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Methodology For the Management of Social Engagement Projects: A Salesian University Validation

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Abstract

The paper examines the effectiveness of project management models for Social Engagement within the university education system, focusing specifically on their responsiveness to external needs. The objective is to propose a methodological framework aimed at enhancing management practices oriented towards social impact. This proposal was validated through a documentary review of projects implemented at Universidad Politécnica Salesiana, employing relational statistics, a Focus Group involving participating faculty, and an Empathy Map based on Design Thinking principles. The findings underscore a positive perception among evaluators, with no significant differences across evaluation years. Additionally, the results highlight the skills developed by faculty, particularly regarding project objectives, indicators, and expected outcomes.

Keywords: *Project, Society, Teaching Center Management, University.*

INTRODUCTION

Actions related to the integration between universities and their surrounding environments have evolved through the use of various management models, such as the Linear Model, the Dynamic Model, the Sabato Triangle, Innovation Systems, and the Triple Helix (TH) framework in its different variants, including Catch Up (López et al., 2006; Castillo et al., 2014). These models generally link government, industry, and academia, assigning them the role of territorial development agents, with the latter being the most clearly observable.

The process fundamentally seeks alignment with UNESCO's definition of relevance, aiming to provide better responses to societal needs, both economic and social, within the contexts where universities operate (Tünnermann, 1995). Transferability is thus assessed through the materialization of scientific results or the creation of innovative technology-based enterprises (Rodríguez and Cassani, 2014; OEI, 2023).

Aligned with the introductory reflections and subsequently supported by the theoretical framework, it becomes evident that addressing the core purposes of Engagement with Society (ES) has been a critical priority. This interest emphasizes the impact that higher education interventions can have in delivering sustainable solutions to transform the social, political, and economic-productive dimensions of their environments, ensuring these outcomes are measurable and quantifiable. Consequently, this paper presents a methodological proposal for project management designed to promote medium- and long-term transformative exercises through internal institutional collaboration. This proposal has undergone an initial validation process and provides a foundation for subsequent actions.

THEORETICAL FRAMEWORK

Castillo et al. (2014) describe the evolution of Triple Helix (TH)-based models used by universities to engage with society. These models enable universities to drive science toward the economic-productive environment and strengthen the university-industry-government relationship (Etzkowitz and Leydesdorff, 2000), which is critical for innovation in a knowledge society. These relationships are later solidified by integrating interface mechanisms into the innovation system, operating through networks that articulate knowledge, resources, and

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markets, providing a foundation for formulating and evaluating innovation policies (González, 2009). The models include the Linear, Dynamic, TH, TH II, TH III, and Catch Up models (López et al., 2006).

Sapien et al. (2015) analyze the relational variables between the helices: linkage management (university-industry), collaboration and cooperation (industry-public sector), and interaction (university-public sector), emphasizing the synergistic effects among the three actors in social development. Innovation models for technology transfer to businesses must incorporate conditioning factors such as the level of specialization, national policies, and the country's socio-cultural and institutional context (Aceytuno and Cáceres, 2012).

The TH model has evolved into a Quadruple Helix, emphasizing the growing importance universities place on the interplay of factors involved in the creation, storage, transfer, application, and use of knowledge (Padilla et al., 2023). Additionally, the Quintuple Helix model introduces interactions among social spheres via media and civil society, as proposed by Carayannis and Campbell between 2009 and 2010 (Universidad del Valle, n.d.). Knowledge transmission models emphasize impact measurement and act as integrative frameworks for social agents, structures, and states (CRUE, 2018).

Across all variants, the strategic role of universities stands out: "The third function of universities in knowledge economies and societies is to contribute to local economic and social development through knowledge-based innovations" (González, 2009: 743). This perspective establishes a new paradigm for universities—the entrepreneurial university—through the development of patents, institutionalized licensing, and spin-offs, supported by agent interactions within networks (Chang, 2010; Aguillón et al., 2020). This role aligns with models connecting sustainability objectives with the three levels of the circular economy's operating system (Borrero and Yousafzai, 2024).

London et al. (2018) categorize technology transfer models into Appropriability, Diffusion, Knowledge Utilization, Linear, Dynamic, Latin American, and TH models, the latter being the most widely adopted. Technology transfer via spin-offs often follows these models (Arguillón et. al, 2020).

