as middle-level technicians.
In 2010, following a meeting of students, parents and teachers, it was decided to split the educational unit into morning and afternoon shifts. Since then, the morning shift has items and the afternoon shift is partially paid by the parents, who pay for the items of the teachers of the technical specialties.

5.4.1 Evaluation findings

Institutional

Regarding the experience at the institutional level in Good News B and Good News D, it has become evident that it has not been possible to form a Management Committee with the support of social organizations. The procedures for recognition as a full BTH, although it has been a reference for years, have been carried out by the directors of the educational unit.

As a full BTH it has been recognized four years ago and is starting to certify as medium technicians the specialties of: Integral beauty, electricity, gastronomy and health and first aid. With the support of FES in 2019, we have had a good equipment in the careers that are health, gastronomy, nursing and integral beauty.

Four specialties were enrolled in the system: for Good News B and D. There are only items for Good News B, in the case of Good News D, the parents of the afternoon shift are the ones who paid for the items of the technical part.

Education

Curricular proposal

As Buenas Nuevas B y D is a reference in technical-technological training, it has been able to consolidate a curriculum that meets the expectations of its students. Although it follows the guidelines set forth by the curricular content of the Ministry of Education, the teachers have managed to build a curriculum that meets the expectations of parents and students.

> *The contents that we learn have their application in our daily life in electricity we can apply it in our homes, as in our practices it is good what we learn here (Antonio, Electricity)*
> *In Gastronomy we not only study how to cook, but also the history of gastronomy, production costs (Marlene, Gastronomy).*
> *The knowledge we learn in the area of Health and First Aid is very useful for us to be able to help anyone who needs it at any time in our lives, whether in our home or in any place where a person needs our help (Katerine, Health and First Aid).*
> *In Electricity, emphasis was placed on contents oriented to mechatronics, new technologies, installation of intelligent alarms, robotics (Prof. Electricity).*

Didactics

As for the methodology applied by teachers of specialized technological techniques, it is a continuous interaction between theory and practice in order to generate significant learning for the students

> *The teacher always motivates us to practice, we work in pairs to be able to practice, at the same time that we have advanced in theory, we practice with our models... (Noemí, Integral Beauty)*

In the case of health and first aid, hospital internships have been carried out, so that students can experience the theoretical contents with practice in the same reality

> *In the case of health, the hospital internships were important, especially with private entities, because with public hospitals it is very bureaucratic and difficult, you have to*

ask for permission and paperwork from SEDES and it is very complicated... (Prof. Health and First Aid).

Another methodology that is used by the integral beauty teacher is to make the students form groups of two young ladies, who have to offer their services as stylists outside the educational unit, so that they can experience the practice in real life, for this, they have to plan their marketing, and perform the service properly contemplating their expenses and their work.

Environments and equipment

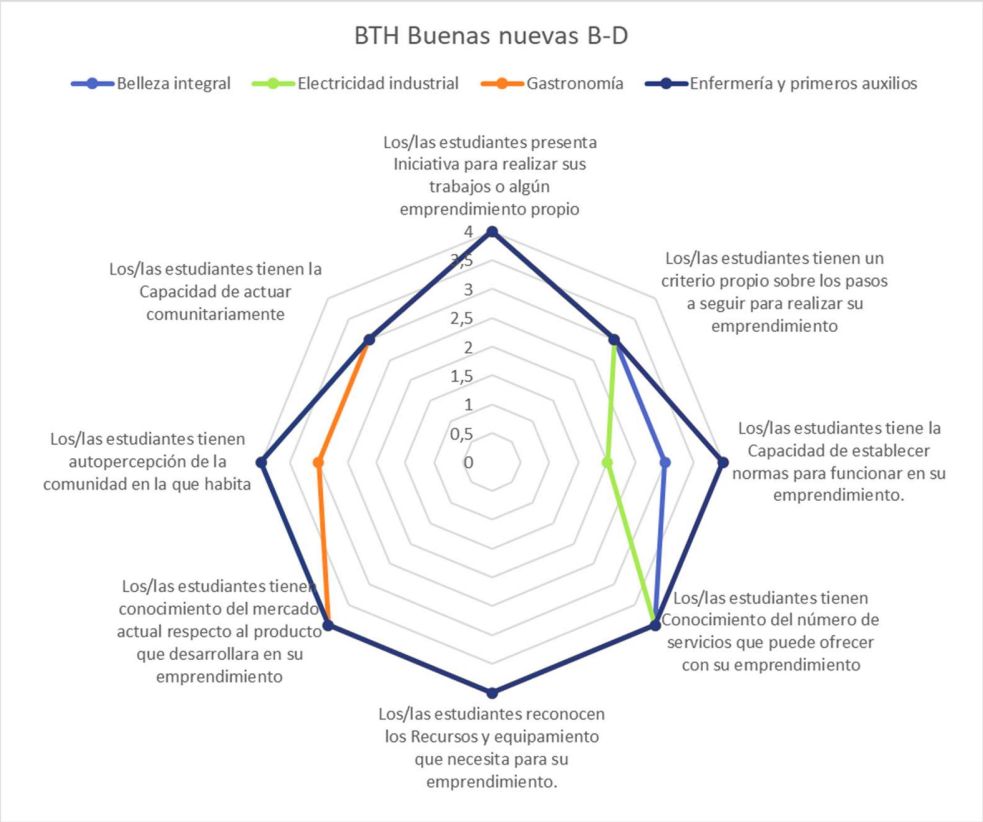
The environments in 2021 have been adequate and improved, the equipment of the specialties offered at the BTH has been renovated, with the necessary machinery and tools for the teachers to carry out the practices with the students

Although there are environments and equipment,

Evaluation

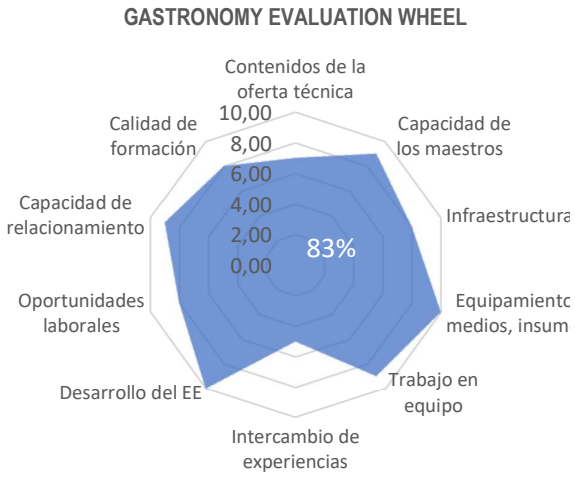
The evaluation is cumulative, measuring knowledge, practice and, at the end, the defense of a degree project in which students have to demonstrate both their theoretical and practical knowledge that they have developed during their training. Previously it was individual, but now, due to COVID, it is still group-based.

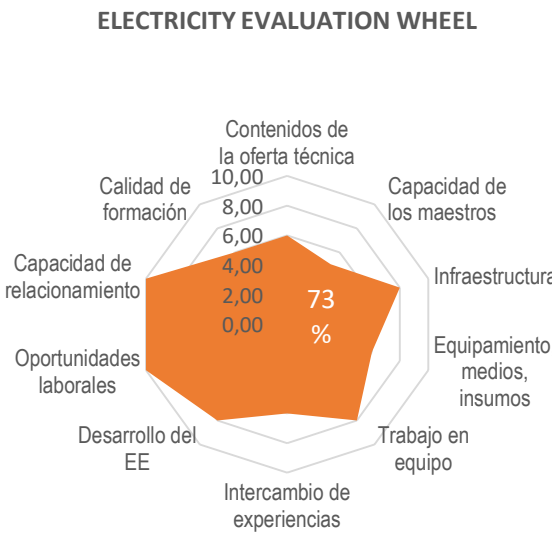
Scale of evaluation of the skills developed by the students



From the perception of the teachers, in Good new it is observed that there is a greater option in 6 factors in Nursing with greater regularity while in electricity they require attention in regulations to direct initiatives and relatively in integral beauty, and gastronomy is the one that has to pay attention in the environment of its community.

