PROJECT, DESIGN AND MANAGEMENT
ISSN: 2683-1597

**How to cite this article:**

Brie, S. (2020). Complementarity and Articulation of Planning and Project Management's Methodologies. *Project, Design and Management, 2*(1), 7-26. doi: 10.35992/pdm.v2i1.225

# COMPLEMENTARITY AND ARTICULATION OF PLANNING AND PROJECT MANAGEMENT'S METHODOLOGIES

**Santiago Brie**
Iberoamerican University Foundation (Argentica)
santiagobrie@gmail.com

**Abstract**. Introduction: The objective of this research is to know the basic structures that contain project's methodologies and get a categorization that allows us to analyze the complementarity and articulation of them. Methodology: Starting from the identification of the main project methodologies, categorizations were recognized according to the organizations that promote them; then, the most representative of each type was selected and a comparison was made between the life cycles and the basic processes of each phase within the identified group; Thereupon, synthesis tables were developed that represent each group of methodologies and reflect the common content of each phase; Finally, tables were developed to show the contents in terms of processes, components and instruments. This process allowed a comparison at the group level of methodologies, which allowed to access to conclusions on the possibilities of complementarity and articulation. Results: the comparative analysis revealed that the group of methodologies associated with the International Cooperation Agencies have some preliminary instances not present in the methodologies proposed by the professional associations; On the other hand, it was possible to determine that the methodologies of the professional associations are much more complex and complete in the processes and instruments proposed for the implementation phases. Discussion: The methodologies are complementary in many aspects, an articulation between them will allow the professionals who develop in the discipline to capitalize on the virtues and potentialities of the methodologies that are not their own, favoring an integral and superior professional practice.

**Keywords:** Project, methodology, planning, management.

## Introduction

Studies oriented towards the analysis of projects and the establishment of methodologies, standards and guidelines aimed at increasing the probability of success in them have become increasingly relevant in recent decades. Theoretical contributions and various experiences have generated various approaches in the formulation and management of projects. Consequently, different authors, professional organizations, and academic institutions, focused on the field of projects, standardized styles of design, formulation, management, and direction, creating a framework that has established

multiple trends in the aforementioned topics. However, among the different approaches there are great points of contact supported by the experience and documentation of projects, and in the theoretical development of an activity that has emerged as a discipline in itself.

The organizations have understood that the success in the implementation of strategic changes is based on the formulation and management of projects and that on the effectiveness and efficiency in that aspect depends not only the success in the adoption of measures aimed at the fulfillment of the goals of the organizational structure, but also primacy over an increasingly competitive environment, in which projects infiltrate the entire hierarchical structure of the institution and in all processes: successful organizations not only seek to achieve the objectives of the projects, but also continuous improvement and the development of suitable human resources for each of its functions.

There is a complex universe of project methodologies, including those proposed by international organizations, cooperation agencies, professional associations, educational entities, and even by certain authors who have dedicated themselves to their development.

From the points of coincidence and dissent, the possibilities of complementation and articulation of these methodologies are analyzed to propose a series of recommendations tending, in principle, to identify the one that is most suitable or most appropriate for a particular type of project, or to be able to integrate or articulate them, using the aspects that make them more robust or flexible, depending on the needs of the designer.

Different methodologies from different types of organization were analyzed with the intention of achieving a representative sample of the great variety of styles and methods. The specific selection criteria is detailed in the Method section. In all the methodologies analyzed, it was possible to recognize a definition of sequential steps organized in practical activities and the use of support instruments to structure and organize operations. This study aims to reveal comparatively what dedication methodologies provide to each of the phases and what quantity and complexity of instruments and processes it proposes.

### *Projects*

A project, unlike daily work activities, are unique tasks that are carried out to obtain something that does not currently exist, and may be a product or a service. If we seek to obtain a product or a service, it is because we want to solve a problem, attend to a need or take advantage of an opportunity.

Another important feature of projects is that they are tailor-made, and therefore no two projects are identical, simply because no two circumstances are the same. They may have been similar, but not identical. If we want to intervene on reality, we have to do it considering its particularities and complexity.

From this, another characteristic of the projects emerges and that is that, since they constitute complex interventions, we need to plan or program the actions, that is, the way in which we are going to intervene.

Projects also differ from ongoing operations by having time limits, the project is designed, applied or executed and then closed, leaving a system running, but the project operation ends. In other words, the running system is no longer a project.

The International Project Management Association (IMPA), understands the project as: *"an operation in which human, financial and material resources are organized in a novel way, to carry out a set of tasks, according to a defined specification, with cost and term, following a standard life cycle, to obtain beneficial changes, defined by quantitative and qualitative objectives"* (Reyes and Martínez, 2013, p.21).

***Methodologies***

Initial research on the best known, used and disseminated project methodologies, allowed recognizing three large groups of easily distinguishable organizations, distinguishing:

- International Cooperation Agencies (ICA)
- Professional Project Associations (APP)
- Eastern academic institutions

This work took into consideration for the analysis and comparison of the phases of the life cycle of the projects: their elements, processes and constituent instruments.

As a basic premise, it is recognized for the life cycle that involves every project, a structure common to all methods, the result of a division into phases. Despite the fact that the characteristics and nomenclature of these phases vary according to the methodology it systematizes, in all of them the idea that a phase of Planning, design or formulation precedes a phase of execution, management, direction or implementation.