Since the 1980s, technology transfer offices have emerged in the U.S., later extending, albeit modestly, to Latin America due to the absence of a robust legal framework. These offices include areas for commercialization, legal support, advertising, consulting, and financing, adopting university-based, external, or mixed models (Alvarado, 2018; Padilla et al., 2023). Challenges to their functionality arise from institutional and environmental factors, such as state policies (Angulo, 2016). These mechanisms constitute transfer models.

Technology transfer offices and spin-offs are prominent in some countries. The former focus on promoting registrations and patents but often lack effective mechanisms to integrate technologies into production (Goebels et al., 2023). Spin-offs, however, thrive in contexts conducive to their adoption, particularly in developed countries (Da Luz et al., 2016). A more structured approach to transferring results and incentivizing involved actors is needed to accelerate the process and prevent innovations from stagnating within universities (Bermeo et al., 2022).

Despite the emergence of models for results transfer, there remains uncertainty regarding one-size-fits-all approaches. Doubts arise about whether these institutions can uniformly adopt management models that integrate these three functions and generate impactful synergies for society (Sánchez, 2014).

Various models and methodologies have been developed by different organizations with specific objectives. For example, the *Manual of Indicators* to systematize information and evaluate the efficiency of this process, developed by the University of Valencia (Albornoz et al., 2017). Its purpose is to design an indicator system that measures the versatility of interactions between Ibero-American universities and their environments. Valencia and Becerra (2023) measure the impact of knowledge transfer using indicators based on the Intellectus Model within the Regional Innovation System. The FORCYT program employs a particular methodology linked to biomedicine in the Ibero-American context (OIE, 2023). It is necessary to achieve a bidirectional relationship in the dissemination of research results between the researcher and the environment (Mhdi and Cater-Steel, 2018).

Gálvez (2022) conducts a bibliometric study on the Triple Helix model, showing how universities are transitioning toward becoming research-oriented institutions. However, most authors and universities are

located in developed countries, raising the question of the situation in developing countries, particularly in Latin America.

In the region, some statements refer to models but fail to clearly establish their components, relationships, and interdependencies. The CEPAL (2010) article explains that, since 1990, universities have taken on a new function called extension, focused on transferring technology and knowledge to promote their application and commercialization, adapting to the market. It emphasizes the proactive role of universities in creating mechanisms that break traditional structures, such as technology transfer, patent, or hybrid offices.

The CEPAL statement highlights the performance gap between universities in developed and developing countries, attributed to socioeconomic differences. In developing countries, universities are required to focus more on addressing the social issues of their surroundings. Communication channels range from the unidirectional transfer of tacit knowledge to the bidirectional exchange of codified knowledge and more complex methods such as licensing or business creation, which require a more formalized structure (CEPAL, 2010).

Tomasino and Cano (2016) provide a critical analysis of the challenges in Latin America, highlighting significant results from incorporating student practices into the curriculum. They identify two predominant models in Southern Cone universities: a) diffusionist-transfer extension, which transfers knowledge from the university to drive behavioral changes, and b) critical extension, which develops projects to meet specific demands with a scientific-technological orientation based on participatory action research, where the university focuses on solving local problems through multidisciplinary solutions.

It is not considered that one model excludes the other. Both can collaborate in an integrated model to promote synergies aligned with the needs of local businesses. This approach would foster innovation and competitiveness by engaging in enterprises and/or territories alongside local development managers.

Gutiérrez and Corrales (2021) reference university extension models based on Gonzalez et.al. (2020), who detail models proposed by Serna (2007), Pla et al. (2012), and Tomasino and Cano (2016). Their analysis summarizes the process of engagement into three dimensions: a) transmission and transfer of knowledge, b) social responsibility, and c) the university's social or civic commitment. They emphasize the social responsibility model over the European transfer model, which has an economic focus.

In Colombia, strategies have been implemented for funding and education, collaboration between startups and industries, business models, and technology valuation, coordinated through technology development offices, innovation, technological licenses, or R&D management (Toro et al., 2022). The Bozeman model (2002) and its expanded version by Bozeman, Rimes, and Youtie (2014), which considers factors such as agents, transfer content, media, recipients, and demand context, fits Mexican universities (Vázquez, 2017). Without referring to a specific model, factors influencing technology transfer are studied, such as the emphasis on scientific publications and the state's need to prioritize funding for applied research that can solve local problems (Catalán et al., 2019).