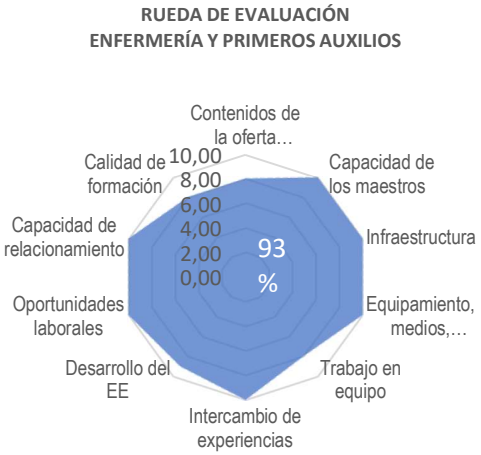
Students' perception of the educational environment

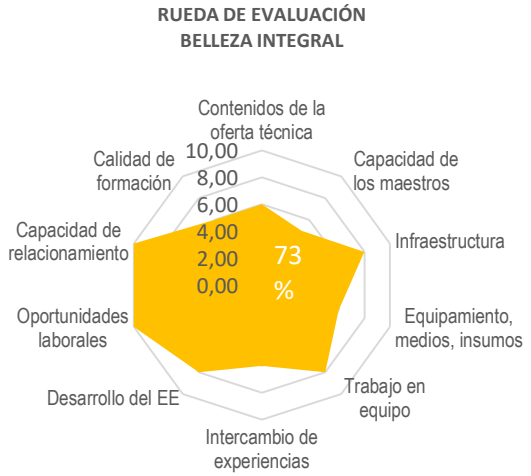




83% of performance is visualized, with an average in its components and should pay more attention to knowledge exchange or mobilization activities.

With a 73% progress rate, it is indicated that there are factors such as exchange, teachers' capacity and equipment, means and inputs in this specialty.





At a 93% capacity in its advancement, it is a career with greater regularity and it must improve teamwork, quality of training and contents, for greater satisfaction.

With a capacity of 80%, it denotes a high level in the contents and to refine a little the quality of training and capacity of the teachers.

5.4.2 External influencing factors

Positive external factors

- The regulations that make it possible to enable the BTH

Negative external factors

- Absence of a multi-actors management committee, including authorities from social organizations and authorities of the Santa Cruz municipal government.
- Bureaucracy at the time of registering specialties with the Ministry of Education.
- There is a lack of hours. In the specialty part, currently the Ministry adds the General TT training of 3rd and 4th year, plus the Specialized TT training of 5th and 6th year. Plus those of Specialized TT of 5th and 6th, with the approval of the same ones, they become creditors to the Title of Medium Technician.
- The designation of the Government teacher´s contract for technical specialty teachers in the afternoon shift is missing.
- The pandemic of COVID 19, which relapsed into an anticipated closure of management in the 2020 and 2021 virtual classes that were insufficient to develop practical skills in students.

5.4.3 Internal influencing factors

Positive internal factors

- Years of experience training students in the technical area.
- To have the necessary environments and equipment to provide adequate training.
- Teachers with years of experience to provide a meaningful teaching and learning process.
- The participation of parents.
- The construction of a curriculum according to the current needs and expectations of the students.
- Motivate on-site learning, i.e., achieve social interaction between the BTH and the Society.

Negative internal factors

- There is a need to motivate greater participation of parents.
- There is a lack of motivation for BTH sustainability initiatives.

5.5 Organizational analysis

The different entities involved in the process are complex in that they articulate various levels (national, departmental, municipal and local), which must influence the decision-making and implementation process of the BTH from their competencies defined by law and seeking to incorporate their initiatives or creativity in the face of certain gaps in the regulations to effectively achieve the results that have the greatest impact in the context and for the students.

At the national level, there is a direct relationship headed by the district directorates at the municipal level, who take the necessary steps with the Departmental Directorates and these with the Ministry of Education, as the governing body of educational policy.

At the local level, a mapping of actors related to decision-making in educational processes that are relevant to job opportunities has been achieved, representatives who have participated and formed a positive relationship that has facilitated the implementation of the BTH at important moments: The "Management Committee" was decisive in this process and it is necessary to consolidate its institutional framework.

5.5.1 Institutional analysis

The Foundation for Education and Service-FES, is a private entity, founded in the city of Cochabamba on February 25, 2003, is a non-profit civil organization, legally established in

Bolivia with legal status RP. 249/04 and created with the purpose of continuing the work initiated by the Free Swedish Mission in Bolivia, (an institution composed of Norwegian, Swedish and Finnish missionaries), who for more than half a century carried out extensive work in the areas of health, education, social and ecclesiastical service.

FES promotes PD BTH in a facilitating role in areas of previous intervention with PDI BOL:

- Starts with initial contacts, agreements and synergies with educational and municipal authorities and other entities
- Supports the definition of specialties in meetings and support of a diagnosis of vocations and/or technical/technological service needs
- Strengthens stakeholder networks such as the "management committee", to promote and make joint decisions
- Generate an equipment plan based on requirements, prioritization with local stakeholders, teachers and external experts (BTH Regulation)
- Supports with the follow-up, monitoring and articulation throughout the implementation process of the PD BTH, up to the operation and dynamics of each UE.

Within this framework of institutional action, the situation of the UE is shown in the following table.

Current situation of each Educational Unit of the Target group							
Municipality	**Educational units**	**Management Committees**	**Infrastructure**	**Equipment**	**THHS Projects**	**Trained Teachers**	**Status**
Sicaya	Orcoma	Yes	Yes	Yes	N	Yes	Full
	Sicaya	Yes	Yes	Yes	N	Yes	Full
Vallegrande	Valle grande	Yes	Yes	Yes	N	Yes	Full
	Liceo Isabel V.	Yes	Yes	Yes	N	Yes	Full
	Monseñor Julio T.	Yes	Yes	Yes	N	Yes	Full
	Enrique Quintela	Yes	Yes	Yes	N	Yes	Full
	Mariscal Sucre	Yes	Yes	Yes	N	Yes	Full
	Emilio Finot	Yes	Yes	Yes	N	Yes	Full
	Enrique Me.	Yes	Yes	Yes	N	Yes	Full
	Obra Josefi	Yes	Yes	Yes	N	Yes	Full
Santa Cruz	Buenas Nuevas B	No	Yes	Yes	N	Yes	Full
	Buenas Nuevas D	No	Yes	Yes	N	Yes	Full

Source: Based on information collected from the BTH´s.