***Planning Processes***

The planning, formulation or design of projects is a complex instance that ranges from recognizing the problem, need or conflict to be resolved; or the definition of requirements established by a principal (organization or private client) until the development of a solution proposal that contains the main aspects necessary to evaluate and submit the suitability or infeasibility of such proposal.

What is formulated in the planning or design instances, is often called a preliminary project. During the formulation, design or planning, there is no materialization, there is no construction, nothing is yet assembled, but it is defined how those later phases will be carried out, it is specified how the project will materialize or how it will be mounted when the implementation phases begin.

Project design involves a process that moves from the general to the specific and in the course of that process the designer must walk a path that begins with the definition of a problem or a need and culminates in the definition of a specific solution, the analysis of the environment and the establishment of the guidelines that will guide it towards the materialization of the deliverable.

***Management Processes***

Once defined what to do, how to do it, where to do it, when, with whom, with what resources and to obtain what results, all elements specified (or sometimes estimated) in the phases mentioned above, the project execution process begins, which will involve management, direction, administration, assembly, construction activities, that is, the previously planned begins to be carried out.

Regarding the way of naming this or these phases, there is no established agreement, there are those who recognize it as the management, direction, execution or

implementation phase, and sometimes it is even used in combination, for example: management and direction.

This situation is not repeated in the Anglo-Saxon language, since the term "project management" synthesizes these necessary processes to be carried out in the execution phase. Martínez (2016) states that there is no single way to mention the functions of project management, because the powers used to describe such a function are complementary: whoever is dedicated to the implementation or execution of projects is administering resources, directing people and managing processes.

## Method

### *Design*

This study is focused on the analysis of the contents of the various methodologies on projects, taking as object of study the bodies of knowledge of different organizations, interpreting the life cycles, the processes that make up each of the phases of the cycle and the processes and instruments proposed for each instance.

A selection of methodologies was made according to importance and dissemination; choosing those that have been most used in their fields of application or that have set trends at a particular time.

From the analysis of the universe of methodologies and the organizations that promote them, it was possible to recognize three large groups that are easily distinguishable: one linked to the International Development Cooperation Agencies; another to the Professional Project Institutions or Associations, which bring together and represent the professionals who work in the discipline; and another conformed by the educational entities, focused on the Universities that approach the subject of Projects.

In order to define the target population for this research, a group selected to three methodologies proposed by the International Cooperation Agencies, three methodologies promoted by the Professional Project Associations and a methodology from the educational field, adopted by three universities belonging to the Funiber network, were selected.

### *Participants*

The selection of methodologies for each of the three groups of organizations is presented below:

*Methodologies of International Cooperation Agencies*

International Cooperation Agencies (hereinafter more ICAs) are organizations that make up a complex global system of entities, whose various forms and relationships globally constitute the so-called International Cooperation System.

International Cooperation is the relationship established between two or more countries, organizations or organizations of civil society, with the objective of reaching agreed development goals.

ACIs have a long history of developing methods for project design and formulation. They have prepared a long list of methodologies aimed at obtaining the results expected for a development project. In general, each agency defines its own methodology to implement, and on many occasions, new methods or updated versions of existing ones are developed that imply an evolution with respect to those in use (Londoño, 2009).

For the purposes of this work, the three methodologies considered to be of greatest relevance will be analyzed, which in turn have set trends and can be associated with different periods depending on their period of greatest use. In chronological order they can be ordered as follows:

- Logical Framework Approach, from the US Agency for International Cooperation (USAID)
- ZOPP Methodology (Goal-Oriented Project Planning) of the German Agency for International Cooperation (GTZ)
- Management of the Project Cycle, from the European Union (EU)

The selection process took into account the progress already made by Natalia Londoño Vélez, author of the book *Formulación de Proyectos: Enfoques, procesos y herramientas* (Project Formulation: Approaches, processes and tools). In this material, an analysis of 40 different project formulation or planning methodologies developed by various ICAs is carried out, with the aim of contributing to consolidating the policies and methodologies of International Cooperation for Development in Latin America and the Caribbean

What is most interesting in this case of the work carried out by the author, are the results or conclusions she has reached. In the words of Londoño (2009):

> … In all the methodological models presented, the programming phase is equivalent to the dialogue and political principles that should guide cooperation projects. The identification phase is the first situational analysis of the project participants, problems, objectives and strategies. Formulation is the phase in which the project design is consolidated, the logical or results framework matrix is completed and the quality of the project design is verified, to make the decision about its financing. (p.3).

Here the author recognizes common points regarding the way to refer to the different phases of the project, and also common points regarding what these initial phases imply. This could be easily reflected in the comparison work carried out.

*Professional Project Associations*

The Professional Project Associations (PPA) considered most important according to their number of partners, for the dissemination of their bodies of knowledge and for the acceptability that exists regarding the proposed methodologies, are:

- The Project Management Institute, and its body of knowledge in project management known as the PMBOK (Project Management Body of Knowledge) currently in its 6th edition, (2017).
- The International Project Management Association and its body of knowledge called ICB (International Competence Baseline) currently in version 4 (2016).

