

Integrated Multilevel Analysis: An innovative model for qualitative research on complex phenomena

El Análisis Multinivel Integrado: Un modelo innovador para la investigación cualitativa en fenómenos complejos

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Abstract

This article presents the Integrated Multilevel Analysis (IMA) model, a theoretically grounded and methodologically structured approach designed to address the analytical challenges posed by complex social and educational phenomena. IMA responds to the limitations of fragmented qualitative analysis by articulating three interconnected levels: (1) the structural-normative level, which maps explicit discourses through open and thematic coding; (2) the institutional-operational level, which explores relational and systemic dynamics using axial coding and data triangulation; and (3) the macro-political-historical level, which situates findings within broader socio-historical structures using contextual hermeneutics and Critical Discourse Analysis. Rather than offering a new technique, IMA proposes an integrated analytical logic that guides researchers through the systematic articulation of descriptive, relational, and contextual dimensions. The model was tested through a pilot case study, not as an object of inquiry, but as a field for validating its methodological potential. For this purpose, a corpus of 38 normative, institutional, and contextual documents related to Uruguay's public teacher education system was analyzed. The application demonstrated the model's capacity to generate coherent, multilevel explanations, to connect normative texts with institutional practices, and to reveal historically situated power dynamics. The results confirm IMA's contribution to the field of qualitative research by offering a replicable and adaptable framework for multilevel analysis. Its structured flexibility facilitates the integration of diverse qualitative tools and data sources, while supporting context-sensitive interpretation. IMA is especially relevant for research seeking to understand the interplay between discourse, institutional action, and structural constraints in education and beyond.

Keywords: multilevel analysis, qualitative research, research methodology, case studies, educational research

Resumen

Este artículo presenta el modelo de Análisis Multinivel Integrado (AMI), una propuesta teórica y metodológicamente estructurada, diseñada para abordar los desafíos analíticos que plantean los fenómenos sociales y educativos complejos. El AMI responde a las limitaciones de enfoques cualitativos fragmentados mediante la articulación de tres niveles interconectados: (1) el nivel estructural-normativo, que mapea los discursos explícitos mediante codificación abierta y categorización temática; (2) el nivel institucional-operativo, que explora dinámicas relacionales y sistémicas a través de codificación axial y triangulación de datos; y (3) el nivel macropolítico-histórico, que contextualiza los hallazgos en marcos sociohistóricos más amplios mediante

hermenéutica contextual y Análisis Crítico del Discurso. Más que una técnica nueva, el AMI propone una lógica analítica integrada que orienta al investigador en la articulación sistemática de dimensiones descriptivas, relacionales y contextuales. El modelo fue puesto a prueba en un estudio de caso piloto, no como objeto de análisis, sino como campo para validar su potencial metodológico. Para ello, se analizó un corpus de 38 documentos normativos, institucionales y contextuales vinculados al sistema público de formación docente en Uruguay. Su aplicación evidenció la capacidad del modelo para generar explicaciones coherentes y multinivel, conectar textos normativos con prácticas institucionales, y revelar dinámicas de poder históricamente situadas. Los resultados confirman la contribución del AMI al campo de la investigación cualitativa, al ofrecer un marco replicable y adaptable que integra diversas herramientas y fuentes, y sustenta interpretaciones sensibles al contexto.

Palabras clave: análisis multinivel, metodología cualitativa, metodología de investigación, estudios de caso, investigación educativa

1. Introduction

Qualitative research in the social sciences faces the challenge of analyzing complex phenomena characterized by the interaction of multiple factors, operational levels, and influential contexts. Phenomena such as the implementation of educational policies, organizational dynamics, or social change processes cannot be fully understood through approaches that are limited to describing surface manifestations, analyzing structures in isolation, or interpreting contexts without systematically connecting them to empirical data and concrete practices.

Traditional qualitative approaches, although valuable, present limitations when applied in isolation to multilevel phenomena. Methodological fragmentation reduces the explanatory power of qualitative research when faced with complexity. Therefore, a model is needed that facilitates the explicit and systematic integration of these levels, allowing researchers to move from identifying manifest elements in the data, through the exploration of underlying relationships, to the contextualization and interpretation of findings within broader socio-historical and political frameworks.

In response to this need, this article introduces and theorizes the Integrated Multilevel Analysis (IMA) model—a methodological framework designed to address complex qualitative phenomena. The objective of this work is twofold: first, to present the theoretical rationale and methodological design of IMA; and second, to validate its applicability and explanatory potential through a case study focused on educational research policy.

2. Theoretical framework

The IMA model is grounded in an interdisciplinary theoretical foundation that recognizes the stratified and relational nature of social and educational phenomena. The model is based on the understanding that such phenomena cannot be grasped through surface description or single-level analysis; instead, they demand a methodology that dialectically articulates the manifest and the latent, and the micro-operational with the macro-contextual.

2.1. Epistemological need for multilevel integration

The study of complex phenomena such as public policies or institutional practices reveals that they do not exist in a vacuum, but are shaped by social, cultural, and discursive structures operating

simultaneously across different levels of reality (Hodder, 1994). Ignoring this complexity leads to partial analyses. For instance, focusing solely on the explicit content of documents omits how these texts are interpreted, negotiated, and transformed in practice by institutional actors—and how both text and practice are embedded in and respond to broader historical, political, and ideological contexts.