Role of the educational administration

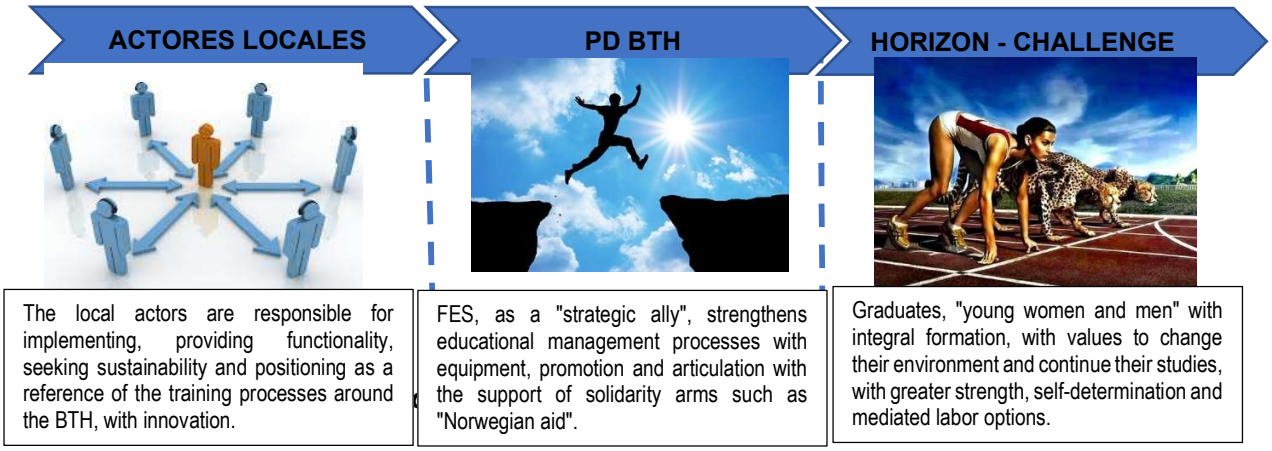
A central actor in the organization of the process in accordance with the current legal framework is the UE Directorate, who with the support of higher authorities (District Directorate and others) convenes and brings together representatives of parents, students and allied institutions: public (GAM, others) private (FES) and society actors with whom the Modality is defined, specialties

of Attention Technical Education, depending on the conditions of infrastructure, equipment and training capacities or materials in the BTH with which it works in the PD -BTH.

The universe of actors identified in the municipalities in question show a good level of participation in the initial implementation process, under a commitment promoted by an "external" facilitating entity, such as FES.

School Site Council	Social part	Autonomous Territorial Entity
Responsible for diagnosing the social, pedagogical and economic conditions of students for the start of classes. Comply with educational administration protocols, regulations, legality, accreditation based on the formulation of the PSP (Socio-productive Project) project for the BTH.	They will support their daughters and sons with information, actions and conditions for the development of the classes. Participation in the management and search for sustainability, articulation with the vocations of the context, support for the operation of the BTH and promotion of entrepreneurship of the sons and daughters.	Responsible for the programming of resources from the PSP (Socio-productive Project), guaranteeing basic services, furniture, educational material, infrastructure and equipment (machinery, tools, laboratories and supplies) for the operation of the BTH.
ROLE OF FES: As an entity that manages, facilitates and promotes:		
Promoted the articulation, support in the management of educational instances, and encouraged the directors, adding energy and motivation for the administrative/pedagogical management of the BTH.	Generated meetings, socialized the BTH, sought funds to support the BTH implementation proposal and managed to activate Parents active participation in the process.	It aroused interest and achieved institutional synergies between GAM (Municipal Autonomous Government), the education and social sectors, supporting the formulation of studies for the definition of specialties according to the vocations of the context.

Organizational figure around DP THHS



The "Management Committee" is a public/private mechanism promoted by the FES, with the purpose of creating a network of actors that can become an instance of consultation, decision

making and above all management of the accreditation process, equipment and improvement or expansion of infrastructure, based on contributions that allow the implementation, start-up and operation of the PD BTH. This initiative was decisive in achieving the objectives defined in the PD BTH and achieving in a short time and having in this period 2018-2021 a health crisis with COVID19, which has certainly had an impact on the speed and consolidation of the PD BTH.

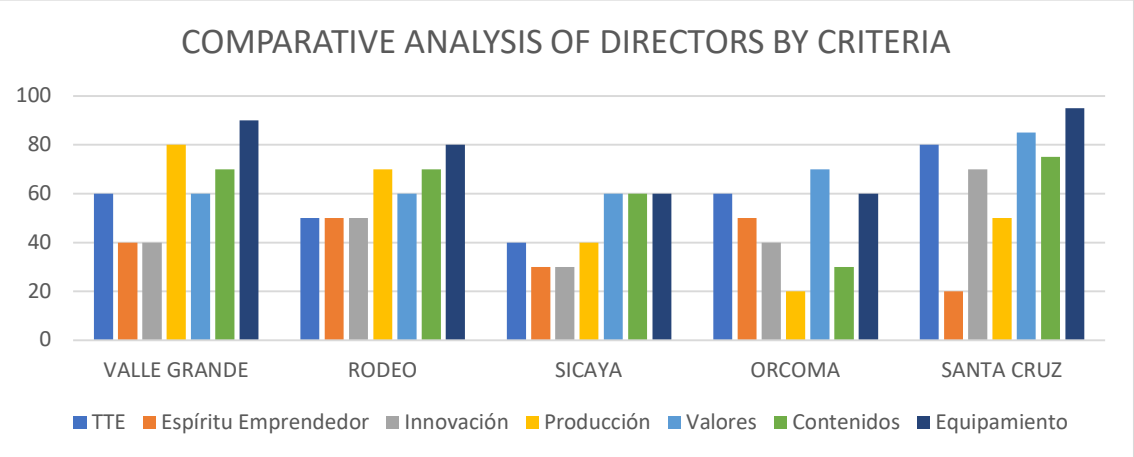
Evaluation from the point of view of UE directors

In this way, satisfaction and motivation can be seen in relation to the progress achieved in the implementation of the BTH, highlighting the contribution in energizing the FES process. However, they recognize that there is still much work to be done to consolidate the articulation with the world of work or the generation of entrepreneurship.

Evaluation table to UE Management

Criteria	WEIGHTED AVERAGE OF DIRECTORS					Average
	VALLE GRANDE	RODEO	SICAYA	ORCOMA	SANTA CRUZ	
F-TTE	60	50	40	60	80	58
Entrepreneurship	40	50	30	50	20	38
Innovation	40	50	30	40	70	46
Production	80	70	40	20	50	52
Values	60	60	60	70	85	67
Contents	70	70	60	30	75	61
Equipment	90	80	60	60	95	77

The logic of the answers, before showing negative aspects, is defined by the expectations generated by a developing process, as for example occurs with the ideal that an entrepreneurial spirit arises in Santa Cruz, or to advance in productive self-sustainability in Rodeo, or in general the new needs that arise in the process to improve or increase elements of the equipment.



The figure clearly highlights that a factor with favorable weighting is the equipment, contents and values that contribute to student empowerment. Aspects oriented to innovation, production and entrepreneurship deserve more attention and it is a challenge that demands attention and

support. These aspects reflect the true state of progress, from the point of view of the educational administration in the PD BTH.

Structure and map of key actors by municipality:

COCHABAMBA	
Sicaya	**Vacas**
President: District Director Vice-president: Municipal Mayor Accompanying: Regional Headquarters, Councilors, Board of Education.	President: Municipal Mayor Recording Secretary: District Director Secretary of Finance: School Parent Board Spokesperson: Regional Headquarters Spokesperson 2: Councilman - Social
SANTA CRUZ	
Valle Grande	**Santa Cruz (Buenas Nuevas)**
Presidenta: Dirección Distrital Vice President: Sub-Governor 2 Spokesperson President: Human Resources Directorate (Municipal self-government) 3 Spokesperson president: Councilman-Education Commission. Spokesperson: Urban/rural teachers' federation Student Government, Social Control, Civic Committee, Youth Committee, Peasant Central, OMBS, Parents Board.	It does not have a management committee It has an organization made up of the Board of Parents in both shifts, which coordinates at the request of the Directorates for certain administrative aspects.