- PRINCE2 (Project In Controlled Environment) methodology proposed by the OGC Office of Government Commerce of the United Kingdom, and its body of knowledge called Managing successful projects with PRINCE2, in its current 6th edition, (2017).

The Project Management Institute (PMI) is a nonprofit organization with more than half a million members. It is one of the world's largest professional associations offering project management certifications in 180 countries through compliance with management standards.

The PMI standards for project, program and portfolio management are recognized in the profession and it is their own PMI volunteers with project experience who develop and update these standards and provide a common language for project, program and program management. portfolios around the world.

The International Project Management Association (IPMA) is the world's first project management association. It is a confederation made up of more than 60 member associations, based in Switzerland. Its member associations promote the development of project management competencies in their geographical areas of influence, interacting with thousands of professionals and developing relationships with corporations, government agencies, universities and colleges, as well as training and consulting organizations.

The objective of IPMA is to develop professional skills in Project Management, and IPMA certification is a means of achieving excellence, not an end in itself. The certification is oriented towards a professional career plan in Project Management, based on the continuous development of skills in Project Management.

In the case of PRINCE2, this is the name of the methodology, and in its initial presentation, no specific mention was made of the professional association that promotes it because it is a somewhat more complex situation. The methodology was designed by the Computing Center and the UK Government Telecommunications Agency, and is the property of the Government Trade Office (OGC). Currently the methodology is promoted by AXELOS, a joint venture created in 2013 by the UK Government and the Capita company.

Despite being a development product of a government agency, its application widely transcends the borders of the United Kingdom, Prince2 has been adopted by different government agencies in different countries (Australia, Holland, Denmark, Canada, among others), by companies multinationals (DHL, BAT, Barclays, Vodafone, Shell, Unilever, Microsoft, HP, IBM, British Airways, among others) and International Organizations (the UN and its agencies, the World Bank, among others).

As in the case of ICAs, it is possible to find great similarities between the methodologies proposed by the different Organizations linked to the profession of Project Manager. Coincidences found in the proposed phases, in the processes proposed for each phase and in the instruments used to address certain issues.

*Methodology in the field of Educational Institutions*

Teaching in projects is applied mainly in the undergraduate and graduate levels, and generally each degree, program or subject chooses a methodology from those already mentioned in the development of its projects. Although there is also the case of universities or chairs that propose their own methodologies. For the development of this work we will analyze the project formulation methodology designed by the professors of

the Engineering area of the Polytechnic University of Catalonia, and adapted by the Universities of the Funiber network, for the dictation of their postgraduate project programs.

The Universities that use this methodology in their project programs are:

- International Iberoamerican University of Mexico
- International Iberoamerican University of Puerto Rico
- European University of the Atlantic

And the programs in which the methodology is used are:

- The Master in Project Management and Design,
- The Master in Architecture and Urban Planning Projects,
- The Master in Innovation and Product Projects,
- The Master in Project Design, Management and Administration for International Cooperation Projects.

The selection of this methodology is justified not only by the use and the great acceptance it has, but also because it proposes a series of innovative elements: it proposes the project planning process through practice, that is, through experience, Based on empirical knowledge, students develop a project based on the recognition of a conflict situation, need or opportunity.

***Instrument***

Documentary analysis has been the main constitutive resource of the investigation. In all cases the methodologies are found in documents, generally called bodies of knowledge or manuals. In some cases you can also find complementary publications promoted by these same organizations or by authors who are members of these.

A study was made of the latest versions edited by each of the organizations that promote the defined methodologies. Focusing on the recognition of the structure and composition of each of the phases, the processes or elements that compose them, and the instruments proposed for the development of the activities.

Tables were used to facilitate the comparison of the information between methodologies and tables to graph and synthesize information.

***Data Analysis***

To carry out the data comparison, and to facilitate the interpretation of the data, the following steps were carried out:

1. A first comparison was made between the methodologies proposed by each group of organizations (the methodologies proposed by the ICAs were compared with each other, and the same was done with the proposals by the PPPs) analyzing the different phases and the basic processes that compose them.
2. A synthesis table was made, which collected the common elements of the methodologies of each group of organizations (trying to overcome the differences in terms of how to refer to the phases and processes).
3. Three tables were prepared that, synthesizing the information previously analyzed on the basic phases and processes, reflected an analysis of the processes, elements and instruments that each group of methodologies proposed for each phase.

This allowed a simpler comparison of the characteristics of the methodologies at group level, that is, having previously recognized the characteristics that typify them.

Regarding the selection criteria, to include an element in the list of processes, components and instruments, the premise or condition that was established is that such element has been present in at least two of the three methodologies compared. It is necessary to clarify that sometimes the presence is not so evident because they are mentioned differently in one material and another, for this a detailed analysis of the descriptions of each element had to be carried out.

The purpose of these synthesis tables is to be able to show a standardized data, referring to the content of each group of methodologies, for each phase of the project, to facilitate comparison between the groups of methodologies.