In Ecuadorian universities, various models have been proposed to establish relationships among stakeholders in the social engagement process. These proposals include reinforcing the technological dimension (Zambrano et al., 2021), emphasizing training, consulting, service provision, pre-professional practice, and project management (Polaino and Romillo, 2017; Cedeño et al., 2020), a management model based on knowledge management and ICT (Valarezo and Estrada, 2018), and a model prioritizing the measurement of social project impacts (Zamora et. al., 2022).

Additionally, some actions, although not constituting a model, attempt to integrate activities related to energy, industries, and non-renewable natural resources at the University of Loja (Gonzaga, 2019). No evidence has been found of spin-off creation in Ecuadorian universities (Uvilla, 2015). Meanwhile, SENPLADES (2014) defines specific models considering public procurement, investors, specific sectoral needs, and a macro model.

In developed countries, the management of the social engagement process is institutionalized and integrated into academic and administrative structures, establishing strategic collaborations with industries, governments,

and other institutions to transfer technology, knowledge, and human resources, with an emphasis on the Triple Helix. Business incubators and technology parks are promoted to foster technology transfer and the creation of research-derived companies.

In Latin America, the models are less institutionalized and more dispersed. While some universities have advanced in creating technology transfer offices and connecting with industries, management tends to be less structured and more reliant on individual initiatives or small research groups, focusing more on solving local problems and developing capabilities.

METHODOLOGY

Through this section, the methodological proposal for the management of social engagement projects is initially presented, followed by a description of the validation process applied.

Methodological Proposal for the Management of Social Engagement Projects: Phases of Service-Learning

The methodological proposal is based on a model whose strategic concepts are outlined in Figure 1. It highlights the necessity of equipping the institution with an organizational unit that not only leads but also supports from a socially integrative perspective. These principles encompass variables associated with the concept of *buen vivir* (good living), as discussed by various authors. Among them, it is emphasized that the ethics of *buen vivir* is not solely constructed from an anthropocentric dimension (Cruz, 2014). Instead, it aims to achieve harmony among communities and social actors through a balanced prioritization of life, respect for differences, identity, basic rights, and the economy (Croce, 2018).