Progress and challenges in the organization of management committees

Driving forces

- Organization with levels of convening, coordination for decision making.
- Authorities, representatives of sectors that are linked to the training of students.
- There is predisposition and commitment to promote the PD BTH to the extent that they are called upon to do so.
- The Technical Humanistic High School is an opportunity for innovation and the generation of opportunities and employment for young people.
- There are contextual conditions in terms of infrastructure, resources that can be allocated as counterparts.
- The PD BTH, broad employability opportunities

In a short time and in spite of the pandemic, there are advances and achievements in the implementation and functioning. There is a need to consolidate and project towards self-management and sustainability of the DP THHS

Fuerzas restrictivas

- Requires adaptation to current legal regulations CPTE
- They do not have a PSP(Socio-productive project): incorporating Projection, Vision and Mission of the PD BTH.
- They require strengthening the structure by assigning roles, based on a plan, Annual Operating Plan.
- Requires institutional framework, by-laws, rules, meeting periods, minutes book, meeting periods.
- They do not visualize a cycle of training and support for entrepreneurship.
- Need for fund-raising, continuous improvement, maintenance, growth, etc.
- Representatives, there is no continuity.
- Define assemblies and a functional board of directors

The Management Committees or CPTE are highly relevant and require strengthening and consolidation in order to optimize tasks oriented to training quality; Seek the means, infrastructure conditions, continuous improvement of training processes, control mechanisms, evaluation of students' entrance and graduation, sustainability, promotion of initiatives or undertakings and consolidation of the technical specialties themselves with a focus on linkage with the social and territorial environment, articulation with productive complexes or chains, based on a PSP (Socio-productive project), which must be urgently formulated in 100% of the UE, with the support of the FES.

5.5.3 Other institutional synergies in Vallegrande

a. Coordination and complementary training with the Aniceto Solari CEA (Alternative Education Center) of Vallegrande.

This Adult Education Center began its activities as a "home" Aniceto Solari, which takes in boarders or children at social risk (abandonment, abuse, violence) up to 15 years of age. Subsequently, it sought that at the age of 18 they could learn a trade or profession for which it worked with the institutionalism of a CEA (Alternative Education Center), very oriented to the attention only to this social group at risk something closed.

The articulation of the BTH and the CEA, was supported by FES, which promotes an approach of the director of the Module, the GAM (Autonomous Municipal Government) and the CEA Aniceto Solari; with the purpose of expanding the offer of specialties, generating an alliance so that students can go to the BTH, as well as other students can be received in the CEA where other offers are strengthened as being:

- Textile Manufacturing,
- Food and Gastronomy,
- Computer Systems,
- Handcrafted embroidery,
- Industrial fabric

In this way, the Mayor's Office will provide some equipment (part of the commitment is still pending), and CEA will provide teachers, seeking self-sustainability, where the student assumes the responsibility of completing his or her studies.

There are some aspects that do not conform to the BTH standard; however, this agreement achieves complementary experiences and optimizes training processes based on institutional synergies. The students receive a PAMUE (Annual provision for materials of Education Unit) (10 Bs/participant), which together allows support with practice materials, fabric, thread, leaves, etc. From the center's administration. Students receive a PAMUE (10 Bs/participant), which together allows support with practice materials, fabric, thread, leaves, etc. From the center's administration.

- We received 30 students from BTH in the specialty of textile manufacturing and another one in the following shift "B". There is a good level of accompaniment with support from the director in follow-up and monitoring.
- Fairs were held (3 times a year), where students promote their products as part of their training and generate income or receive job offers.

Recommendation:

- Teachers need to be able to complete their workload to 96 hours, which is currently still insufficient to extend to the afternoon and morning shifts.
- Even though the agreement has expired, this institutional synergy continues with a humanitarian character, where emphasis is placed on orientation, reflection and recommendations to the students, promoting the fact that technical training is of great personal benefit and service to the community, for life.

Courtesy of CEA Director, sister Leovigilda Gutiérrez (Nov. 2022)

b. Support to the "Special Education Center" – Marisol Elvira Torrico Limón

As a special education support center, the purpose of the center is to provide support to people with disabilities of all types and ages. There are currently 42 people enrolled in disability levels:

- Intellectual Disability 30 permanent
- Multiple Disability 2 participants
- Hearing Disability 2 participants
- Others 8 participants

The service provided is to carry out thematic work based on the contents of the Ministry's national curriculum. For this purpose, we have a complementary staff, which is a teacher, who works at the BTH and supports special education (40 Hrs).

The support of FES was important because of the donation of materials, equipment, such as:

- Kitchen
- Ovens
- Kitchenware

> *"…we receive help from some people like Mrs. Ingrid, from the Norwegian church in a collaborative contribution for the facilities since 2016; we also make arrangements with the OTB (Territorial Base Organization) of the neighborhood that supports the improvement of the access to the Center and there is coordination with the director of the BTH..." (Prof. Armin Mojica, Nov. 2022)*

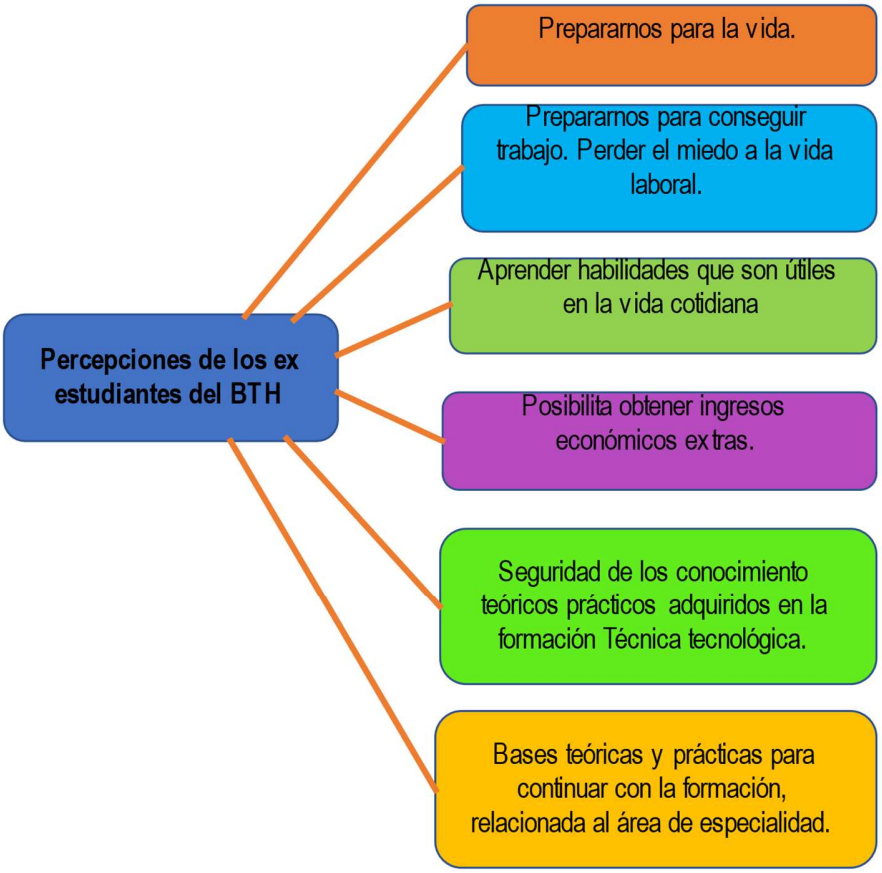
Recommendations:

- Continue to seek ecumenical donations to support the construction and improvement of the Center.
- Continue with the support of the GAM (Autonomous Municipal Government) of Vallegrande, for the expansion and improvement of the center, which is already too small.
- Extend the support of some families that support the construction of classrooms (Torrico family).
- It is necessary to have specialty teachers for therapy, a physical therapist.

5.6 The former students' vision

The students who passed through the classrooms of the different BTH are ultimately the direct actors of the process, which is why their opinions show the impact of the BTH and in some way their empowerment in the current context of their work or academic work. It is in the search for these visions that the testimonies of former students of Vallegrande are presented.

Thanks to interviews with former students from Orcoma, Vallegrande and Santa Cruz, we were able to obtain perceptions about the capabilities achieved at the THHS, which are presented in the following scheme.



