

CASE REPORT

## Integration of 360 Entrepreneurship into the University System: A Cross-Cutting Strategy for the Holistic Education of Students Case Study: Centro Universitario de los Altos

### Integración del emprendimiento 360 en el sistema universitario: como estrategia transversal para la educación integral de los estudiantes Estudio de caso Centro Universitario de los Altos

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Cite as: Aguilar Carvajal L, Navarro del Toro GJ, Rodríguez Sedano E. Integration of 360 Entrepreneurship into the University System: A Cross-Cutting Strategy for the Holistic Education of Students Case Study: Centro Universitario de los Altos. *Seminars in Medical Writing and Education*. 2025; 4:690. <https://doi.org/10.56294/mw2025690>

Submitted: 11-05-2024

Revised: 18-10-2024

Accepted: 07-06-2025

Published: 08-06-2025

Editor: PhD. Prof. Estela Morales Peralta 

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#### ABSTRACT

The present research proposes 360 entrepreneurship as an innovative strategy in which entrepreneurship is integrated into the experience of university students, in this sense, at the Los Altos University Center of the University of Guadalajara it is highlighted as a central element for professional development through the recognition of the characteristics of the environment and through the benefits generated by entrepreneurial proposals focused on generating productive ideas with economic and social impact. For its implementation, the design of business plans, work of high-performance teams and training are linked. In addition to an integrative vision of contributions from the Learning Units, from an interdisciplinary approach that encourages collaboration; for the joint development of business skills, by promoting active development agents, by generating jobs and offering innovative solutions to the challenges of the Altos Sur region of the state of Jalisco. As part of the analysis of the progress made with the implementation of the 360 entrepreneurship strategy, a descriptive, mixed, cross-sectional research is carried out, considering the application of an instrument designed as a survey to obtain representative data of the impact generated in students of the Center University of Los Altos, this sample corresponds to 156 students who represent the total study population, which is represented by students who worked collaboratively and interdisciplinary to generate entrepreneurship proposals during the 2024A school calendar.

**Keywords:** Entrepreneurship; Interdisciplinary; Transversal; Comprehensive Education.

#### RESUMEN

La presente investigación plantea el emprendimiento 360 como estrategia innovadora que integra el emprendimiento en la experiencia de los universitarios, en tal sentido, en el Centro Universitario de los Altos de la Universidad de Guadalajara se resalta como un elemento central para el desarrollo profesional a través del reconocimiento de las características del entorno y de los beneficios generados por las propuestas emprendedoras enfocadas en generación de ideas productivas con impacto económico y social. Para su implementación se vincula el diseño de planes de negocios, trabajo de equipos de alto rendimiento y capacitaciones. Además de una visión integradora de aportes de las Unidades de Aprendizaje, desde un enfoque transdisciplinar que trasciende las diferentes disciplinas del conocimiento y fomenta la colaboración y unificación del conocimiento; para facilitar el desarrollo conjunto de diferentes habilidades empresariales, al promoverse agentes activos del desarrollo, al generar empleos y ofrecer soluciones innovadoras a los

desafíos de la región Altos Sur del estado de Jalisco. Como parte del análisis del avance realizado con la implementación de la estrategia de emprendimiento 360, se realiza una investigación descriptiva, mixta de corte transversal, considerando la aplicación de un instrumento diseñado a manera de encuesta para obtener datos representativos del impacto generado en estudiantes del Centro Universitario de los Altos, dicha muestra corresponde a 156 estudiantes que representan el total de la población de estudio, la cual se encuentra representada por estudiantes que trabajaron de forma integral, colaborativa y transdisciplinaria para abordar problemas, así como generar propuestas de emprendimiento durante el calendario escolar 2024A.

**Palabras clave:** Emprendimiento 360; Transdisciplinario; Transversal; Educación Integral.

## INTRODUCTION

Entrepreneurship is currently consolidated as an essential pillar in higher education, transcending and surpassing its traditional association with creating businesses to become a fundamental personal and professional development skill. In this sense, the 21st century is leading an educational revolution committed to developing professional skills, competencies, and training for entrepreneurship as a guarantee of a professional performance consistent with the needs of the various contexts".<sup>(1)</sup> In the face of rapidly changing economic, technological, educational, and social contexts, university education must evolve to equip students with the competencies, knowledge, skills, and tools necessary to face the challenges of a world in constant and permanent transformation.

It is clear that university education from a perspective that considers the needs of the environment, but above all the professional demands of its graduates, must take into account the strengthening of entrepreneurial skills that link 'creativity, attitude towards risk, leadership, commitment, self-confidence, goal orientation, achievement motivation, self-esteem, is more evident in complex and dynamic environments, in which people need to devise alternatives to deal with situations';<sup>(2)</sup> The above involves the development of key skills, both in the design of entrepreneurial proposals and in the strengthening of capabilities and human talent in a competitive environment.

Therefore, entrepreneurial capacity implies capacities associated with professional performance by implementing disciplinary competencies and skills related to situations that require the application of innovation, creativity, collaborative work, effective communication, critical thinking, and decision-making. In this sense, it is stated that 'Bachelor's degree curricula have a design that attempts to integrate entrepreneurial skills and business management and teamwork competencies in a transversal manner'.<sup>(3)</sup> However, in conventional educational scenarios, based on a theoretical approach and reduced in the practice of situations in authentic contexts, university students limit their potential for designing proposals and solving difficulties, an essential part of the entrepreneurial mindset necessary in a dynamic and competitive environment.

In this context, the research addresses the foundations and characteristics for the practical application of the Entrepreneurship 360 strategy at the University Centre of Los Altos, which according to the information published on its news portal indicates that 'Entrepreneurship is a factor that drives regional economic development, as it contributes to employability and the transfer of technology and knowledge through processes of invention and innovation', of which it is considered in the network of the University of Guadalajara that this University Centre represents a benchmark, by mentioning again on its website that 'CUAltos is the first University Centre affiliated to the Network of Entrepreneurship and Innovation Centres of the University of Guadalajara, a synergy and direction that seeks to consolidate and energise the isolated efforts to promote and foster entrepreneurship in our institution',<sup>(4)</sup> Therefore, the contributions are remarkable, now from a methodological approach of entrepreneurship 360, which is oriented to prepare students for an environment where adaptability, creativity and informed decision making are unavoidable imperatives involved as part of their professional performance.

## Theoretical framework

### *Bases that underpin the 360° entrepreneurship strategy*

As part of an initial conceptual definition of entrepreneurship, it is remarkable to consider many concepts that converge in various related words, such as innovation, creativity, risk, and determination. In this regard, it is essential to think that it corresponds to a multifaceted term, which links to the entrepreneur's action; for this reason, it corresponds to the 'set of attitudes and behaviors that give rise to a certain personal profile oriented towards self-confidence, creativity, innovation capacity, sense of responsibility and risk management'<sup>(5)</sup> as determining factors and concepts.

Therefore, entrepreneurship, although consistent with a dynamic of initiatives and investment based on the needs of the environment, also involves the foundations on which professional training is based within the university environment and the strengthening of entrepreneurial skills, which, as proposed in professional

performance environments are ‘technical, entrepreneurial and management skills’<sup>(1)</sup> which are represented in figure 1 ‘Three dimensions of entrepreneurial skills’:



Figure 1. Adapted from Cala and Gougoulakis (2024, citing Cooney 2012) Three Dimensions of Entrepreneurial Skills

From an entrepreneurial perspective, the university student aims to create a company or be part of an innovative company. Given this, it is necessary to highlight that the dimensions linked to entrepreneurial skills provide an approach centered on ‘Productivity and competitiveness improve with entrepreneurial skills, as the workforce is flexible and willing to promote innovation’.<sup>(1)</sup>

However, it is necessary to recognize that, although the same methodology is applied to promote entrepreneurship, there are factors related to entrepreneurial intention, which ‘is a state of mind that directs the individual to start a business’.<sup>(6)</sup> Therefore, the various formative particularities of university students and their environment can affect or contribute to their intention to undertake and modify this so-called state of mind.