*Comparison of Life Cycles with their basic phases and processes, by group of organizations*

The following is a comparison of the life cycles of ICA methodologies:

Table 1

*Life Cycle of ACI methodologies*

| Logical Framework Methodology | ZOOP Methodology | Project Cycle Management Methodology |
|---|---|---|
| Phase I of Identification:<br>- Analysis of participants<br>- Analysis of Problems<br>- Analysis of Objectives<br>- Analysis of Alternatives<br><br>Phase II of Design:<br>- Project Planning Matrix<br>- Activity Programming<br>- Resource Programming<br>- Feasibility Factors<br>- Project Document<br><br>Phase III of Execution and Follow-up:<br>- Execution plan<br>- Carrying out operations<br>- Follow-up report<br><br>Phase IV of Evaluation:<br>-Evaluation of viability, impact, effectiveness, efficiency and relevance | Phase I Identification:<br>- Identification of the central problem<br>- Analysis of the causes and effects of the central problem<br>- Analysis of Objectives<br>- Analysis of Alternatives<br><br>Phase II of Design:<br>- Project Planning Matrix<br>- Programming of Activities<br>- Programming of Resources - Factors of Feasibility<br>- Document of the Project<br><br>Phase III of Execution and Follow-up:<br>- Plan of execution<br>- Carrying out operations<br>- Follow-up report<br><br>Phase IV of Evaluation:<br>-Evaluation of viability, impact, effectiveness, efficiency and relevance | Phase I of Programming<br>- Analysis of political orientations<br>- General Principles<br><br>Phase II of Identification:<br>- Diagnosis on the idea of the project<br><br>Phase III of Instruction or Formulation:<br>- The design of the project<br><br>Phase IV of Financing is consolidated:<br>- Feasibility Study<br><br>Phase V of Execution and Monitoring:<br>- Use of resources<br>-Analysis of effectiveness and efficiency<br><br>Phase VI of Evaluation and Audit |

Below is a synthesis table resulting from the comparison of the life cycles of the ICA methodologies, recognizing the basic processes of each phase:

Table 2
*Synthesis table of the Life Cycle of the ICA methodologies:*

| Phases of ACI Methodologies | Basic processes of each phase |
|---|---|
| Phase I of Programming | - Political Diagnosis<br>- Analysis of Cooperation and Development Policies |
| Phase II of Identification | - Situational analysis of: participants, problems, objectives and strategies<br>- Institutional Capacity<br>- Technical Feasibility Studies |
| Phase III of Formulation | - Framework Matrix and definition of: objectives, products, activities, hypotheses, indicators with baselines, sources of verification, preliminary schedules, budget and economic analysis.<br>- Evaluation of the Design of the proposal: assessment of the quality criteria and development factors<br>- Writing the Project Document |
| Phase IV of Execution | - Operations Plan<br>- Executing operations<br>- Progress and monitoring report |
| Phase V of Evaluation | - Analysis of relevance, effectiveness, efficiency, impact and viability<br>- Progress report and monitoring |

Below is a comparison of the life cycles of PPP methodologies:

Table 3
*Life Cycle according to PPP methodologies*

| Project Management Institute | International Project Management Association | PRINCE2 |
|---|---|---|
| Phase I of Initiation:<br>- Act of Constitution of the Project | Phase I of pre-investment:<br>- Ex-ante evaluation<br>-Preconceptual Engineering | Preliminary Project Phase I:<br>-Planning of the initial scenario<br>- Start-up of the project |
| Phase II of Organization and Preparation:<br>- Statement of the Scope and objectives<br>- Plan of action<br>- Baseline | Phase II of Investment:<br>- Execution<br>- Monitoring<br>- Reports<br>- Delivery | Phase II of the Initial Scenario:<br>- Creation of the Project Plan (for scenario 1)<br>- Review of the initial Plan |
| Phase III of Execution of the project:<br>- Progress according to Plan of Action<br>- Monitoring and control Acceptance<br>- Approval | Phase III of Operation:<br>- Evaluation of results<br>- Lessons learned | Phase III of Project Execution:<br>- Review of the Scenario 1 planning<br>- Execution of Scenario 1 Plan |

| | |
|---|---|
| Phase IV of project closure:<br>- Delivery | - Preparation of Scenario 2 Plan (Repeated as many times as scenarios are proposed).<br><br>Phase (n) of Project Closing:<br>- Delivery |

Below is a synthesis table resulting from the comparison of the life cycles of the PPP methodologies, recognizing the basic processes of each phase:

Table 4

*Synthesis of the Life Cycle of the PPP methodologies*

| Phases of PPP Methodologies | Basic processes of each phase |
|---|---|
| Phase I: Start - Planning | - Project Planning<br>- Preconceptual Engineering<br>- Project Constitution Act<br>- Action Plan |
| Phase II: Execution –Operation | - Progress according to Action<br>- Plan Monitoring and control Acceptance and approval<br>- Evaluation of Results |
| Phase III: Closing | - Delivery<br>- Lessons learned |

Below is a table recognizing the basic processes of each phase of the life cycle according to the methodology proposed by the universities of the Funiber network:

Table 5

*Life Cycle according to the methodology of Educational Institutions*

| Methodology of Educational Institutions |
|---|
| Phase 1: Identification of the Problem<br><br>- Delimitation of the problem, scope, involved and requirements |
| Phase 2: Preliminary<br>- Definition of the solution system, the associated risks, human and material resources required.<br>- Evaluation of investment and operating costs and transmission process to the future management team. |

| |
|---|
| Phase III: Detailed Engineering<br>- Detailed studies required for execution<br><br>Phase IV: Assembly and Construction<br>- Execution<br>- Monitoring and follow-up<br><br>Phase V: Commissioning and Assignment<br>- Reports - Delivery<br>- Evaluation of results<br>- Lessons learned |