In practical terms, the aspects that empower the graduate in "real life" are reflected in the following testimonials:

> *The BTH was very important for me, thanks to these courses today I have an income and these courses are very good because they helped me in my university studies (Vallegrande graduate).*

> *The truth is that the experience was good and interesting, thanks to the practice we can work on what we learned, it would be good for the institution to be better known so that people do not underestimate our degree. (Vallegrande graduate)*

> However, from another perspective, the suggestions of the former students, beyond being contributions for a better functioning of the BTH, are at the same time a critical view of their offerings for the training of young people, and those that have to do with aspects that go beyond recurring themes, such as improving the time load in the subjects, or the need for new instruments, are highlighted.

Update contents according to the digital era (Orcoma and Vallegrande graduates).

Strengthen solidarity and group work (Vallegrande graduate).

According to the opinions of alumni and different stakeholders, around 30% of the graduates have incorporated the skills developed at the BTH into their life projects, a figure that is an approximation since there is no systematic follow-up of the graduates

5.7 Knowledge management in other contexts: impact on La Guardia[5]

The present experience incorporates strategic elements, lessons learned and many factors to reflect towards other actors and contexts. Therefore, the PD BTH Project can be seen as a model to replicate and dynamically generate space for mobilization of the Vallegrande experience.

This activity resulted in an exchange trip of public and educational actors of the Municipality of La Guardia that concluded with the incidence in financing policies of a similar action at the municipal level from the decision making of the authorities, who today face this initiative to implement the BTH in the municipality, with the expectation of achieving it in a larger dimension.

It is an experience of institutional management, with incidence in public policy, based on educational initiatives, knowledge mobilization, for the configuration and implementation of the Technical Humanistic High School (BTH) in the municipality of La Guardia.,

Emphasizing that "an exchange of experiences" carried out at the PD BTH of Vallegrande with the support of the Foundation for Education and Service FES has influenced the decision making of municipal and educational authorities of La Guardia, who take on the challenge to put the BTH on track with strength and social and inter-institutional support.

This initiative has a technical study at the request of the District Directorate of Education (DD) and the Autonomous Municipal Government of La Guardia (GAMLG), financed by the Foundation for Education and Service (FES), through the Development Project for Humanistic Technical Baccalaureate (PD-BTH), framed in the productive socio-community model and supported by the Education Law 070 Avelino Siñani-Elizardo Pérez (2010).

The study contributes to propose technological technical specialties to be implemented progressively, which implies the allocation of an estimated budget for the construction or readjustments to the infrastructure of the Productive Technological Modules (MTP) and Productive Technological Workshops (TTP), a budget for equipment for the technological specialties to be implemented, taking as a reference the experience in the implementation of the BTH in the municipality of Valle Grande and another one, within the PD-BTH project.

A chronology of the process is as follows:

- On September 4, 2021 at the head of the District Directorate of the municipality of La Guardia, in coordination with parents, urban and rural teachers, and the student government, held the social summit for educational quality, which among its resolutions has the implementation of the BTH and vocational technical training.
- ¨FES carried out BTH socialization workshops for the Management Committee and directors of secondary level educational units, resulting in an important diagnosis of the situation of the BTH implementation process in this municipality. This diagnosis served as a starting point for the design of the implementation plan for the Technical Humanistic High School in the Municipality of La Guardia.
- ¨ FES has also donated 5 engines for the automotive mechanics specialty and managed the necessary resources to finance this consultancy.
- ¨ On October 4, 2021, in the presence of educational and municipal authorities and social organizations, a management committee was formed to assume the responsibility of managing the BTH, establishing inter-institutional agreements, securing the necessary human resources, guaranteeing economic resources, among

[5] The systematization document on the impact in the municipality of La Guardia presents the complete text, this is a summary.

other activities to make this implementation process a reality.

- On October 29, 2021, the Municipal Autonomous Law 270/2021 "Municipal Law for the Provision of Equipment for the implementation of the THHS in the Municipality of La Guardia" was decreed, where in its first article it mentions the provision of equipment and the readjustment of the infrastructure to gradually and progressively implement the BTH throughout the municipality.

At present, the District Directorate of Education currently has six (6) educational centers. Of the 90 Educational Units of the Educational District, 39 correspond to the Productive Community High School level, 2 belong to the night shift (Adela Saavedra Vaca and Camino al Éxito) and 37 in the morning and afternoon shifts, these last ones are part of the object of study of the present investigation since according to regulations they have the possibilities of implementing the BTH by having an alternate shift where to develop the general and specialized technical-technological training.

5.8 Evaluative analysis of findings

After the descriptive view of the findings, an evaluative analysis of the findings is made, based on a synthesis of the factors favoring and limiting educational quality.

Favorable and limiting factors

Factors favoring	*Attention on:*	*Limiting factors*
High interest of local actors: educational, social and autonomous entities Current legal framework is an opportunity Timely and supportive support from FES Broad student acceptance Fondos concurrentes	Quality criteria: Gender Job opportunity Impact on the environment Practical efficiency Effectiveness in terms of issues, timing.	Infrastructure requires greater investment Non-compliance with some commitments in the payment of contributions. Teachers with specialties cannot be found Insufficient government teacher´s contract in hourly load

5.8.1 Analysis in relation to gender strategy, relevance, efficiency and effectiveness

A necessary dimension to analyze are those related to gender, relevance, efficiency and effectiveness:

There are still no activities that promote a **gender strategy**, as contributions of the project, such as the elaboration of a work guide, concrete actions on job opportunities, equality of conditions in specialties typified for men or women (e.g. Gastronomy, Electricity). To this end, it is possible to work on instruments specific to values, typical cultural practices, and the generation of criteria to reduce differences.

In relation to **relevance and pertinence**, in general, it is observed that the PD BTH is a response that generates job opportunities for students with limited economic conditions and few possibilities of access to the University, On the other hand, the project objectives are aligned with the policies promoted by the State in terms of employability, socio-community and productive development, for which it is recommended to expand to environmental or agri-food chains with the community, such as: forestry and agroforestry in Sicaya, Rodeo; fruit processing in Vallegrande and Santa Cruz, expanding the offer in new technologies, aluminum carpentry, electronics.

In relation to **efficiency**, there has been continuous monitoring, timely support with equipment, studies, facilitation of collective meetings with stakeholders in decision making, which have

allowed improving the infrastructure and connecting the project to the needs of the population. However, there is an urgent need to pay attention to the development of the entrepreneurial spirit, strategies to promote alumni initiatives, and that "thematic" defense projects be oriented towards "entrepreneurship defense", towards competitive funds or seed capital with allies.

In terms of **effectiveness**, the stakeholders involved responded promptly in different processes: the project reacted quickly to the situation generated by COVID-19, reinforcing biosafety aspects. The energy of the actors involved can be channeled into consolidating processes, having a BTH educational project that generates a short, medium and long term vision and emphasizing the search for self-management through the Management Committee, defining roles, building instruments for periodic monitoring of its operation.