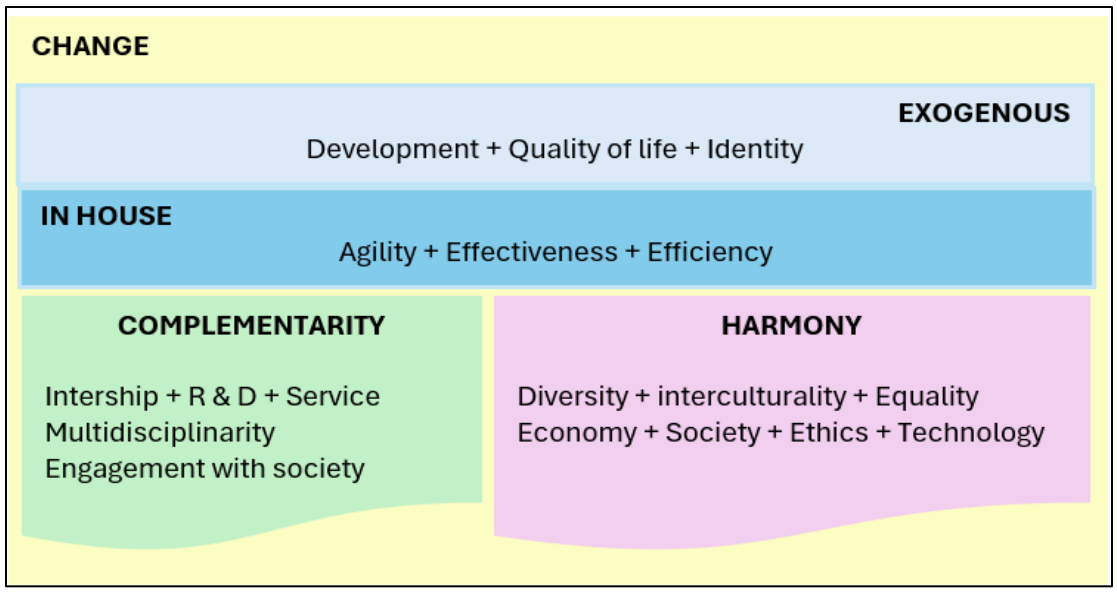

Figure 1. Strategic concepts for the ES project management model

Source: Author's elaboration

It is understood that *Complementarity* manages with integrity: a) Academics, through practices and internships, as a way to strengthen the professional and human profile of students; b) Research, as an action of diagnosis, innovation, experimentation, and development; and c) Engagement, as the connector between the university and external social environments through organizations and institutions. Their articulation provides a sense of completeness that allows an abstraction of their characteristics as objects of a tangible real-world environment under a valid and unique representation (Ruiz, 2017). Additionally, it guides management among institutional academic actors toward the creation of innovative tangibles that, from their empirical nature, steer the establishment of a social semantics that makes sense of experience and fosters the generation of laudable expectations (Ramos-Torre and Callejo-Gallego, 2017).

Meanwhile, *Change* must be seen as an opportunity for improvement, executed at operational levels so that the management of ES promotes positive effects for both implementers and recipients (Simbaña-Cabrera and Correa, 2018). Moreover, with the aim of resource efficiency and optimization, intentions will be promoted to integrate multidisciplinary contributions and collaborative work across departments and substantive functions, thereby contributing to complementarity.

Harmony, in turn, is finally considered as a factor that drives change and enables complementarity. This is understood within the context of a society that demands respect for diversity, equality, interculturality, and individual capacities and conditions. Additionally, people face daily problems of an economic, social, technological, legal, ethical, and environmental nature. Only through understanding and recognizing these aspects can engagement projects generate sustainable development and fulfill the goals of improving quality of life.

The methodological proposal is explained through a model that energizes the management of ES projects by recognizing:

Inputs of the Model: These are not merely aimed at addressing Article 4 of the Ecuadorian Academic Regime Regulations, which define ES as an action responding to environmental needs through the generation and exchange of knowledge in academic and research domains (Consejo de Educación Superior, 2022). They also converge with theoretical models that identify social demands as a source of proposals for public, private, and academic actors. The project management model must be nourished by this recognition, clarifying aspects such as: a) Problem-situation, causes, and effects, adhering to the Logical Framework approach, which universities have utilized for its practicality and feasibility (Contreras et al., 2017), b) Indicator identification and baseline measurements to substantiate the original and initial reality of the intervention phenomenon, on which impact and transformation will be measured in the future, c) Definition of expected deliverables, primarily understood as tangibles that the university delivers to the beneficiaries through project execution. These deliverables will serve as catalysts for social, cultural, economic, and productive transformation, potentially also addressing research, innovation, and technology transfer. These outcomes emerge from the exercises of empathy and ideation, as suggested by the Design Thinking methodology, which fosters a socio-constructivist learning education based on creativity and critical thinking (Latorre et al., 2021), d) Other aspects such as identifying stakeholders, beneficiaries, and a succinct description of the intervention environment.

Processes Included in the Model: The proposal focuses on executing two macro processes: a) Institutional Project management, b) Project management per se. In the first case, the proposal emphasizes defining interdepartmental management processes, recognizing various procedural stages. This begins with obtaining approval from an organizational body dedicated to ES, responsible for evaluating technical, operational, and financial feasibility, and articulating other substantive functions. In the second stage, authorization is granted by an academic body, usually the highest collegiate body of a program or department, acknowledging academic and curricular pertinence and the availability of faculty and students. Lastly, institutional approval is secured from higher-ranking authorities, such as a Vice Rectorate or Rectorship, demonstrating commitment to resource allocation and transfer.

In the second case, the focus is on the specific management of the project, following the processes recommended by the Project Management Institute (PMI), which primarily include Planning, Execution, Closure, and Evaluation of the project (Project Management Institute, 2021). This second macro-process is characterized by the development of templates or formats that guide each process, providing the following advantages:

- Define a data structure that supports coherence, integrity, and homogeneity of information.
- Facilitate understanding of the project management process for engagement initiatives, acknowledging that not all academic leaders executing the project are expert managers, but rather specialists in their professional domains.