*Comparison of processes, components and instruments proposed for each Phase:*

Below is a table containing the phases common to the group of methodologies represented by the ICAs, which also indicates the processes, components and instruments that make up each phase:

Table 6
*Processes, components, and instruments of the ACI.*

| Phases | Processes or components | Instruments |
|---|---|---|
| Identification Phases | Political Diagnosis<br>Identification of needs Analysis of Problems<br>Analysis of Objectives<br>Analysis of Stakeholders<br>Objective Tree<br>Identification of alternatives<br>Strategy selection<br>Definition of Actions | Problem Tree<br>Effects Tree<br>Cause Tree<br>Objective Tree<br>Matrix for assessing the power and interest of those involved<br>Action Tree |
| Programming Planning Phases Formulation | Definition of Variables and Indicators<br>Definition of assumptions<br>Determination of means of monitoring and control<br>Analysis of risk factors | Matrix Project Planning<br>Matrix Structure<br>Analytical of the Project<br>Matrix Logical Framework<br>Matrix of means of verification<br>Results measurement technique |
| Execution Phases Evaluation | Execution of the operations<br>Conclusions intermediate evaluation<br>Problems and actions intermediate evaluation<br>Monitoring and evaluation | Plan of Operations<br>Progress and monitoring report<br>Ex post or impact evaluation |

Below is a table containing the phases common to the group of methodologies represented by the PPPs, which also indicates the processes, components and instruments that make up each phase:

Table 7
*PPP processes, components, and instruments*

| Phases | Processes or components | Instruments |
|---|---|---|
| Planning Phases:<br>-Pre-investment - Preliminary project<br>-Organization and preparation | Project Start-up Process<br>Project Planning Process<br>Scope Management Plan<br>Schedule Management Plan<br>Cost Management Plan<br>Quality Management Plan<br>Human Resources Management Plan<br>Communications Management Plan<br>Risk Management Plan<br>Procurement management plan<br>Stakeholder management plan<br>Project Management Process Plan<br>Project team development and management Plan<br>Management of the parties involved | Project Constitution Act (in English: charter)<br>Stakeholder analysis matrix<br>Labor Division Structure<br>Matrix of Assignment responsibilities<br>Task schedule<br>Organizational chart |
| Execution Phases:<br>- Monitoring and control<br>- Evaluation<br>- Closing | Communications management Project Process<br>Project team development and management<br>Management of the parties involved<br>Communications management Project Phase Control Process<br>Follow-up and control of Project<br>Product Delivery Management Process<br>Quality assurance<br>Integrated change control<br>Schedule control<br>Risk control<br>Procurement control<br>Contract administration | Breakdown of Organizational Structure Method<br>Earned method<br>PERT method<br>ROY method<br>Schedule Control Diagram<br>Gantt Project<br>Milestone Plan Cost Analysis Variance Method<br>Cost Systems by Activity<br>Request for Proposal Techniques<br>Supplier Selection Techniques<br>Contract Administration Techniques<br>Risk Assessment Matrix<br>Quality Management Techniques<br>Quality Audits Cost |

| | | |
|---|---|---|
| | | Classification Economic evaluation indicators: VAN, TIR, TD.<br>Environmental impact assessment techniques |
| Closing Phase | Limits Management Process<br>Validation and scope control<br>Project Closing Process<br>Project closing or phase<br>Closing of acquisitions | |

Below is a table that contains the phases of the methodology of educational institutions, which also indicates the processes, components and instruments that make up each phase:

Table 8
*Processes, components, and instruments of the methodology proposed by the universities of the Funiber network.*

| Phases | Processes or components | Instruments |
|---|---|---|
| Definition Phase | Identification of the Problem<br>Recognition of the Causes<br>Contextualization of the problem<br>Identification of Limitations<br>Identification of those involved | Table of definition of the context of the problem Matrix for evaluating the power and interest of those involved<br>Ishikawa diagrams<br>Matrix for evaluating requirements<br>Matrix for contrasting requirements and limitations |
| Planning Phases | Recognition and assessment of the requirements of those involved<br>Definition of a system that provides a solution to the problem<br>Development of the basic components of the system<br>Definition of the human and material resources required to development and subsequent operation<br>Risk Identification Assessment of the impact on the environment<br>Budget development and investment schedule<br>Project assignment process | Flowcharts<br>Structure of the Division of Labor Organization chart<br>Matrix for assigning responsibilities<br>Environmental impact study<br>Simplified Risk Assessment<br>Technique Investment Schedule Budget |

| | |
|---|---|
| Execution Phases | Not addressed in the methodology of educational institutions. In the master's degrees in question, this is developed in the Management and Direction Modules, where it is proposed to apply what is proposed by the PPPs |

## Results

### *Results of the comparative analysis of the Life Cycle of the ACI methodologies*

There is a notable coincidence between the phases and the basic processes of each of the methodologies. The project formulation stage itself is preceded by a programming - identification instance, destined to frame the project within an institutional political context. Then the planning-formulation phase continues where the basic components of the project are developed, determining the future actions and the role that each of the participants will have. Subsequently, the execution-monitoring stage continues. It does not provide great concepts or tools nor does it specify the same detailed division of processes that is exposed in the initial phases, rather it specifies how to carry out the monitoring of activities, but not how it is executed. And finally, there is an evaluation phase in which aspects of effectiveness, efficiency, impact, feasibility and relevance are analyzed.