In this respect, they point out that ‘various elements can influence it, including aspects of a cognitive nature... as well as the university and social environment in which they develop; these are often also conditioned by marked cultural and social attitudes’.<sup>(7)</sup> Therefore, the entrepreneurial intention must be strengthened with the analysis of the paradigms that are taken as a starting point to promote an integrating vision of their capacity to link the competencies acquired practically, as well as their abilities to meet needs and provide solutions to problems or conflicts that are specific to their professional performance environment.

Thus, from the training bases focused on promoting through the 360° entrepreneurship strategy, the entrepreneurial capacity ‘is linked to the ability to identify new forms of development and progress; the ability to generate creative and innovative solutions to problem-solving and to maintain a correct attitude in the face of mistakes’,<sup>(8)</sup> the advantage it provides is the acquisition of foundations and practical bases that stimulate the competences of their profile and professional potential.

Although in academic matters ‘teaching entrepreneurship courses offers a favorable perception of the entrepreneurial context, demonstrating that the variables used have a direct effect on the intention to undertake, with the university environment having a greater relevance, obtaining results that deepen the empirical research’,<sup>(9)</sup> however, the approach in the classroom limits the perspective of a scenario of real applicability.

## DEVELOPMENT

This research initiative arises from the need to follow up on the impact generated by students at University Centre of Los Altos, who work collaboratively and interdisciplinary in entrepreneurship proposals, which

involves the design and implementation of creative and innovative business strategies and plans that require putting into practice the competences developed as part of their professional profile and also strengthening those linked to the generation of business plans as part of the entrepreneurship process.

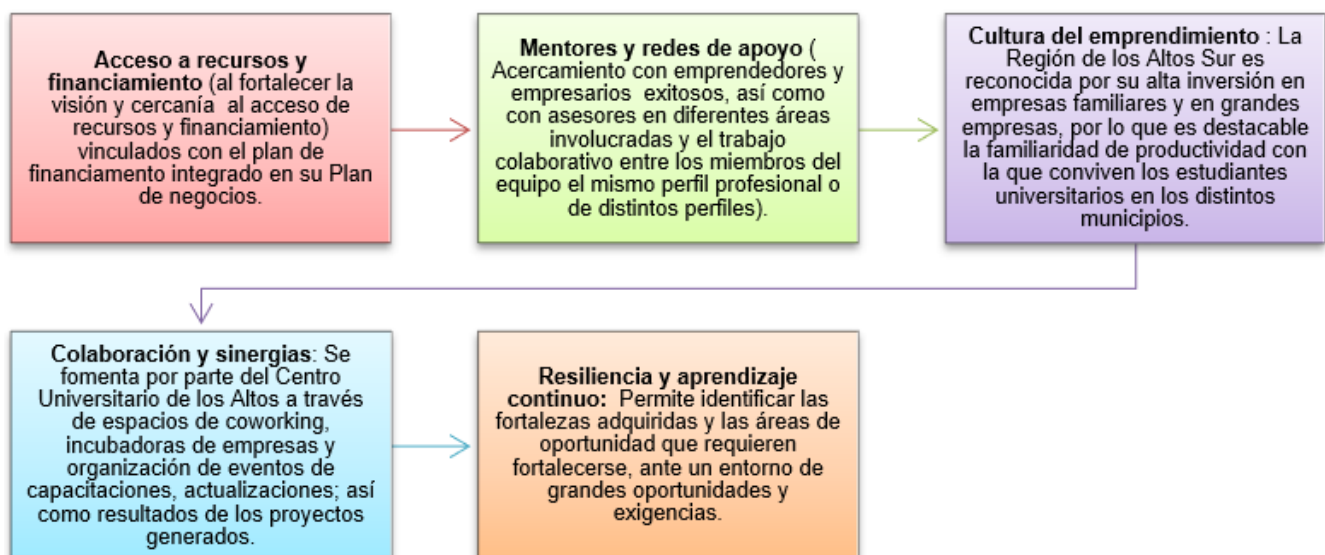
For this reason, the research focuses on a total study population of 156 students in 2024. A school calendar of the bachelor's degrees in Livestock Systems Engineering, Administration, Public Accounting, International Business, Nursing, Nutrition, and Psychology. With the results obtained, aspects can be implemented to strengthen further the formative didactic strategies of Entrepreneurship 360, which will enhance the results of the students in the improvement of the entrepreneurship projects and their business plans, as well as in the student's perception of the experience acquired in this process. In addition, to establish a clear guideline, the Centre for Research and Innovation of Organisations of the University Centre of Los Altos has already become a reference as part of the Network of Entrepreneurship Centres of the Network of the University of Guadalajara.

In this sense, from a practical perspective, the 360° education approach for entrepreneurs corresponds to a comprehensive methodology that seeks to provide complete and multidimensional training to entrepreneurs, covering not only technical and business aspects but also soft skills, leadership, creativity, and personal well-being,<sup>(10)</sup> which not only poses training and disciplinary challenges, which are directly related to the university environment but is also associated with the perspective for professional and labor development, since the skills to be enhanced are linked more with practical aspects required in real performance environments.

Therefore, its approach is oriented toward the transversality of entrepreneurship; in this regard, 'For the construction of transversalities that are authentic areas, it means that there is a greater difficulty for the development of the curricular project based on the development of transversal didactic units, that is, that they include content that covers all areas of the curriculum'<sup>(11)</sup> so that through the design of integrative entrepreneurship projects, they can apply knowledge, strengthen skills and demonstrate their attitudes from more real scenarios through their proposals.

Given this, the University Centre of Los Altos (CUAltos) "incorporates entrepreneurship in a transversal manner in its fourteen academic programs. It can be observed that, after an implementation in 2021, the mentality of many students has changed. Companies, brand registrations, and incubations have been created",<sup>(12)</sup> which allows CUAltos to be a benchmark for entrepreneurship within the University of Guadalajara Network itself and in internal competitions in which entrepreneurs from the Southern Highlands Region show interest regarding the proposals that are generated by the students themselves from the different educational programs; in addition, the most outstanding ones are incorporated into the high-performance teams for state and national competitions.

Therefore, in figure 2, it is clear to have such visibility and constant analysis of entrepreneurship's potential for Centro Universitario de los Altos when analyzing what the factors that promote entrepreneurship imply:

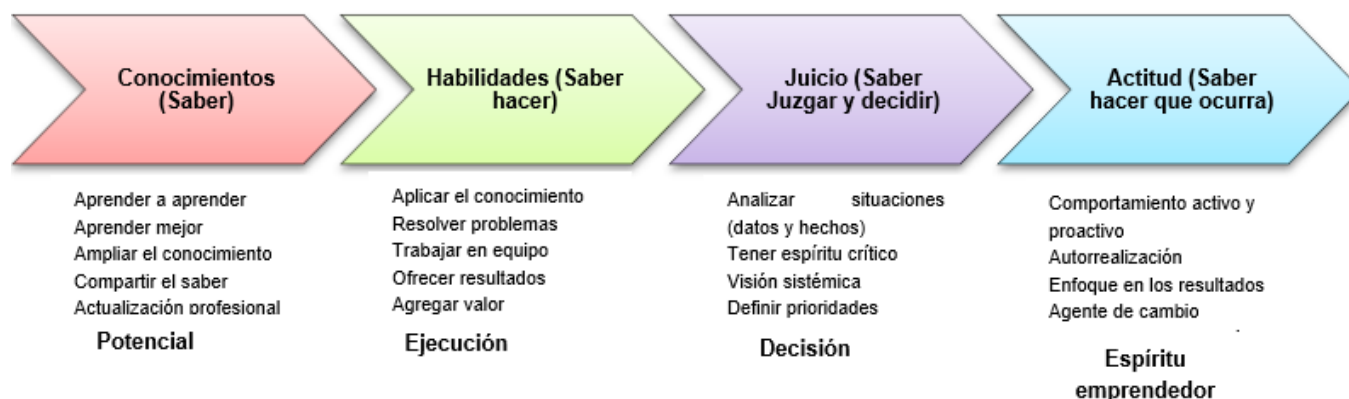


**Figure 2.** Adapted from Navarro and Villegas the importance of entrepreneurship in Latin American universities. <https://theconversation.com/la-importancia-del-emprendimiento-en-las-universidades-de-america-latina-208982>

These factors contribute to the strengthening of human talent, recognizing that 'To be talented, the person must possess some competitive differential that values him or her',<sup>(13)</sup> but this author not only highlights the interest or performance to have talent but also proposes four key aspects (figure 3) related to the development of competencies linked to human talent, on which the evaluation of the impact of the 360° entrepreneurship



strategy at the Centro Universitario de los Altos is focused: as a transversal strategy, which is represented in the following diagram:



**Figure 3.** Adapted from Chiavenato Structural Bases of Human Talent p. 41. The New Role of Human Resources in Organisations. Fifth edition

## METHOD

As part of the dynamics to investigate the impact generated by the 360 entrepreneurship strategy at the Centro Universitario de los Altos, we chose to implement a mixed methodology (involving qualitative and quantitative research), one that requires “quantitative and qualitative data, integrates them and then makes interpretations based on combining the strengths of both. Its central premise is that using quantitative and qualitative approaches to study, in combination, provides a better understanding...”<sup>(14)</sup> by allowing for a perspective that takes up central aspects of broadening and relating the data within the research approach.

This required, on the one hand, the consideration of the support, which is based on the theoretical framework, as well as the implementation of a survey, which was designed from the structural bases of human talent,<sup>(13)</sup> which is aligned to detect the impact achieved in the knowledge and skills developed by students who carried out entrepreneurship projects, detecting the bases that consider their power, execution, discussion, and entrepreneurial spirit.

For this, the descriptive type of research required as part of the research strategy is a sequential implementation design, considering that ‘in sequential designs, the data collected and analyzed in one phase of the study (CUAN or CUAL) are used to inform or develop the other phase (CUAN or CUAL)’<sup>(15)</sup> which required a qualitative research phase that in its conceptual phase allowed the conceptual framework of the research to be determined, In its empirical, methodological phase, it determines what is being researched, in its empirical analytical phase, the results obtained are analyzed, so that later, in the inferential phase, the theoretical framework that underpins the research can be established.

This allows the conceptual phase of the quantitative design to establish the research dimensions, in addition to the empirical phase, the guidelines for the construction of the research survey and subsequently apply the study to obtain, in the analytical, empirical phase, the representative data that can be complemented using meta-inferences with the analysis between the theoretical and practical aspects obtained.

Thus, the contribution provided by the mixed methodology with a sequential execution design approach is that it allows us to obtain a theoretical basis that supports the relevance of the formative research of human talent that aims to create, stimulate, and promote entrepreneurial talent, as well as the results of the intervention through the 360° entrepreneurship strategy, which enables an analysis of the data, taking into consideration the achievements obtained, as well as the aspects that need to be improved in future interventions.

## The Survey

For its application, the teachers assigned to the Learning Units related to the design of entrepreneurship projects of the degrees in Livestock Systems Engineering, Administration, Public Accounting, International Business, Nursing, Nutrition, and Psychology provided the link to access the online survey requesting their collaboration to participate in this research, following the purpose and indications requested in this instrument. This facilitated the process of application and collection of information, with an estimated fifteen days to collect the necessary data. As part of the required data, at the beginning, they must select the degree to which they belong. Subsequently, the questions are focused on collecting data on their experience of participation in the Entrepreneurship 360 strategy.

### Structure of the evaluation survey on the impact of the Entrepreneurship 360 Strategy (EIEE360) in the University Centre of Los Altos as a transversal strategy

The instrument (table 1) is structured with 20 questions, integrated into four dimensions: knowledge (knowing), skill (knowing how to do), judgment (learning how to judge and decide), and attitude (learning how to make it happen), which are represented in the following table of content:

Dimensions	Abbreviation	Description	Questions
Knowledge Potential.	C.P	It relates to improving, complementing and updating their learning.	1-5
Ability (know-how) Execution.	H. E	It involves applying knowledge in processes of problem solving, finding solutions and achieving set objectives.	6-10
Judgement (knowing how to judge and decide) Decision.	J. D	It involves processes related to obtaining data and analysing it in order to set priorities and make decisions.	11-15
Attitude (Knowing how to make it happen) Entrepreneurship	A.E. E	It is linked to the demonstration of initiative related to creative and innovative proposals, focused on challenges that stimulate the self-realisation of professional potential.	16-20

The survey instrument includes five questions for each of the four dimensions described above; the response options correspond to a Likert-type scale, with the possible responses being strongly agree, agree, disagree, and strongly disagree.

#	Questions	Response options 1.-Strongly agree, 2.-Agree, 3.-Neither agree or disagree, 4.-Not agree and 5.-Strongly disagree.
C.P1	Were strategies incorporated to encourage you to implement better learning practices?	Response options 1.-Strongly agree, 2.-Agree, 3.-Neither agree or disagree, 4.-Not agree and 5.-Strongly disagree.
C.P2	Did your teachers or specialised advisors use complementary learning strategies to gain better knowledge in relation to your entrepreneurship project?	Response options 1.-Strongly agree, 2.-Agree, 3.-Neither agree or disagree, 4.-Not agree and 5.-Strongly disagree.
C.P 3	Do you consider that you have broadened your professional knowledge from the dynamics carried out for the development of the entrepreneurship project?	Response options 1.-Strongly agree, 2.-Agree, 3.-Neither agree or disagree, 4.-Not agree and 5.-Strongly disagree.
C.P 4	Were you encouraged to share knowledge with your fellow team members in the entrepreneurship project?	Response options 1.-Strongly agree, 2.-Agree, 3.-Neither agree or disagree, 4.-Not agree and 5.-Strongly disagree.
C.P 5	Were you provided with professional updates by way of complementary training applicable to the entrepreneurship project developed?	Response options 1.-Strongly agree, 2.-Agree, 3.-Neither agree or disagree, 4.-Not agree and 5.-Strongly disagree.
H. E 6	Was the practical application of knowledge promoted during the stages of the entrepreneurship project?	Response options 1.-Strongly agree, 2.-Agree, 3.-Neither agree or disagree, 4.-Not agree and 5.-Strongly disagree.
H. E 7	Was guidance provided for the resolution of problems encountered during the development of the entrepreneurship project?	Response options 1.-Strongly agree, 2.-Agree, 3.-Neither agree or disagree, 4.-Not agree and 5.-Strongly disagree.
H. E 8	Was inter- and multidisciplinary teamwork promoted for the development of the venture proposal?	Response options 1.-Strongly agree, 2.-Agree, 3.-Neither agree or disagree, 4.-Not agree and 5.-Strongly disagree.
H. E 9	Does the proposal focus on presenting results from a vision of a real-life entrepreneurship scenario?	Response options 1.-Strongly agree, 2.-Agree, 3.-Neither agree or disagree, 4.-Not agree and 5.-Strongly disagree.