5.8.2 Analysis of progress according to Logical Framework indicators

Once a first approach has been made, it is time to analyze progress in relation to the Logical Framework indicators, which are highly quantitative, by the way. In general terms, it can be established that there is compliance to a large extent with the expected results. This can be seen in the indicators, considered substantial for the project process, which are shown in the following table

Progress table of main products

Objective/Product	Goal	Progress
General Objective **Bolivian high school students have access to the Technical Humanistic High Shool (BTH) and upon completion of their studies they receive a Certificate at the Intermediate Technical level according to the Technical Career they have chosen.**		
Product 1		
High school students in the four municipalities with intermediate technical degrees	425 students graduated as intermediate-level technicians between 2019 and 2022.	418 students graduated as intermediate-level technicians between 2019 and 2022.
Results 2		
Las unidades educativas incluidas en el PD-BTH están acreditadas como completas con capacidad para ofrecer la FTT especializada del BTH.	10 educational units with full accreditation	13 educational units with full accreditation
Product 2.1		
Facilitate dialogue and promote meetings for the formation of Management Committees.	38 members of management committees trained (annually)	42 members of management committees trained (annually)
Product 2.3		
Equipment of workshops for Technical Technological Training	Agreements signed with the 4 municipalities for counterparts	Agreements signed with the 4 municipalities for counterparts
	10 workshops with equipment	15 workshops with equipment
Product 2.4		
Teacher training	84 teachers trained (annually)	29 teachers trained (pandemic incidence)

There is a weakness in three substantive aspects for a process of social sustainability of the THHSs, these aspects are:

- Limited in-service teacher training
- The scarcity of content taught from the first year of secondary school, which systematically allows students to develop skills to potentially implement ventures.
- The non-involvement of parents in learning processes that contribute to their children's education.

6 Conclusions

The conclusive synthesis of the PD BTH evaluation allows objective value judgments to be made at three different levels: municipal, general and empowerment level.

6.1 Conclusions by Municipality

Sicaya. In the municipality of Sicaya there are two BTH (Sicaya - Automotive Mechanics and Orcoma - Food Transformation), both BTH develop their activities normally, allowing the students to achieve their certification as medium technicians, they have management committees with reactive activity to the needs of the BTH, rather than developing continuous processes, There is also weaknesses in the exchange of experiences, which limits the students' visualization of the possibilities of undertaking projects, which, from the perspective of the 5th and 6th grade students, is a very important aspect of the students' work. Level emphasize that it is very important to achieve teachers with high capacity and practical application in the search to achieve fairs of products or services to the guilds: carriers, community.

Vacas. In the community of Rodeo, UE of the same name, the BTH develops its activities in the specialties of Gastronomy and Automotive Mechanics, this BTH, beyond the agricultural dynamics that characterize the region, has the particularity of a permanent relationship with the community. (fairs, repair of community members' vehicles, preparation of refreshments for mayoral events), from another "experience exchange" perspective aimed at generating greater capacities and developing a sustainability trend for the BTH, reflecting a high level of involvement and coordination with social organizations, regional headquarters, OM Bartolina Sisa and GAM de Vacas, highlighting the visionary Director, with high creativity and initiatives to promote entrepreneurship and employability that promotes teamwork.

Vallegrande. In Vallegrande there is a PD challenge in socio-cultural terms: a single module where eight UE participate with students studying 7 specialties, a complexity that has been solved by both teachers and the management committee, beyond the reactive nature of this committee and the difficulties of finding a method that articulates theory and practice with greater relevance, An achievement in development is the collective construction, among the teachers, of the didactic guide for each and every one of the specialties. The Management has a recognized leadership and there is a challenge oriented to the scalability of technical training, since the management is in the process of implementing an institute of higher education.

Santa Cruz de la Sierra. The UE Buenas Nuevas B and D are located in the Plan 3000 of the municipality of Santa Cruz de la Sierra, being located in the most extended popular area of the largest departmental capital of the country implies a particularity that marks its way of working, which is why it has been divided into morning and afternoon shifts. It has been operating for 35 years, at that time as an industrial institute, at present it has four specialties: Its characteristics arise from the context described, there is no management committee, however, there is a close relationship with parents in relation to the academic and disciplinary behavior of students. A high point is the extension of training in the specialties of nursing and first aid and integral beauty by doing internships outside the UE.

6.2 Conclusions at the empowerment level

Another dimension of the evaluation, not less important but essential, refers to empowerment, which is seen from two points of view, the first one the degree and level of empowerment of students and educational communities, the second one the areas of empowerment.

6.1.1 Degree and level of empowerment

Resources

They have increased with equipment, starting with the implementation of the PD BTH project for the specialty workshops. Some BTH have contributed with manpower and economic resources with significant contributions from the GAMs, and not least from the parents for the implementation and strengthening of the BTH (Rodeo case).

Action

The BTH have been able to organize and form Management Committees with municipal governments, social organizations, directors of educational units, teachers, educational councils of parents and student governments to achieve recognition of their units as full BTH,

Achievements

To broaden horizons and opportunities for higher education or labor linkage for students (women and men) in the technical/technological field that show high relevance in the areas of intervention prioritized by social and territorial characteristics, where the universe of 10 training careers can contribute to influence economic initiatives, employability and greater empowerment of students with integral human formation.

Getting young women and men to receive a technical-technological training with the accreditation of Medium Technician, which is a valid professional degree that opens employment opportunities, allows many of them, a greater integration into the family and the community, on the other hand, there is evidence of former students with successful work or academic activities.

6.1.2 Thematic areas of empowerment

The personal development of students (women and men) who achieve an integral education, broaden their learning in technical/technological fields, achieving a degree of medium technicians are considered as a basis to push themselves to new challenges with greater security, expanding opportunities to continue their "personal growth".

Strengthening civil society

- In the municipal context, the communities (urban-rural) have an instance in which their sons and daughters can achieve technical training and that for this there is an involvement, articulation and synergies between public/private authorities, educational and social sector, which shows that the BTH is an opportunity to strengthen social networks with services and products from the technical/technological training of their children, from the Management Committee that is a multi-key actors instance on equal terms, to support the education of their sons and daughters.

Health

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- When there is a conception that the efforts of Parents translate into opportunities for growth and social development in the community or for migration, there is a "community or social health" that makes the educational factor of the BTH a "medical" alternative to the dropout rates and low percentages that currently exist in the continuity of studies or access to employability for young people.
- The BTH as educational units address health-related issues. For example, the Orcoma educational unit has as a PSP (Productive Socio-Community Project) the incorporation of healthy foods to increase their defenses against COVID 19.
- La experiencia de Vallegrande con la deshidratación de frutos para ser ofertados como dulces sanos en sus ambientes.

Harmonious coexistence

- The educational community of the BTH promotes a coexistence of reciprocity and solidarity of respect among its male and female students, children and youth.
- Local partners and communities combat gender-based violence, enabling students to be able to choose the major of their choice regardless of gender and promoting peaceful coexistence.
- In communities with an indigenous population, they have a respectful coexistence.

Environmental management

- Although the curriculum incorporates contents and a spirit of coexistence with nature and the environment, from the technical/technological training, the introduction of this topic is gradually being concretized, which will have an impact on the behavior of graduates in the near future. However, it is a good thing that careers such as Agroecology, develop direct actions to the healthy consumption of food, organic production, reduce the use of agrochemicals, which will allow to change and habits of community/citizen behavior.
- THHS students have a proper management of the solid waste generated.

Quality education

- It can be seen from the qualitative evaluation of the testimonies, that there is a greater capacity for interaction from expanding the humanistic training with the technical/technological training, noting an approach of the parents with the children, when they do their internships: e.g., integral beauty, food processing, automotive and others. Integral beauty, food processing, automotive and others; because the students take their concerns home and they are of daily life, therefore of easy attention for parents; regardless of their educational level, it also allows them to visualize contents on environment, organization and projects or entrepreneurship; which contribute to a quality education.
- Technical/technological training provides content for an integral human formation and allows for the empowerment and development of future citizens with greater responsibility for their life projects.

Economic empowerment

- Definitely extending humanistic training with technical/technological training is a direct blow to the insecurity and lack of opportunities that many students have when they do not have a degree™, the BTH has been able to provide a trade or an option for entrepreneurship in

services, products or ventures, since even with the short time of implementation in the experience developed with the support of the FES, there are very motivating and challenging testimonies towards the future of the students to date.

- The directors of the educational units and their students (Rodeo case), have been able to generate their own economic resources to expand their equipment with: Crockery, automobile, engines for students to practice.