- Encourage the transfer of internal organizational knowledge to address the constant turnover of project managers. This, affirming a practice predominantly based on empiricism, adds agility while adhering to the fundamental principles of Transparency, Inspection, and Adaptation (Schwaber and Jeff Sutherland, 2020).

Lastly, the outputs of the Model: Ultimately, and without losing sight of the objective of transforming the beneficiary in response to their needs, the proposal establishes policies and guidelines that deepen the evaluation process. This process focuses on the analysis of the indicators identified during the project's diagnosis and formulation, in alignment with its objectives. In the ex-post and impact phases, the model seeks to assess: a) Variability of indicators 3 to 5 years after the project's closure, and, b) The utility, functionality, and usability of the deliverables. Only then will the model acknowledge that Sustainability has been achieved. For academia, external stakeholders, and beneficiaries, the result of this transformation is the most significant output, supported by the existence of innovative or developed tangibles that act as the driving force behind this evolution.

Validation Process

The proposal was implemented at Universidad Politécnica Salesiana (UPS) in Cuenca, Ecuador, starting in 2022 and evaluated in 2024. The UPS, founded by the Salesian Society of Ecuador, focuses on human and cultural development through its three substantive educational functions, grounded in its Christian, Catholic, and Salesian inspiration (Salesian Institutions of Higher Education, 2016). Its approach aligns with Don Bosco's preventive system, which integrates love, reason, and religion, fostering both personal and organizational improvement (Cárdenas-Tapia & Pesántez-Avilés, 2020). Additionally, it promotes the formation of professionals with a social conscience, capable of contributing positively to addressing personal, local, and national challenges, while driving environmental initiatives to combat the effects of the ecological crisis.

In 2012, UPS implemented a Plan for Engagement with Society with the primary objective of not only aligning with the National Development Plan but also strengthening its commitment to the community by fostering social development through academia, particularly in the most vulnerable sectors. This commitment was realized by integrating ES with teaching, research, and administrative management, ensuring that these activities contributed positively and sustainably to local and national development. In its second iteration (2016–2018), the focus shifted to the student-environment relationship through projects that promoted social development via science, technology, and research (Secretaría Técnica de Vinculación con la Sociedad, 2016). Finally, the 2023 version emphasized the use of indicators to evaluate the transformative impact of projects, addressing the shortcomings of earlier versions.

The validation process was conducted across two dimensions, acknowledging that its scope was descriptive, aimed at recognizing the proposal's utility, and relational, to assess its consistency.

A documentary review of engagement project records was carried out to examine differences in their design and structure before and after implementing the proposal. This qualitative process analyzed project documents from two periods: Before the proposal: 2017 to 2021, covering a total of 297 projects, and after the proposal 2022 to 2024, covering 34 projects. The comparative analysis aimed to identify:

- Whether the projects aligned with the problem-cause-effect framework.
- Whether the declared objectives corresponded to the identified issues.
- Whether the projects defined indicators associated with objectives and impact measurement, including baseline data.
- Whether there was consistency in defining deliverables, stakeholders, and beneficiaries.

An evaluation process was also conducted with ES managers, delegated by each program to oversee project management. Surveys were administered in 2023 and 2024 to determine whether managers had developed competencies in:

1. Conducting needs assessments.

2. Identifying stakeholder matrices.
3. Developing and proposing objectives.
4. Defining deliverables.
5. Establishing indicators and targets.

A total of 21 faculty members, representing 84% of the programs involved in ES processes at the time of the study, participated. They evaluated each variable on a Likert scale ranging from 1 (Low Difficulty) to 5 (High Difficulty) in terms of whether the management proposal posed challenges for comprehension and implementation.

To ensure the reliability of the study, Cronbach's Alpha statistic was applied, yielding a reliability level of 0.804, which, as classified by Martín, Lafuente, and Faura (2015), is considered good due to its proximity to 1. Additionally, Shapiro-Wilks tests were conducted to analyze normality and determine homogeneity among the variables. Based on these results:

- Student's t-test was applied to analyze non-homogeneous variables.
- Wilcoxon test was used for homogeneous variables.