H. E 10	Is there an incentive to add a market differentiating value to your venture proposition?	Response options 1.-Strongly agree, 2.-Agree, 3.-Neither agree or disagree, 4.-Not agree and 5.-Strongly disagree.
J. D 11	From the data obtained, were you required to analyse situations regarding the feasibility of the venture project?	Response options 1.-Strongly agree, 2.-Agree, 3.-Neither agree or disagree, 4.-Not agree and 5.-Strongly disagree.
J. D 12	Were they asked to critically reflect on the strengths and weaknesses of their venture proposal?	Response options 1.-Strongly agree, 2.-Agree, 3.-Neither agree or disagree, 4.-Not agree and 5.-Strongly disagree.
J. D 13	Did you manage to develop a systemic (big picture) view of the interrelationships and connections of the components of the venture project?	Response options 1.-Strongly agree, 2.-Agree, 3.-Neither agree or disagree, 4.-Not agree and 5.-Strongly disagree.
J. D 14	Did they define priorities for the timely delivery of the proposal based on the information analysis of the venture project?	Response options 1.-Strongly agree, 2.-Agree, 3.-Neither agree or disagree, 4.-Not agree and 5.-Strongly disagree.
J. D 15	Was the analysis of alternatives applied in decision-making?	Response options 1.-Strongly agree, 2.-Agree, 3.-Neither agree or disagree, 4.-Not agree and 5.-Strongly disagree.
A.E. E 16	Were you encouraged to be actively involved in identifying opportunities for improvement during the development of the entrepreneurial proposal?	Response options 1.-Strongly agree, 2.-Agree, 3.-Neither agree or disagree, 4.-Not agree and 5.-Strongly disagree.
A.E. E 17	Was an experience that contributes to the achievement of your career goals addressed during the entrepreneurship proposal?	Response options 1.-Strongly agree, 2.-Agree, 3.-Neither agree or disagree, 4.-Not agree and 5.-Strongly disagree.
A.E. E 18	Did your university advisors or entrepreneurs in the region provide recommendations on tools to ensure better processes for the final product/service?	Response options 1.-Strongly agree, 2.-Agree, 3.-Neither agree or disagree, 4.-Not agree and 5.-Strongly disagree.
A.E. E 19	Does the selection of the venture proposal stem from the analysis of better addressing market needs?	Response options 1.-Strongly agree, 2.-Agree, 3.-Neither agree or disagree, 4.-Not agree and 5.-Strongly disagree.
A.E. E 20	Does the venture proposal involve creativity in its design and innovative processes for its development?	Response options 1.-Strongly agree, 2.-Agree, 3.-Neither agree or disagree, 4.-Not agree and 5.-Strongly disagree.

## RESULTS

### Results were obtained on the impact generated by implementing the Entrepreneurship 360 methodology

The instrument was socialized by the teachers responsible for the Learning Units related to entrepreneurship. It was applied online, with a total study population of 156 university students from the following degrees: Livestock Systems Engineering, Administration, Public Accounting, Nursing, International Business, Nutrition, and Psychology.



Figure 4. Q.P 1 Were strategies incorporated to encourage you to implement better learning practices?

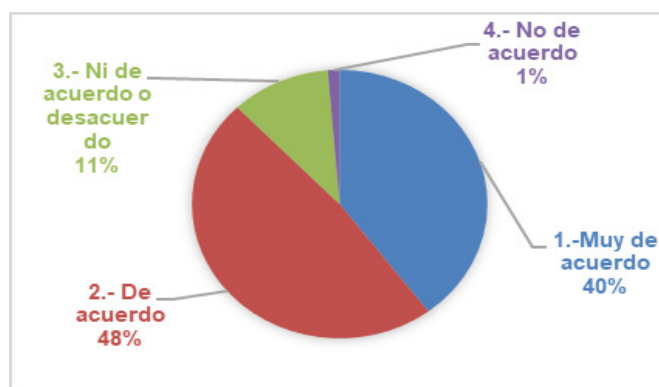


Figure 5. Q.P 2 Did your teachers or specialist advisors use complementary learning strategies to gain better knowledge in relation to your entrepreneurship project?

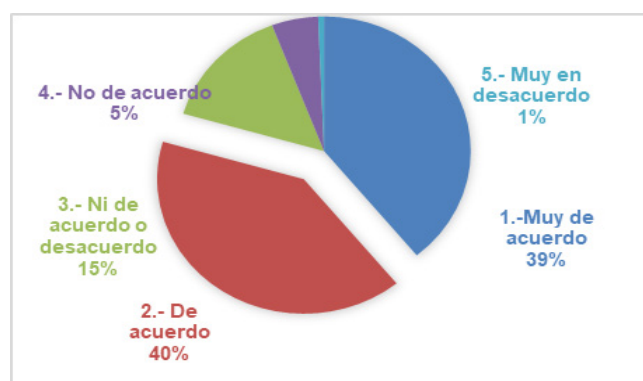


Figure 6. Q. Q 3 Do you consider that you broadened your professional knowledge from the dynamics carried out for the development of the entrepreneurship project?

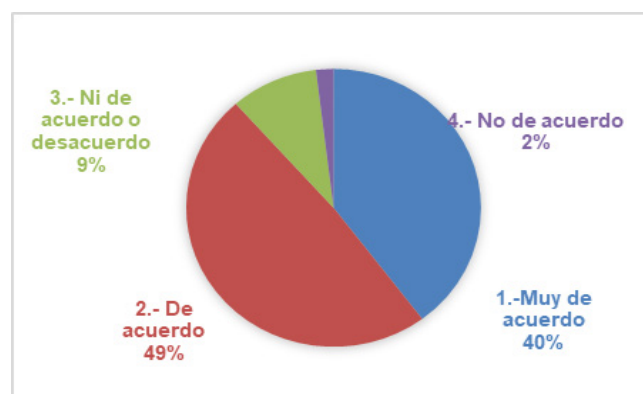


Figure 7. Q.P 4 Were you encouraged to share knowledge with your fellow entrepreneurship project team members?

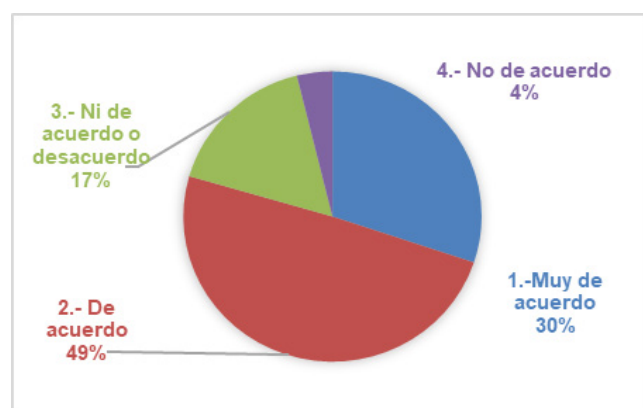


Figure 8. Q. P 5 Were you provided with professional updates by way of complementary training applicable to the venture project developed?



### The following data are obtained for the study dimension Knowledge Potential (C.P)

The results presented in the dimension Knowledge (know) Potential (C.P) indicate figure 4 that the strategies to promote better learning practices are implemented, 35 % state that they strongly agree, 50 % agree, and 13 % neither agree nor disagree, regarding 2 % state they do not agree. Furthermore, when questioning whether the complementary strategies used by their teachers or specialized advisors to obtain better knowledge about the entrepreneurship project (figure 5), it increases to 40 % strongly agree, 48 % agree, 11 % neither agree nor disagree, and 1 % disagree. When asked about whether their professional knowledge was expanded as a result of the dynamics carried out for the development of the entrepreneurship project (figure 6), although the results are considered favorable, 39 % strongly agree, and 40 % agree, it should also be considered that it increases to 15 % neither agree nor disagree; as well as 5 % disagree; which represents an area of opportunity that should be addressed.