Gender equality

- With the BTH, it is a challenge to reduce sexist differences in terms of roles, since technical training does not establish access only to women or only to men. However, this concept still needs to be deepened in careers where women are already observed in occupations such as automotive mechanics and men in food processing or gastronomy, and there are many examples like these.

6.1.3 Evaluación de Empoderamiento

El resultado que se obtuvo en la evaluación externa del PD-BTH tabla de evaluación de empoderamiento (EAT) es el siguiente:

Tabla de evaluación del empoderamiento

NIVEL / GRADO	Nivel 1: Producto Individuo o comunidad	Nivel 2: Producto Individuo o comunidad	Nivel 3: Resultado Individuo o comunidad	Nivel 4: Resultado Comunidad y/o sociedad	Nivel 5: Impacto Comunidad y/o sociedad / Estructural
Fortalecimiento de la sociedad civil (Obligatorio)		X			
Igualdad de género (Obligatorio)		X			
Gestión Organizacional: GF, GA, N			X		
Gestión en Finanzas: Capacidad Financiera			X		
Gestión Técnica: Capacidad Técnica			X		
Gestión Administrativa: Capacidad Administrativa			X		
Capacidad de Negociación			X		
Salud			X		
Coexistencia pacifica				X	
Gestión medio ambiental				X	
Empoderamiento económico		X			
EVALUACION TOTAL PROYECTO			X		

El proceso de evaluación de Empoderamiento realizado con el apoyo de la herramienta EAT, aportó a visualizar los criterios de calidad y el enfoque integral en cuanto a valores, sostenibilidad, apropiación y aceptación; desde nuestro punto de vista se observa un avance

y posicionamiento del PD-BTH, a partir de instrumentos, visitas, entrevistas y diálogo directo con actores involucrados en el proceso, valorándose que el proceso se encuentra en ***un nivel intermedio "3",*** lo que permite pronosticar que se podrá consolidar los procesos y resultados alcanzados en un marco de institucionalidad.

En el marco del análisis, con las evidencias que se han considerado en el documento principal podemos definir:

- Que existe una alta aceptación, involucramiento y administración, mostrando que los BTH poco a poco son asumidos por los actores: Comunidad, padres y madres de familia, gobiernos municipales, autoridades educativas, cuerpo docente, facilitadores de las carreras técnicas.
- Los y las estudiantes, ven a los BTH como una oportunidad, que amplía su horizonte de vida, en la medida que pueden lograr y generar: empleo, autoempleo, emprendimientos, servicios y autoayuda para seguir estudios superiores o simplemente les ha permitido una formación integral, que aporta a la personalidad y capacidad de estudio.
- Es importante destacar que existen muchos retos, desafíos y opciones para innovar y lograr avances o impactos en un futuro mediato, que debe ser respaldado institucionalmente por el sistema de educación como por las autoridades municipales. Evidenciándose que se debe profundizar el tema de género, avanzar hacia una mayor solidez en la enseñanza técnica (medios, didáctica, facilitadores, materiales).

Tabla de evaluación cualitativa

NIVEL 3 (Resultado)		**Evaluación EAT**
Recursos	Han aumentado por el aporte del PD_BTH a nivel de UEs, logrando incursionar en diferentes modalidades educativas y procesos de gestión involucrando aporte de los actores locales.	Los actores involucrados: Padres de familia, estudiantes, autoridades educativas y sociales, están vinculados institucionalmente, destacando que el PD-BTH, tendrá incidencia en el entorno local, en un mediano plazo.
Acción	Estudiantes, docentes, autoridades administrativas, muestran apropiación, visualizan acciones para una práctica con generación de ingresos que deben ser afinadas y optimizadas de forma institucional	Los actores educativos y sociales sienten confianza y seguridad institucional, porque el BTH cuenta con un marco legal que lo respalda. Sin embargo, están conscientes que la sostenibilidad y evolución de los procesos formativos e inserción laboral depende de sus acciones y estrategias.
Logros/ Resultados	Existe alta motivación e inclusión de los padres de familia en el proceso de "formación técnica" destacando iniciativas e ideas en maduración.	La consolidación del BTH en cada contexto está basada en las gestiones administrativas, respaldo social, y apoyo financiero propio, como gestión ante entidades pertinentes, dando alta valoración al apoyo de FES.

Fuente: Elaboración propia aplicando el instrumento EAT DIGNI,

Tabla de Áreas temáticas en el marco de los resultados.

AREA TEMÁTICA	META DE IMPACTO	OBJETIVOS DE RESULTADO
Fortalecimiento de la sociedad civil (Obligatorio)	La Sociedad tiene representación integral, amerita apoyo en el ejercicio de roles.	Existe avances en la conformación, difusión e identifica desafíos que deben contar con ejercicio de roles.
Igualdad de género (Obligatorio)	Se asume la igualdad de oportunidades, que puede precisarse con instrumentos para mayor énfasis	La participación de varones y mujeres tiene las mismas oportunidades, culturalmente amerita atención con organizaciones sociales, para lograr mayor motivación en mujeres.
Gestión Organizacional: Comunidad educativa y niveles institucionales: Nacional Departamental y Municipal.	Actores locales tienen información, existe compromiso y asumen responsabilidades.	Existe un buen nivel de participación y apropiación sobre el PF-BTH pensando en la formación técnica/humanística. Existe compromiso del sector educativo que hace énfasis para lograr aportes del sector institucional. Los líderes están conscientes de trabajar un manual para el ejercicio de roles.
Gestión en Finanzas: Capacidad para generar aportes	Docentes, estudiantes y padres de familia están buscando estrategias para generar ingresos y ampliar la visión productiva del BTH	Existe desafíos para la gestión organizacional y planteamiento de proyectos como una estrategia para fortalecer el espíritu emprendedor.
Gestión Técnica: Capacidad Técnica de los facilitadores	Se identifican perfiles con mayor capacidad para la enseñanza técnica	Se brinda atención a la formación de los "facilitadores o docentes de especialidad", ampliando la atención a materiales de enseñanza y evaluación.
Gestión Administrativa: Capacidad de Gestión Educativa/formativa	La administración educativa (Dirección), son "Actores Claves" En la coordinación, convocatorias, gestión y administración financiera.	Los padres de familia, estudiantes orientan esfuerzos a lograr ingresos, aportes, contrapartes para la sostenibilidad del PD-BTH
Capacidad de Coordinación (Negociación)	Existen espacios de coordinación, comunicación y niveles de articulación social.	Lograr atención a las competencias de los actores, lograr institucionalizar con normas concretas para cada contexto y situación.
Salud	Actores locales encaminar el PD BTH con protocolos de bioseguridad y calidad en proceso formativos como oportunidades para sus hijos e hijas.	Los procesos de enseñanza aprendizaje, aulas y talleres inician con la señalética, seguridad industrial y normas de bioseguridad, que deben ser normados con profundidad.
Coexistencia pacifica	El proceso formativo del PD BTH logra una coparticipación y acción conjunta en una visión territorial	Dar mayor consistencia a la visión de desarrollo coherente con las oportunidades formativas, vocaciones de contexto laboral y territorial

Gestión medio ambiental	Existe el espíritu conjunto para lograr el equilibrio en el medio ambiente	Lograr incorporar objetivos, estrategias para incidir en acciones que incorporen el cuidado en el entorno
Empoderamiento económico	Estudiantes, docentes tienen evidente atención a la búsqueda de fondos y generación de ingresos.	Los actores en pleno cuentan con el conocimiento y están profundizando información y estrategias para consolidar el proceso.