These tests aimed to evaluate whether the perceptions of faculty members significantly varied between 2023 and 2024, with a 95% significance level used in all analyses.

Also, an *Empathy Map* was constructed to illustrate both positive and negative sentiments regarding project management, reinforcing insights gathered from the surveys. This process included organizing a Focus Group where 10 volunteer faculty members participated in a one-hour session. Participants answered the following questions:

1. How does this methodology compare to others you know or that are applied in other higher education institutions?
2. Do you think the proposed methodology facilitates impact management through ES projects?
3. What have you heard from your colleagues regarding the current ES project management methodology?

The feedback from the focus group provided a qualitative layer of validation, enriching the study's findings and offering actionable insights into the perceptions and attitudes toward the management approach.

RESULTS

The application of the methodological process allowed for the identification of findings across both validation scopes: the comparison of project declarations before and after implementing the proposal, as well as the perceptions generated among those responsible for project management.

Firstly, when analyzing projects from the 2017-2021 period in relation to each phase of project management—planning, execution, closure, and evaluation — Figure 2 summarizes the deficiencies identified, which could be considered generalizable. Similarly, Figure 3 highlights the differences found in projects managed after the proposal's implementation during the 2022-2024 period.

These comparative analyses underscore the transformative impact of the new management methodology on the structure, clarity, and outcomes of the ES projects. They provide a tangible reflection of the methodology's effectiveness in addressing previously identified gaps.