When asked whether they were encouraged to share their knowledge with their teammates in the entrepreneurship project (figure 7), a similarity was maintained concerning the previous question, with 40 % strongly agreeing. However, this increased to 49 % agreeing, decreased to 9 % neither agreeing nor disagreeing, and only 2 % disagreeing. About the question of whether they were provided with professional updates by way of complementary training applicable to the entrepreneurship project (figure 8), 30 % strongly agree, 49 % agree, but an area of opportunity is detected by 17 % neither agree nor disagree, in addition to 4 % disagree; so questioning about updates of interest to them is a strategy that should be further strengthened according to the data obtained.

### Study dimension Ability (know-how) Execution (H.E) The following data were obtained

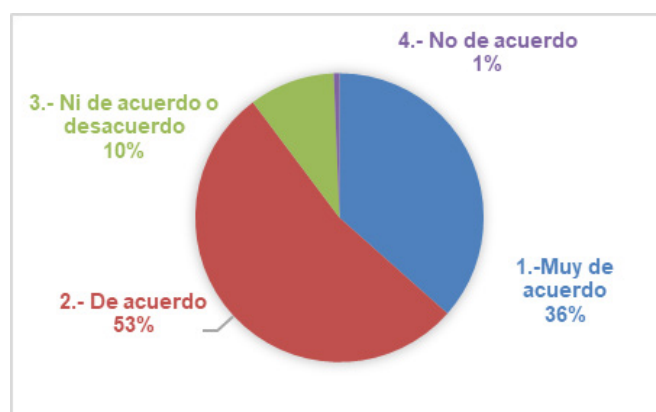


Figure 9. H. E 6 Was the practical application of knowledge promoted during the stages of the entrepreneurship project?

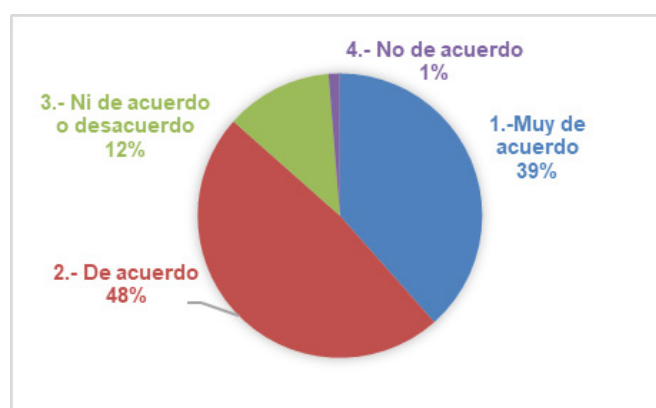


Figure 10. H. E 7 Was guidance provided for the resolution of problems encountered during the development of the venture project?

The results of the study dimension Skill (know-how) Execution (S.E) indicate figure 9 about the question of whether the practical application of knowledge was promoted during the stages of the entrepreneurship project, 36 % strongly agree, a notable increase is obtained with 53 % agreeing, as well as 10 % neither agreeing nor disagreeing and only 1 % disagreeing. Furthermore, in figure 10, when asked whether guidance was provided for the resolution of problems that arose during the development of the entrepreneurship project, in an average similar to the previous result, 39 % indicated that they strongly agreed, 48 % agreed, 12 % neither agreed nor disagreed and 1 % again disagreed.

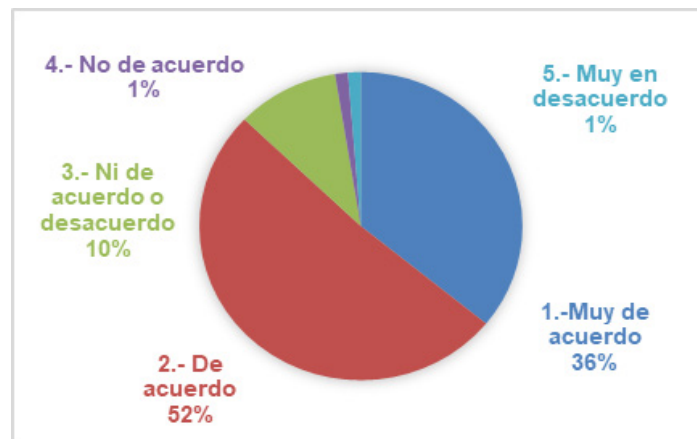


Figure 11. H.E 8 Was inter- and multidisciplinary teamwork promoted for the development of the venture proposal?

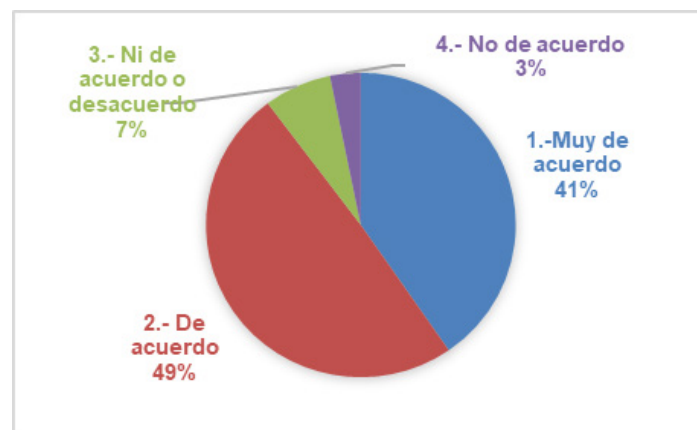


Figure 12. H. E 9 Does the proposal focus on presenting results from a vision of a real-life entrepreneurship scenario?

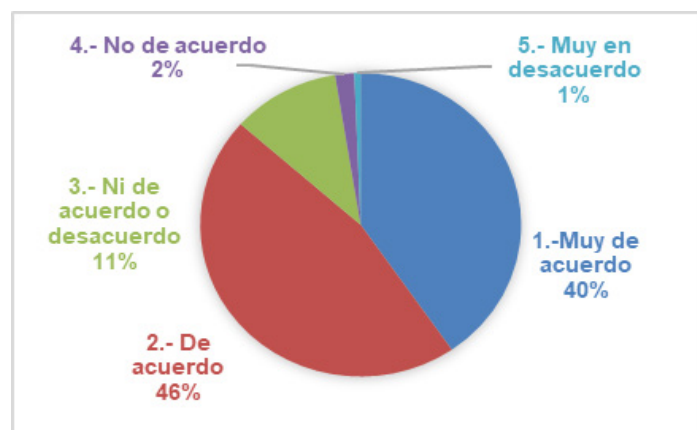


Figure 13. H. E 10 Is there an incentive to add a market differentiating value to your venture proposition?

Also, in figure 11, when asked whether inter- and multidisciplinary (transdisciplinary) teamwork was promoted for the development of the entrepreneurship proposal, the average is similar to the previous answers, with 41 % strongly agreeing, 49 % agreeing; it also decreases to 7 % neither agreeing nor disagreeing but increases to 3 % disagreeing. Regarding figure 12 when asked if the proposal focuses on presenting results from a vision of a real scenario of entrepreneurship, 36 % strongly agree, 52 % agree, 10 % neither agree nor disagree, in addition to 1 % disagree, and for the first time in the survey 1 % strongly disagree; so this aspect represents special attention in the improvement strategies. Likewise, about (figure 13) a question on whether adding a differentiating value concerning the market for their entrepreneurial proposal is encouraged, a similar average is maintained with 40 % strongly agreeing and 46 % agreeing; however, a similar result to the previous question is also present, with 11 % neither agreeing or disagreeing, 2 % disagreeing and again 1 % strongly disagreeing.