These results are in line with those proposed by Londoño (2009), who points out:

> Although each agency presents differences in the number and name of the phases to structure a project, as well as slight variations according to institutional philosophy and emphasis on one or another methodological approach, the meaning, as well as the processes that make up each phase, are almost identical and comparable. Substantially three common and central phases in the construction of a project can be pointed out: planning, implementation and evaluation. (p. 27).

This can be explained in the sense that this type of project always tends to achieve the development and benefit of a certain group of people, with the commitment and participation of different actors, and with cross-cutting approaches and analyzes that promote equity in a community. As are, among others, environmental and gender perspectives.

*Results of the comparative analysis of the Life Cycle of PPP methodologies:*

From the analysis of the life cycle, the basic phases and processes of PPPs, it is also possible to recognize that there are greater coincidences than differences, generally starting with an initial phase- planning-formulation that does not require previous instances, where the tasks are focused on developing the action plan or the project plan. It is continued by an execution-monitoring phase, where what is defined in the initial instance is carried out, constantly controlling, monitoring and evaluating the processes and results. Subsequently, a closing phase is developed, in which the deliveries of the developed products are made and the completion of contracts and other contractual relationships.

*Results of the analysis of processes, elements and instruments of the methodologies proposed by the ICAs:*

From this analysis it could be deduced that the methodologies of the ICAs dedicate a lot of time and effort to the preliminary definitions that are aimed at determining the beneficiary community or group, the problems central, the perceptions of the same on the part of the actors involved, the strategies and alternatives of action, that is, a series of processes that precede the determination of the action plan. At the same time, the processes, elements and instruments proposed for the execution and monitoring phases have much less development, and even attend almost exclusively to the control function over the application of activities, but without defining how to apply or develop such activities.

*Results of the analysis of processes, elements and instruments of the methodologies proposed by the PPPs:*

In contrast to what was verified in the ACI methodologies, in the case of the PPP methodologies, it can be seen that the processes start with the definition of the action plan, that is, the preliminary definitions of what it is intended to do seem to be already defined and not part of the planning processes. This is clearly represented in the case of the PMI Life Cycle where it is stated that the start of the project follows from the directive of the company management on a specific requirement.

On the other hand, the number of processes and instruments proposed for the implementation and monitoring phases are notably more numerous and complex, which denotes a greater dedication and concern for these instances.

*Results of the analysis of processes, elements and instruments of the methodologies proposed by the Educational Institutions:*

In the case of this methodology, it can be seen that both in the definition of the phases of its life cycle and in the instruments proposed for each instance, there is an evident coincidence with the methodologies proposed by the ACI. In relation to the execution and monitoring phases, there are no elements to make the comparison since this methodology is focused on the planning and formulation processes but not on the management and execution processes. Such contents are addressed in the analyzed master's programs, in different modules, where the application of the instruments and processes developed by IPMA and the PMI is proposed.

*Results that allow the comparison of the processes, elements and instruments of the three groups of organizations:*

Comparing the results obtained in the three tables, we can see that there is first a difference in terms of the phases in which one and the other methodologies are structured, taking The proposals by the ICAs and the methodology of the educational field have much in common, but having great differences with those proposed by the APPs.

The first (ACI and educational institutions) focus on "what to do", and show great dedication in the previous instances of definition or programming, where it is intended to establish a framework for action and try to define a consensus scenario with actors who will be beneficiaries or that they will be influenced by the intervention; while the second

(APP) focus on the "how to do it", having previously defined and determined what it is intended to achieve.

This is clearly reflected in the processes, elements and instruments proposed for each phase by each group of methodologies: a superiority in quantity and complexity of the factors analyzed in the preliminary phases for the ICAs and the methodology of educational institutions is observed, while such superiority is found in the treatment that PPP methodologies make of the management and execution phases.

## Discussion and conclusions

### *Conclusions of the results of the investigation*

Based on the results obtained by the investigation, and clarifying that this does not attempt to be representative of all the existing cases, but rather the population defined as the object of study of this investigation, we can establish the following conclusions:

- The project methodologies proposed by the ICAs are focused on the initial processes, attending to the preliminary definition and programming of the actions, but avoiding fundamental processes of project execution.
- The project methodologies proposed by the PPPs have less development of the preliminary instances compared to those proposed by the ICAs, but the aspects related to the project execution instances are much more developed, with a very complete battery of instruments intended to the application and execution of activities.
- The methodology proposed by the universities of the Funiber network, as conceived by the project programs, is focused only on planning instances and has great points of coincidence with the methodologies proposed by the ICAs, proposing different starting points, and may also be adaptable to the development of projects in the private sphere. The methodologies proposed by the ICAs are recommended for projects with defined intentions, linked to promoting the development of a community or region, but often with uncertainty regarding the way to obtain or achieve said results.
- The methodologies proposed by PPPs are recommended for projects that have defined the product or service that they intend to achieve or offer, and that require the definition of processes to achieve said results.
- Despite having different starting points in the three groups of methodologies, these are essentially complementary; In the cases in which projects are developed by the ICAs, for the development of the execution phases it is possible to use the processes, elements and instruments proposed by the PPPs.
- Complementarity of methodologies is also possible when companies (which generally use PPP methodologies) develop projects with an impact on the community or the environment. In these cases, using the processes and instruments proposed by the ICAs can be essential to achieve project success.