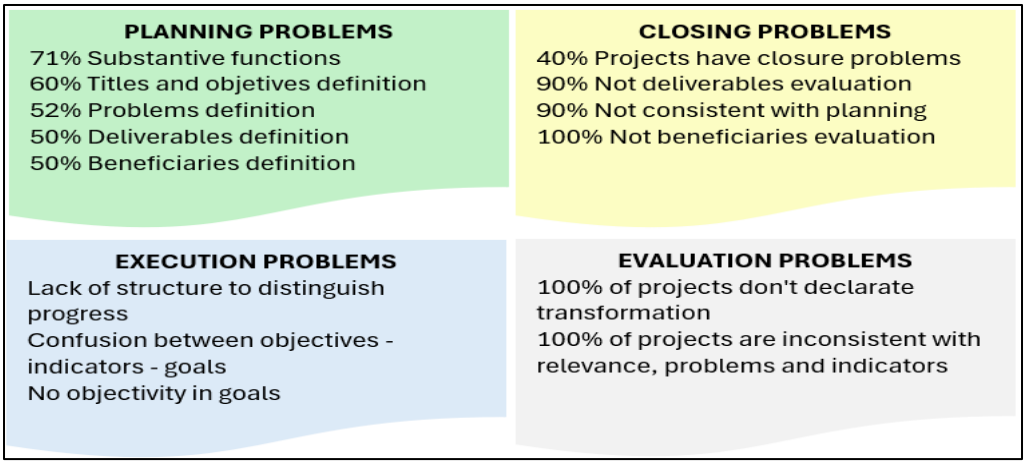

Figure 2. Deficiencies in ES project management 2017 – 2021

Source: Author's elaboration

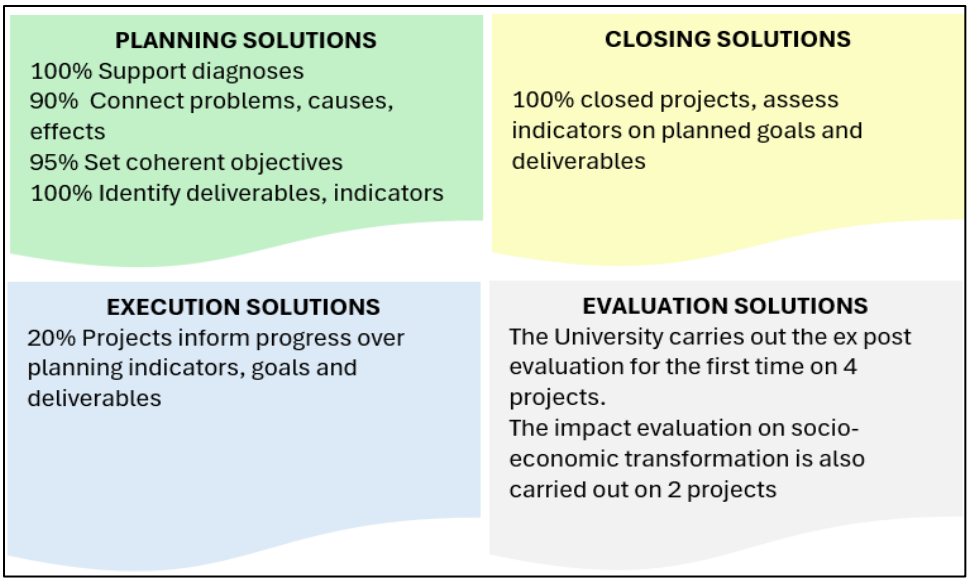

Figure 3. Improvements found in ES projects 2022-2024

Source: Author's elaboration

It is worth noting that the aspects presented in the preceding figures can be recognized as the most general. However, other specific details also stand out, primarily those related to the alignment of the problem and the project's intent with, for instance, contributions to the National Development Plan, the Sustainable Development Goals, the ES itself, Institutional Strategic and Operational Plans, integration with substantive functions, interdisciplinarity, and the involvement of various academic programs. In this regard, before the application of the management proposal, the following aspects, which have shown improvement since 2022, were observed:

- Dispersed and broad contributions to the Sustainable Development Goals, which were not always associated with indicators or tied to the problem being addressed.
- Overly general task declarations, which were often mistaken for objective statements, particularly for specific objectives. This confusion hindered the identification of indicators, targets, and ultimately, impact evaluation.
- Overestimated number of beneficiaries in some projects.

- Reduction in the number of project submissions per academic term, from an average of 33 per cycle to 7 per cycle. This reduction is significant because it reflects a better understanding of the complexity of the management process and the focus on the intended outcomes. This decrease represents a time-saving advantage for the institution's human resources. Although interdisciplinary projects are still a minority, some progress in their integration has been made.

On the other hand, in validating the methodology, Figure 4 displays the average rating per year and the overall average rating for each variable regarding perceived difficulty. This data suggests a favorable outcome for the research.

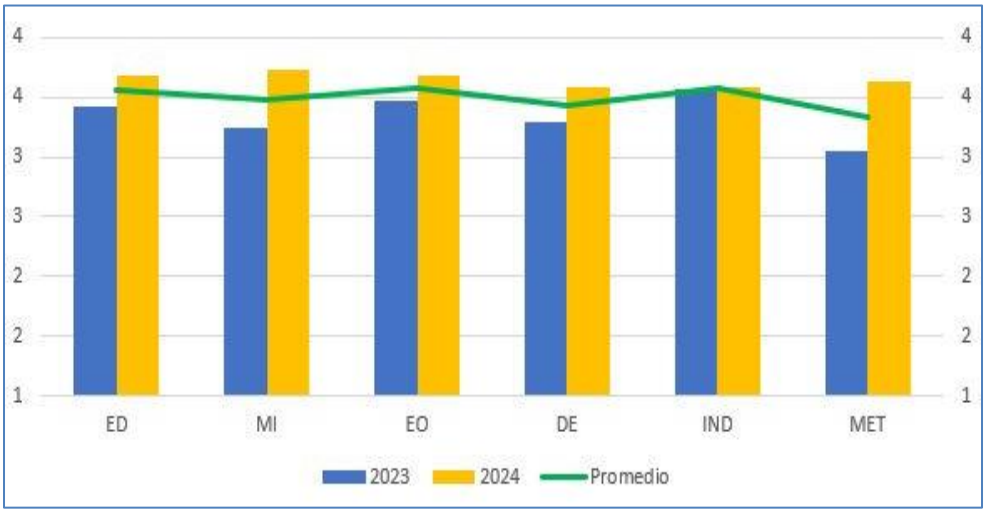

Figura 4. Difficulty assessment of ES project management variables

Source: Author's elaboration. ED = Diagnosis Preparation, MI= Stakeholders Matrix, EO = Objetives Definition, DE = Deliverables Definition, IND = Indicators Definition, MET = Goals Definition

Table 1 presents the analysis of the behavior of the variables and the teachers' assessment. In section (a), it is observed that 2 variables exhibit normal behavior, while 4 are non-homogeneous based on the normality hypothesis test with $\alpha = 0.05$. Section (b) analyzes the difference in assessment between the two years studied. For the variables *Stakeholders* and *Goals*, no significant differences are observed in their medians, indicating that the variations are not statistically relevant. For the variables *Diagnosis Development*, *Objective Formulation*, *Deliverable Definition*, and *Indicator Definition*, although there are no significant differences, the 2023 values were lower than those of 2024, suggesting an improvement in the managers' skills.