Dimension of study Judgement (knowing how to judge and decide) Decision (J.D) The following data are obtained

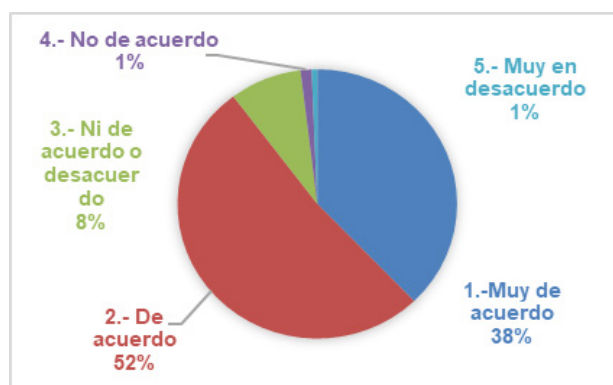


Figure 14. J. D 11 From the data obtained, were you required to analyse situations about the feasibility of the venture project?

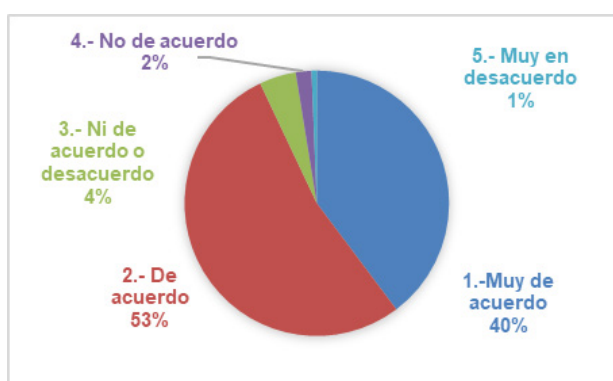


Figure 15. J. D 12 Were you asked to critically reflect on the strengths and weaknesses of your venture proposal?

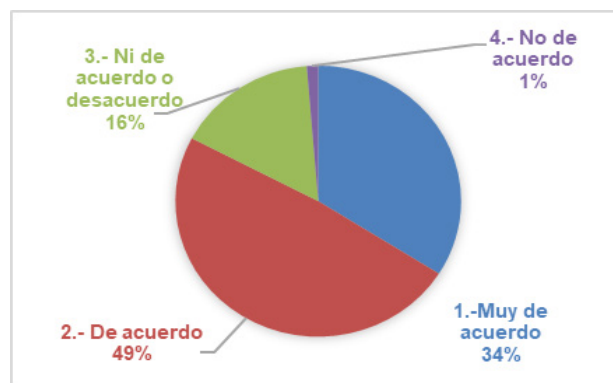


Figure 16. J. D 13 Did you manage to develop a systemic (big picture) view of the interrelationships and connections of the components of the venture project?

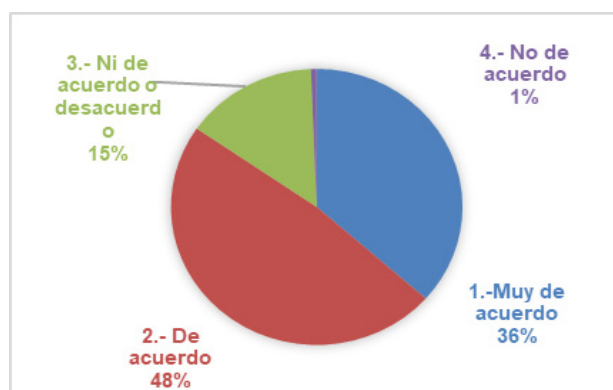
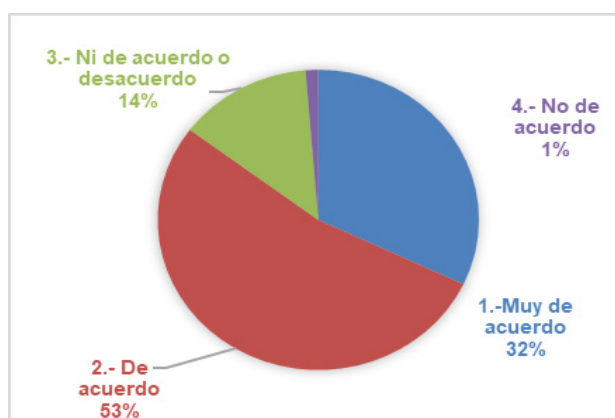


Figure 17. J. D 14 Did you define priorities for the timely delivery of the proposal based on the information analysis of the venture project?

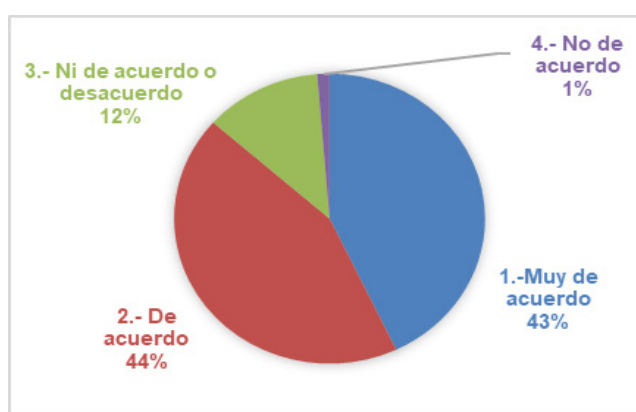


**Figure 18.** J. D 15 Was the analysis of alternatives applied for decision-making?

The results of the study dimension Judgement (knowing how to judge and decide) Decision (J.D) show that figure 14 concerning the question asking whether, based on the data obtained, they were asked to analyze situations regarding the viability of the venture project, 38 % strongly agreed, 52 % agreed, 8 % neither agreed nor disagreed, in addition to 1 % disagreed and 1 % strongly disagreed; maintaining a significant percentage of need for improvement in this aspect of 10 %. In figure 15, when asked whether they were asked to critically reflect on the strengths and weaknesses of their venture proposal, there is an increase in favorable results, with 40 % strongly agreeing and 53 % agreeing. A decrease in the percentage of negative margin considering that 4 % neither agree nor disagree, 2 % disagree, and 1 % strongly disagree.

Furthermore, in figure 16 when questioning whether they managed to develop a systematic vision (as a whole) of the interconnections and connections of the components of their venture project, 34 % strongly agree, 49 % agree, increases to 16 % neither agree nor disagree, and 1 % disagree. In figure 17, the similarity is maintained with the previous results when asked if they defined priorities to comply in time and form with the proposal based on the analysis of information from the venture project: 36 % strongly agree, 48 % agree, 15 % neither agree nor disagree and 1 % disagree. Finally figure 18 continues the relationship of results concerning the previous data, considering that when requesting information on whether the analysis of alternatives was applied for decision-making, 32 % strongly agreed, 53 % agreed, 14 % neither agreed nor disagreed, and 1 % disagreed.

For each dimension of the study, Attitude (Knowing how to make it happen) and Entrepreneurship (A.E.E), the following data are obtained



**Figure 19.** S.A. E 16 Were you encouraged to be actively involved in identifying opportunities for improvement during the development of the entrepreneurial proposal?