### *Graphical representation of the results*

The following graph shows the phases adopted by each group of methodologies.

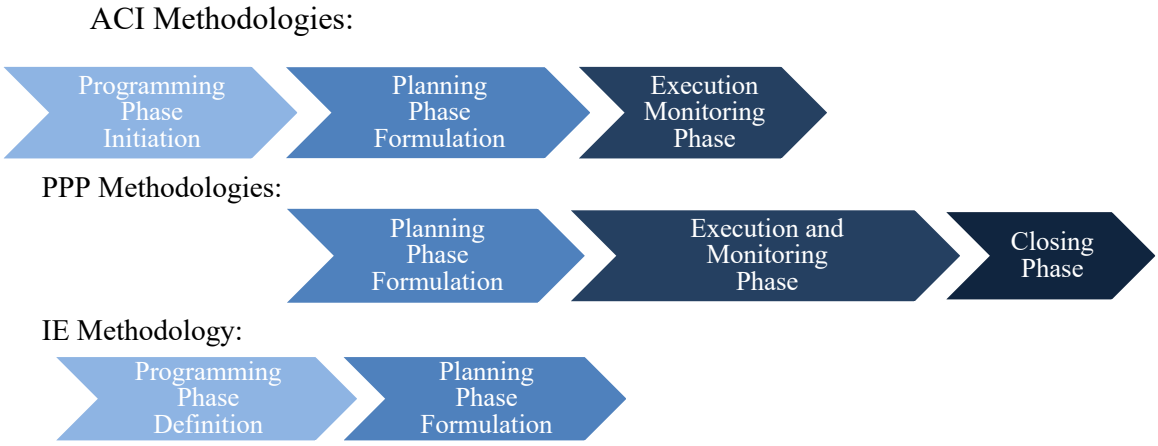


*Figure 1*. Phases for each group of methodologies

Below is a graph that represents the dedication according to the number of processes, elements and instruments proposed for each phase, differentiated by groups of methodologies:

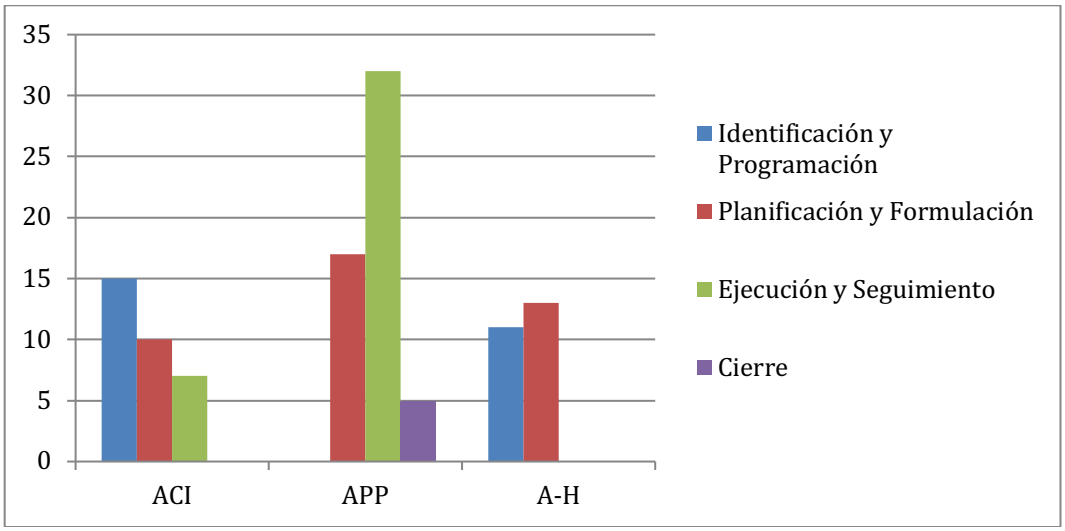


*Figure 2.* Processes, elements, and instruments of each phase in each group of methodologies.

### *Reflection of the author*

Work in undergraduate university teaching applying ACI methodologies and in postgraduate teaching where we apply the methodology of the universities of the Funiber network; I am also a member of the Argentine Association of Project Management in which we promote the use of methodologies developed by PPPs. Based on this experience, I can say that, despite the clear differences between the types of methodologies and their applicability, this does not seem to be evident for professionals in the area. It is common for university professors to be unaware of the instruments and resources that PPP methodologies provide for the execution of projects, and in the same

sense, it is sometimes surprising the disinterest that exists even on the part of PPP professionals, regarding the instruments and applicability of ACI methodologies.

It is frequent, then, that this potential that disciplinary integration provides us is wasted as many times those who are dedicated to planning are unaware of the virtues of management tools, and those who are dedicated to execution, do not take into account the benefits of methodologies. Planning.