Tabla 1. *Variables Analysis*

(a) Shapiro-Wilk Normality Analysis				(b) Groups Differences		
	Statistical	**gl**	**Sig.**	**Wilcoxon Statistical**		
ED2023	.818	19	.002	**Variable**	**z**	**p-value**
ED2024	.803	19	.001	MI	–1.718b	.086
MI2023	.922	19	.121	MET	–1.588b	.112
MI2024	.845	19	.006			
EO2023	.811	19	.002			
EO2024	.839	19	.005			
DE2023	.845	19	.006	**T-Student Statistical**		
DE2024	.889	19	.031	**Variable**	**t student**	**p-value**
IND2023	.883	19	.024	ED	–1.14	,27
IND2024	.834	19	.004	EO	– .96	.35
MET2023	.930	19	.172	DE	–1.00	.33
MET2024	.856	19	.008	IND	–.15	.89

Source: Author's evaluation. Red values indicate homogeneous behavior with a 95% significance level. Green values validate the hypothesis of no differences between groups with a 95% significance level.

And finally, through the Empathy Map (Table 2), favorable and unfavorable responses from the validation are illustrated. The section "What Does [the Participant] Think?" refers to direct feelings about the methodology, while "What Does [the Participant] Hear?" gathers comments the participant has heard from others, such as colleagues or Directors. The section "What Does [the Participant] See?" aims to identify comparisons between this methodology and others the participant may know. Lastly, "What Does [the Participant] Do?" reflects the skills or difficulties in applying the methodology.

Two main aspects stand out as consistent findings: the need to strengthen training processes, particularly in the definition of indicators, and the need to improve time management during the process. Additionally, it is noteworthy that faculty members have improved their competencies in project formulation, encompassing the entire process—from its conception and scope to the definition of objectives, deliverables, goals, and indicators that drive the transformation of the reality associated with the beneficiaries.

Tabla 2. Empathy Map

Section	Negative	Positive
Thought	• Improve timelines and reduce the number of procedures • Managing projects is not easy, as the process requires in-depth planning, particularly in the technical aspects • Integrate research and community engagement into a single management process • Strengthen faculty learning in management through training programs	• Consistency, continuous improvement, and agility in processes. • A methodology has been oriented to apply it at the University.
Said	• Improve timing. • Other institutions adhere to demands directly from companies	• Lack of knowledge of other methodologies for managing ES processes
Felt	• Measure the evaluation because the beneficiaries disappear. • Defining indicators is not easy	• It helps to think about the impacts and their quantification as an end, not just as an academic management exercise. • The formats are complex, but they guide the project process
Did		• Improvement is identified in the understanding of the project concept and its difference from events. • Skills are recognized in identifying stakeholders, diagnosing needs, defining objectives, and conducting ex post evaluation.

Source: Author's elaboration

CONCLUSIONS

The theoretical-methodological discussion emphasizes that universities in the region prioritize a community engagement management approach focused on the social component, influenced by socioeconomic differences, distinguishing them from models in developed countries. The proposed methodology follows this trend, integrating management components to enhance the impact on the environment.

The validation of the methodological process reveals that community engagement practices have improved since 2022, with greater coherence in project formulation, the connection between problem-cause-effect, and the clarification of objectives and indicators, which has facilitated understanding and reflection by the responsible teachers.

The methodological proposal seeks to generate a transformative impact on beneficiaries by delivering tangible results that drive social change. It also highlights the importance of evaluating both the impacts of the projects and the management process, which requires active and constant participation from the managers.

Finally, the research represents a first attempt at validation with positive results. It is suggested to expand the analysis to other campuses of the Universidad Politécnica Salesiana, as it was initially implemented in Cuenca as a pilot. This will strengthen the methodological evaluation over time and across various populations.

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