Regarding the results of the study dimension Attitude (Knowing how to make it happen) Entrepreneurship (A.E.E), in figure 19 where data is obtained on whether it was promoted to become actively involved in identifying opportunities for improvement during the development of the entrepreneurship proposal, an initial similarity is shown by presenting 43 % powerfully agree and 44 % agree, in addition to 12 % neither agree nor disagree and only 1 % do not agree. Likewise, in figure 20 when questioning whether an experience that contributes to the achievement of their professional goals was addressed during the entrepreneurship proposal, it is considered an area for improvement by obtaining a decrease in favorable results, considering 36 % strongly agree, 45 % agree; it also increases to 16 % neither agree nor disagree, 2 % do not agree, and 1 % strongly disagree.

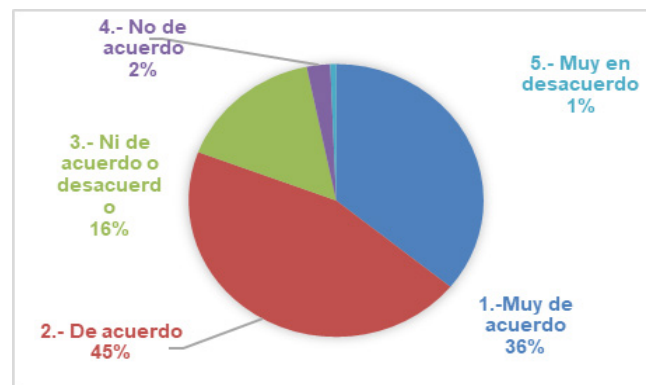


Figure 20. A.E. E 17 Was an experience that contributes to the achievement of your career goals addressed during the entrepreneurship proposal?

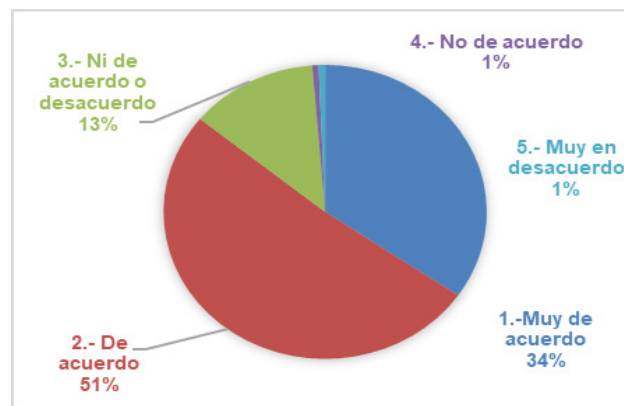


Figure 21. S.A. E18 Did your university advisors or entrepreneurs in the region provide recommendations on tools to ensure better processes for the final product/service?

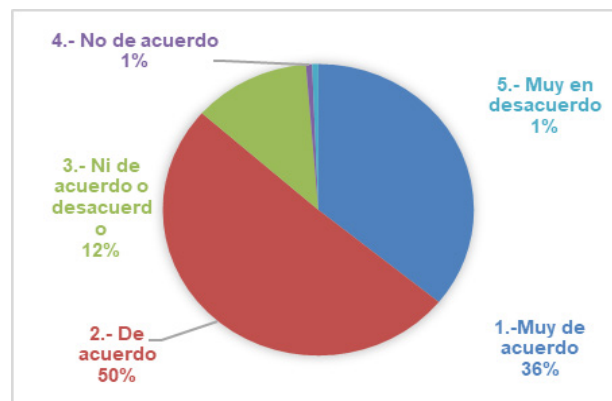


Figure 22. A.E. E 19 Does the selection of the venture proposal stem from the analysis of better addressing market needs?

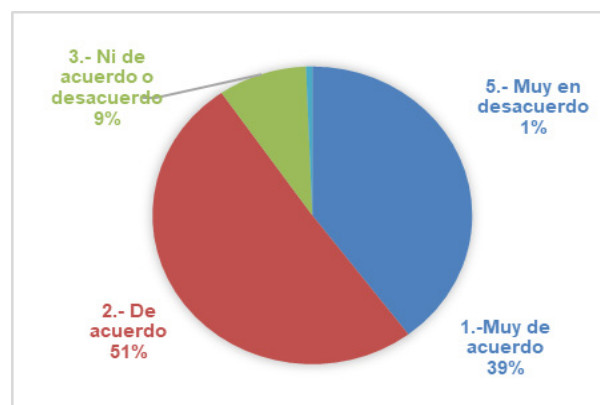


Figure 23. A.E. E 20 Does the venture proposal involve creativity in its design and innovative processes for its development?



Figure 21 increase the results in the value of positive impact when questioned about whether their university advisors or entrepreneurs provided recommendations on tools that ensure better processes for the final product/service, to which 34 % strongly agree, 51 % agree, and as results that are considered areas for improvement 13 % neither agree nor disagree; furthermore respectively in disagree and strongly disagree in both 1 %. A very similar result (figure 22) when asked if the selection of the venture proposal arises from the analysis of better attention to market needs, to which 36 % strongly agree, 50 % agree; in aspects of improvement is maintained with 12 % neither agree nor disagree, 1 % disagree, and 1 % strongly disagree. Finally figure 23, the positive impact of the results on whether the entrepreneurial proposal involves creativity in its design and innovative processes for its development increases, with 39 % strongly agreeing and 51 % agreeing; there is a notable decrease in the values representing the areas of opportunity, with 9 % neither agreeing nor disagreeing and only 1 % strongly disagreeing.

## DISCUSSION

As part of the processes of educational innovation, the identification of strategies that enhance not only technical-disciplinary aspects but also the encouragement to put into practice the so-called soft skills associated with collaborative work, decision-making, effective communication, creativity, among others, from a pragmatic vision that allows a complete vision of the importance of transdisciplinary work to be established.

In this sense, some research has been carried out concerning the University Centre of Los Altos (CUAltos) itself, including the research article entitled 'Transversality of entrepreneurship in the careers of the University Centre of Los Altos,<sup>(11)</sup> whose central purpose is to evaluate transversality focused on the development of competences to collaborate through entrepreneurship, applying a research instrument used to teachers, so that from their perception of the work carried out in different disciplines in CUAltos. This allows us to analyze the knowledge of their impact on their teaching work to determine, above all, to strengthen the alignment of training that can also have, as a consequence, an improvement in their work practice and, therefore, impact the entrepreneurship projects generated.

However, the present research focuses on recovering the opinion of the students themselves, who collaborate in a transdisciplinary way, based on key dimensions of the 360° entrepreneurship strategy, so that the alignment between the perceptions of the impact of the teaching practice concerning the generation of entrepreneurship can be analyzed, but in a more specific way to detect for each dimension the areas of opportunity that need to be strengthened and also involve the teachers in this process of reflection-action.

Another study that maintains coherence is 'Entrepreneurship as a potentiator of soft skills in students at the University Centre of Los Altos,<sup>(16)</sup> which aims to evaluate the impact of the development of soft skills focused on entrepreneurship, questioning communication skills, problem-solving and thinking, leadership and teamwork skills, ethical and moral values, as well as self-management. Although it allows for the recovery of relevant data on the skills that they must demonstrate when carrying out their projects, the research on the 360° entrepreneurship strategy raises the practical dimensions of interest promptly, as well as questions directly aligned with the key questions that allow us to determine the data of strength and aspects for improvement, from a vision linked to the practical experience recovered.

Undoubtedly, the educational strategies that allow for innovation in the process require research that addresses the impact generated and will enable us to determine whether the actions have been favorable for the established purposes, or on the contrary, they require guidelines that can be aligned with the needs expressed by the university students themselves, for whom this training process is intended. It is through this research that the impact generated can be appreciated, not only as isolated and unstructured data; on the contrary, it presents an integral approach, taking up the knowledge (knowledge), know-how (skill), know-how to judge (judgment) and know-how to make it happen (attitude),<sup>(13)</sup> which are based on the proposal of the Structural Bases of Human Talent, which are directed towards generating an entrepreneurial spirit.