### *General conclusions*

The comparison of the contents and graphics allows us to reaffirm the observed trend regarding the object of study or work of both organizations. In the case of ACI methodologies, the highest level of detail is focused on the initial definition, planning and formulation processes, corresponding to the design tasks of the professionals involved; while the material available and promoted by PPPs, presents a more exhaustive development in the execution phases, concerning the management and direction tasks of the professionals.

This is mainly due to the reasons that lead in both cases to develop the projects. In the case of Development projects, promoted by the ICAs, the motivation is to benefit a community or group of people, so the form or through which product or service will be specified is not defined, and therefore these initial phases they are more extensive and require more time, tools and particular methods for such a definition; On the other hand, in the type of projects that are approached from the PPPs, many times there is already the objective to be achieved and even the definition of the product to be achieved or the service to be offered, predetermined by the managers of the organization or by the clients of the company. In these cases, less time and resources are required for the most basic and initial definitions of the project.

In projects developed by a company, which continue the logic of PPP methodologies, it is common for the project owner and its executor to be the company itself, therefore, the methodologies propose a battery of operating instruments for management, administration and direction processes; on the contrary, in the projects promoted by the ICAs, it is common for the owner and executor of the project to be an NGO, or a civil society institution or organization that is advised, accompanied and sometimes monitored. Therefore, the instruments they propose for these instances aim at control rather than execution of operations.

This is evidenced in the postulated in the Logical Framework Methodology manual for planning, monitoring and evaluation of projects and programs of the Latin American and Caribbean Institute for Economic and Social Planning. In this document that dedicates 95% of its content to the Design and formulation aspects, the authors Ortegón, Pacheco and Prieto (2005) affirm:

> The Follow-up or Monitoring is carried out during the execution stage of a project and not in others stages of the project cycle. It is a systematic procedure used to check the efficiency and effectiveness of the project execution process to identify achievements and weaknesses and recommend corrective measures to optimize the desired results. (p.47)

The Logical Framework methodology proposes as an integrating element between the planning phase and the execution phase, the Monitoring and Evaluation Plan. In this regard, Oregon et al (2005) states: "It is worth noting that without establishing a good M&E plan, the Project Manager does not have the basic element of management in their hands" (p. 50)

## References

AEIPRO-IPMA. (2009). *NBC-Bases para la Competencia en Dirección de Proyectos*. Valencia: Editorial UPV.

AXELOS (2009). *Managing Successful Projects with PRINCE2.* London: Editorial Van Haren Publishing.

AXELOS (2017) *Managing Successful Projects with PRINCE2® 2017 Edition First Edition, Second Impression.*

Blasco, J. (2003). *Los proyectos de sistemas artificiales: el proyectar y lo proyectado*. Barcelona: Ediciones UPC.

Camacho H. Et. Al (1999). *El enfoque del marco lógico: 10 casos práctico.* Madrid: Fundación CIDEAL y Acciones de Desarrollo y Cooperación.

Cejas, C.; Olaviaga, S.; Kremer, P. (2006): *Manual para la formulación de proyectos de organizaciones comunitarias*. Buenos Aires: CIPPEC

Comisión Económica para América Latina y el Caribe –CE- PAL. Instituto Latinoamericano y del Caribe de Planificación Económica y Social –ILPES. (2005) *Metodología del Marco Lógico para la planificación, el seguimiento y la evaluación de proyectos y programas*.

FUNIBER. (2017) *Material del Módulo de Diseño de la Maestría en Proyectos.* Barcelona: Fundación Universitaria Iberoamericana

Gómez, M., Sinz, H. (2003). *El ciclo del proyecto de cooperación al desarrollo*. CIDEAL. P. 221.

IPMA International Project Management Association (2015). *NCB4 Competence Baseline*. International Project Management Association.

Londoño Vélez, N. (2009). *Formulación de Proyectos: Enfoques, procesos y Herramientas. Escuela Latinoamericana de Cooperación y Desarrollo*.

Ministerio de Asuntos Exteriores de España. Secretaría de Estado de Cooperación Internacional y para Ibero América (1997). SECIPI: *Metodología de evaluación de la cooperación española*. Madrid.

Osorio, S., Zamora, V., Jimenez, M. y Macias, H. (2015). Guía Metodológica para el Diseño de Proyectos de Intervención de la Práctica Educativa. *Revista de Docencia e Investigación Educativa*, 1 (1), 39-48. Retrieved from https://dialnet.unirioja.es/servlet/articulo?codigo=6367046

Planificación de Proyectos Orientada a Objetivos (ZOPP). (1998) *Deutsche Gesellschaft für Technische Zusammenarbeit* –GTZ. GmbH, Eschborn.

PMI, Project Management Institute. (2017). *Guía de los Fundamentos para la Dirección de Proyectos (Guía del PMBOK)* (6ª Ed.). Pennsylvania: Project Management Institute.

Reyes, J. E., y Martínez Almela, J. (2013). *Procesos de Proyectos y Competencias en Dirección de Proyectos*. Valencia: Editorial UPV.

**Date recieved:** 16/05/2019
**Date reviewed:** 29/10/2019
**Date accepted:** 03/05/2020