6.2 General conclusions

It is necessary to begin the general assessment of this educational process by stating that, beyond the contextual problems of approaching the BTH, its development has led to **successful** results; considering the short time involved in consolidating a process from its administrative management, the teaching-learning process, to the personal development of students after graduation with articulation to the community and promotion to the labor market, with relative differences in the four municipalities. In other words, there is a conceptual line that guides the pedagogical work, which is nourished by state guides, regulations and guidelines, FES guidelines, and the proactivity of educational authorities, teachers, parents and the educational communities themselves, as well as municipal authorities.

In this context, one of the links that in general shows weaknesses in its actions are the management committees, for different reasons; the short conception that the action of the committee reaches only up to the implementation of the BTH, secondly, there is no clarity in the roles of the committee members.

Another aspect that must be taken care of is the destiny and life project of the graduates, which apparently are not followed up, since, in short, it is the aspect that is most related to the territorial context, understood as family, culture and productive activity.

Finally, a potential bottleneck in this context is the sustainability of the project in the different municipalities, an aspect that must be addressed in different dimensions, impact on the State, productive educational logics, broad visions of entrepreneurship and, fundamentally, the training processes of the educational community.

7 Lessons learned

- A BTH project helps to achieve a joint vision of the process in the short, medium and long term, avoiding the risk of the UE entering a static or not very dynamic activity, because the technical/technological training is highly dynamic and the observation of results, effects require adjustments over time to achieve impacts on young people (women and men) in their personal and professional development.
- The BTH must be included in territorial planning instruments such as the PTD (Territorial Development Plan), POA (Annual Operational Plan). of the GAM in order to make short, medium and long term challenges visible with the educational community and the municipality.
- Although the BTH is based on personal initiatives such as those of the directors (which is not a bad thing), it is necessary to involve the different actors and institutionalize them within the framework of each BTH with agreed-upon rules and plans.

- The experiences show that a BTH project must involve all the actors, it will allow to have guidelines, mission, tasks, roles to make visible that the THHS, the process does not end with the implementation of a career, it implies to have a monitoring system, a participative management towards sustainability and to have a constant dynamic to improve the educational quality thinking about achieving better graduates and a better response to the social and territorial environment.
- The gaps in the regulations and implementation guide of the Ministry of Education complicate the achievement of teachers with experience in technical/technological subjects, so it is necessary for each UE to plan advocacy and management strategies to achieve quality teachers.
- The Ministry's curriculum is very general, and teachers need to be strengthened in the adaptation of content and the generation of guides or materials for interactive, practical and holistic training.
- Many specific offers demanded by the parents are not easily adapted to the 24 official offers proposed by the ministry, which makes a flexible strategy necessary to achieve an offer of specialties that respond to the social context.
- It is important that there are processes of exchange of experiences for students to achieve a tangible approach to the objective reality of work, the positive example of nursing and first aid, integral beauty in Santa Cruz, demonstrates this.

Finally, one lesson learned is that the BTH is a process that merits understanding that the perspective does not end with the training and certification of the student; it implies seeing mechanisms that allow us to observe what happens with the graduates:

8 Successful strategies and best practices

- Developing a study for the definition of technical careers, with a productive socio-community approach, was very important, as it is relevant to the context.
- The BTH orientation, dissemination and awareness campaigns have generated motivation and commitment to form the Management Committee with the participation of municipal authorities, educational authorities, school principals, teachers, educational councils, social organizations and student governments.
- Guaranteeing the conditions of infrastructure, equipment and hiring of external teachers has provided certainty and motivation for the continuity of the PD BTH.
- Motivate students with short Tik Tok´s, on knowledge, educational practices of the technical specialty they are studying.

9 Recommendations

9.1 General Recommendations

Institutionally, continue with the consolidation of the BTH in the different UE from:

- To complement with an Educational Project that contemplates a short, medium and long term horizon.
- Define the coordination spaces and instances, defining the functions and tasks of the Management Committee, according to the competencies defined by law or customary practices.

- Institutionalize the Management Committee based on clear rules of participation, quality control and follow-up, support and search for sustainability and management with public and private contributions.
- Incorporate maintenance, expansion, improvement and support to enterprises in strategic planning guidelines such as PTDI (Territorial Integrated Development Plan), POA (Annual Operational Plan) as part of the Education Sector.

In the educational field, it is essential to achieve continuous improvement in the teaching and learning process, starting with:

- Generate educational administration instruments that respond to the particular dynamics of each unit, in order to have sufficient equipment, materials, supplies, learning guides, evaluation with a focus on promoting project fairs, and student initiatives at the conclusion of their training process.
- Manage the items of the state, with the sufficient hourly load that currently do not have

In relation to the attention to Interaction and development with the world of work:

- To ensure that the UE with the BTH not only replicate models where they are certified, but also take into account the relevance, effectiveness and efficiency of the training processes that respond to the challenges of the technical-humanistic high school graduates.
- Expand spaces for inter-learning; fairs, internships, and spaces for internal "assessment, analysis and reflection" among students, teachers, parents, local and governmental authorities to see the level of satisfaction or expectations of students.
- Vitalize vocational orientation processes for young people before choosing technical training over technical/technological training, which should not be considered as a second option.
- Pay more attention to achieve the student's entry profile (vocational test), for greater certainty and evaluation of the graduation profile.
- Generate strategies to enable students to access the labor market with their own entrepreneurship or to continue higher education with this support.
- It is important to generate statistics on graduates and maintain contact with former students, as well as to follow up with them.

9.2 Specific recommendations

- Motivate the creation of enterprises by students as a degree project.
- Consolidate the management committee in its organization and management, considering as a flexible model the Productive Technical Educational Communities (CPTE) proposed by the BTH Regulations.
- Encourage the use of new digital technologies both for the development of content and to use them as marketing tools in ventures.
- It is important to carry out exchanges of experiences with professional experts in the technical specialty so that students can provide feedback on the knowledge they have acquired; these exchanges also include visits to enterprises, so that students can empirically experience their specialty.
- Strengthen capacities in the generation of didactic material for teachers and students to foster the entrepreneurial spirit:
  - Contents with economic initiatives, business approach
  - To ensure that project advocacy becomes advocacy for technical/technological entrepreneurial initiatives.

- Seek to generate funds or fairs, seed capital, etc
- Support for the training process, especially for the management of supplies and materials for the internship
- Consolidate the allocation of funds for the BTH in the POA (Annual Operating Plan), PTDI (Territorial Integrated Development Plan)

- Promote spaces for internal and external exchange, in order to achieve relationship skills, teamwork, conflict resolution, technological capture: among students, among careers, with recognized professionals or public/private institutions, under alliances or internship agreements
- In the environment or workshop: develop the concept of: Industrial safety, organization of the environment (signage, decalogue), order, aesthetics and sanitation.

10 Documentary and bibliographic references

Ahumada, Pedro, Assessment in a Meaningful Learning Conception, University Editions of Valparaíso, Catholic University of Valparaíso, Chile, 2001.

Benedetti, Mario, Perplexities at the end of the century, South American Publishers, Buenos Aires Argentina, 1993.

Ministry of Education (2014). Training Unit No. 7 “Participatory evaluation of educational processes”. Continuing Education Notebooks. PROFOCOM Team. La Paz, Bolivia

Patriotic Agenda 2025. (2013). Participación en la Construcción de la Bolivia Digna y Soberana con Autonomías. [Links]

Alvarado, L. (mayo de 2019). Relevant characteristics of the sociocritical paradigm. Retrieved from https://dialnet.unirioja.es/descarga/articulo/3070760.pdf. [Links]

Ministry of Education of Bolivia. (2018). Bachelor's degree in the MESCP: Complementary Training for Teachers. La Paz.

FES (2017). PD BTH Project.
FES (2017). Baseline Study. PD BTH Project.
FES (2021). Informe de Sistematización. PD BTH Vallegrande Project
FES (2018/2022(. Anual reports PD BTH