## CONCLUSIONS

The research carried out on the educational strategy of Entrepreneurship 360 at the Centro Universitario de los Altos proves to be a successful educational initiative that goes beyond traditional teaching, based on reception and assimilation, but involves the implementation of their discipline that corresponds to their professional profile for the design of entrepreneurial proposals that mobilize innovation, creativity, communication skills, collaborative work and the search for solutions. Therefore, its impact extends to the integral development of students, preparing them to face a world in constant and permanent transformation and fostering a new and innovative entrepreneurial mindset that transcends the university classroom and can be put into practice more naturally.

Given this, the teaching work in the classroom goes beyond an isolated learning unit. Still, it involves cross-disciplinary work that enables the contribution of key elements required for training, monitoring, assessment, and evaluation of the projects developed by the students. In this sense, the path toward continuous

improvement involves addressing the opportunities and challenges identified to capitalize on successful practices. A key element is the results obtained, corresponding to feedback from the students collaborating to design entrepreneurial proposals.

Therefore, it is essential to perfect the implementation of 360° entrepreneurship, ensuring that it continues to evolve dialectically in response to the needs expressed by the participants themselves, considering the implementation of innovative actions and procedures that manage to strengthen the elements that need to increase the value of their perception based on their experience in this process. This is how the formative culture of entrepreneurship is a reference for the Centro Universitario de los Altos, being a strategic vision that highlights the need for university students to identify key needs for the design of entrepreneurial proposals with innovative characteristics, which allows them to incorporate competitive aspects to their professional training, by capitalizing on the opportunities that the social and commercial environment itself provides.

### Future Work

The proposed educational dynamics require the analysis of the data obtained to determine the actions that need to be strengthened; in this sense, it is considered necessary a process that allows to establish the dynamics of training to improve the areas of greater attention detected. Thus, the 360° entrepreneurship strategy seeks to enhance the entrepreneurial capacity of the participating university students, which requires strengthening communication between the teachers who collaborate in this process so that it is even more efficient and that some difficulties can be detected in the process of formulation, design, and implementation of entrepreneurship; where problems can constantly arise to establish agreements mainly and to implement proposals.

In addition, the tasks considered necessary are applying the improvement actions and reapplying the survey to assess the progress achieved. Thus, this experience can be a reference in monitoring and evaluating more comprehensive practices of university entrepreneurship, which can be taken up again within the University of Guadalajara Network itself, thus having a greater impact on university students within the social and economic growth.

The above makes it clear that in the first instance, the analysis of the results provides a guideline on the guidelines that should be considered in the improvement actions, then follows up on the impact of strengthening the entrepreneurship strategy 360. likewise, it is necessary to think that an integral vision of the process and the results obtained by the students must be taken into account to address in a more timely manner the difficulties that are present in an educational process with a notable approach to the entrepreneurial environment that needs to be promoted, having a proposal that highlights the importance of the training process for the design of entrepreneurship projects that are generated by the educational community of the University Centre of Los Altos, as part of the strengthening of the entrepreneurial culture.

### BIBLIOGRAPHIC REFERENCES

1. Cala T, Gougoulakis P. Habilidades profesionales, competencias y formación para el emprendimiento. 1ª ed. Editorial Universitaria; 2024. <https://elibro-net.wdg.biblio.udg.mx:8443/es/lc/udg/titulos/249188>
2. Quispe G, Delgado R, Ayaviri D, Maldonado A. Competencias emprendedoras para generar una cultura de emprendimiento en la educación superior. *Rev Cienc Soc.* 2022;28(6):297-313. Disponible en: <https://www.redalyc.org/journal/280/28073815021/html/>
3. Montiel O, Canales R, Calderón G. Educación universitaria y mentalidad para el emprendimiento: caso de estudio exploratorio en una universidad mexicana. *Rev Entrecienc.* 2023;11(25). Disponible en: <https://www.redalyc.org/journal/4576/457672025005/html/>
4. Centro Universitario de los Valles. La cultura del emprendimiento y la innovación en la educación superior. <https://www.cualtos.udg.mx/noticia/la-cultura-del-emprendimiento-y-la-innovacion-en-la-educacion-superior>
5. Ovalles L, Moreno Z, Olivares M, Silva H. Habilidades y capacidades del emprendimiento: un estudio bibliométrico. *Rev Venez Gerenc.* 2018;23(81):217-34. <https://www.redalyc.org/journal/290/29055767013/html/>
6. Rubio F, Bañuelos L. Intención emprendedora en estudiantes universitarios. *Univ Psychol.* 2022;21:1-17. <https://revistas.javeriana.edu.co/index.php/revPsycho/article/view/36960/29027>
7. Leiva J, Viquez A, Cascante A, Esquivel R. La intención emprendedora de las estudiantes universitarias en

Latinoamérica: Factores cognitivos y del contexto que la influyen. Universidad Nacional del Mar de Plata; 2022. Disponible en: [https://nulan.mdp.edu.ar/id/eprint/3933/1/red\\_motiva\\_2022.pdf](https://nulan.mdp.edu.ar/id/eprint/3933/1/red_motiva_2022.pdf)

8. Rey M, Peña C. Las competencias blandas en el emprendimiento. 1ª ed. Corporación Universitaria Minuto de Dios; 2021. <https://elibro-net.wdg.biblio.udg.mx:8443/es/lc/udg/titulos/231775>

9. Narváez J, Useche L, Mite M. Revisión bibliométrica de los métodos multivariantes en la intención emprendedora en estudiantes universitarios. *Minerva J*. 2023;9(10):108-13. <https://dialnet.unirioja.es/descarga/articulo/9016316.pdf>

10. Navarro J. Educación para emprendedores: ¿qué es el enfoque 360? *The Conversation*. 2024. <https://theconversation.com/educacion-para-emprendedores-que-es-el-enfoque-360-229937>

11. Navarro G, Romo L. Transversalidad del emprendimiento en las carreras del Centro Universitario de los Altos. *Braz J Educ Technol Soc*. 2024;17(1):275-92. <http://dx.doi.org/10.14571/brajets.v17.n1.275-292>

12. Navarro G, Villegas B. La importancia del emprendimiento en las universidades de América Latina. *The Conversation*. 2023. Disponible en: <https://theconversation.com/la-importancia-del-emprendimiento-en-las-universidades-de-america-latina-208982>

13. Chiavenato I. Gestión del talento humano. El nuevo papel de los recursos humanos en las organizaciones. 5ª ed. Editorial McGraw-Hill; 2020.

14. Forni P, De Grande P. Triangulación y métodos mixtos en las ciencias sociales contemporáneas. *Rev Mex Sociol*. 2020;82(1):159-89. Disponible en: <https://revistamexicanadesociologia.unam.mx/index.php/rms/article/view/58064/51325>

15. Hernández R, Mendoza C. Metodología de la investigación: Las rutas cuantitativa, cualitativa y mixta. 2ª ed. McGraw-Hill; 2023.

16. Navarro G, Aguilar L, Rodríguez E. El emprendimiento como potencializador de habilidades blandas en estudiantes del Centro Universitario Altos. *Rev Kupuri*. 2023;2(2):92-116. Disponible en: <http://repositorio.cualtos.udg.mx:8080/jspui/bitstream/123456789/1632/1/El%20emprendimiento%20como%20potencializador%20de%20habilidades%20blandas%20en%20estudiantes%20del%20CUAltos.pdf>

## **FINANCING**

None.

## **CONFLICT OF INTEREST**

Authors declare that there is no conflict of interest.

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