Contemporary social theory, including critical and post-structuralist perspectives, emphasizes this interconnectedness. Authors such as Ball (1994) and Mainardes (2018), particularly in the field of educational policy, argue that policies are dynamic discursive processes represented across multiple arenas and levels, shaped by power relations and specific contexts. This view demands methodological tools capable of tracing these trajectories and connections across levels.

2.2. Foundational components for methodological articulation

IMA responds to this epistemological requirement by integrating elements from various qualitative traditions into a cohesive, interconnected analytical structure:

- Critical document analysis and grounded theory

Document analysis (Bowen, 2009) provides the primary material. IMA, however, approaches it from a critical perspective (Hodder, 1994), viewing documents as both sources of information and cultural artifacts that reflect and reinforce structures. To systematize material analysis and explore relationships, IMA employs coding procedures from grounded theory (Glaser & Strauss, 1999; Strauss & Corbin, 2014). These techniques enable the inductive identification of key concepts (open coding) and the systematic establishment of relationships between them (axial coding), thus bridging description and explanation.

- Critical Discourse Analysis (CDA)

To explore how texts and practices reflect and reproduce power relations, ideologies, and inequalities, the model incorporates CDA (Fairclough, 2003, 2010). This approach examines linguistic choices, discursive practices, and their relation to social practices, uncovering the sociopolitical dimensions embedded in language and action. This is key to connecting findings with structures of domination and broader ideological contexts.

- Contextual hermeneutics

To situate findings within their temporal and cultural dimensions, IMA draws on contextual hermeneutics (Gadamer, 1998; Ricoeur, 1999). This perspective supports the interpretation of texts and practices as products of their time and setting, acknowledging historical distance and the interpretive dialogue between the researcher and the phenomenon. It enables a richer understanding of meaning in relation to historical narratives and long-term social processes.

2.3. Comparative perspective

To clarify the distinctions and added value of IMA in relation to other methodological approaches, Table 1 summarizes the key characteristics across analytical dimensions.

Table 1. IMA vs. traditional document analysis approaches

Key Dimensions	Thematic Analysis (Boyatzis, 1998)	Content Analysis (Krippendorff, 2019)	Integrated Multilevel Analysis (IMA)
Main focus	Identification of patterns and recurring themes in texts.	Classification and quantification of textual elements to identify trends.	Integration of descriptive, structural, and contextual levels for holistic understanding.
Levels of analysis	Focuses on surface-level themes (explicit content).	Focuses on manifest content (words, phrases, concepts).	Combines three levels: structural-normative, institutional-operative, and macro-political-historical.
Interpretative depth	Limited to theme identification, without examining underlying dynamics.	Restricted to description and quantification of textual elements.	Explores underlying dynamics, tensions, and historical-political contexts.
Contextualization	Does not explicitly incorporate historical or sociopolitical context.	Does not address context beyond textual content.	Integrates historical, political, and social context to enrich interpretation.
Relations between categories	Does not systematically explore inter-category relations.	Does not deeply analyze interactions between categories.	Uses techniques like axial coding and relational matrices to explore category connections.
Critical approach	Lacks critical perspective on power or ideology.	Does not analyze sociopolitical implications of texts.	Includes critical discourse analysis to examine power relations, ideologies, and inequalities.
Flexibility and adaptability	Less flexible for analyzing complex and multidimensional phenomena.	Less adaptable to dynamic and changing contexts.	Highly flexible and adaptable to various contexts and data types (educational, social, political, etc.).

Note: Adapted from *Transforming qualitative information: Thematic analysis and code development*, by R. Boyatzis, 1998, Sage and from *Content analysis: An introduction to its methodology*, by K. Krippendorff, 2019, Sage.

As shown in Table 1, while approaches like thematic analysis focus on surface-level patterns and content analysis examines manifest textual elements, IMA stands out for its goal of multilevel integration. Rather than limiting itself to theme description, it incorporates specific procedures to systematically explore underlying structural relationships. IMA also integrates the macro-political-historical dimension through hermeneutic and CDA tools, enriching interpretation. This capacity to connect descriptive, structural-operational, and contextual-interpretive dimensions allows IMA to overcome the fragmentation often resulting from isolated application of traditional approaches.

Nonetheless, the multilevel perspective is not exclusive to IMA. Other approaches in academic literature have adopted similar perspectives. For example, multilevel case study (Thomas, 2011), offers a general framework for addressing phenomena across different contextual levels, although without the methodological structuring proposed by IMA. Framework analysis (Ritchie & Spencer, 1994) facilitates the organization of qualitative data into thematic matrices useful for applied analysis but lacks the hermeneutic-critical dimension present in IMA. CDA (Fairclough, 2010) shares with IMA a focus on the relationship between text and sociopolitical structure, though it is exclusively centered on discourse. Situational analysis (Clarke, 2005) introduces tools for mapping complex social relations, yet with less formalization regarding analytical levels.

Within the scope of critical realism, authors such as Archer (1995) have developed approaches that address the interaction between agency and structure—converging with IMA in their

explanatory emphasis, albeit from a more ontologically dense perspective. Lastly, models such as institutional ethnography (Smith, 2005) and policy implementation analysis (Mazmanian & Sabatier, 1983) explore how texts, norms, and practices operate across institutional levels, providing useful points of comparison with the operational dimension of the IMA model. In comparison, these models help situate IMA as an integrative, methodologically explicit proposal, oriented toward the critical understanding of complex social phenomena from multiple levels of analysis.

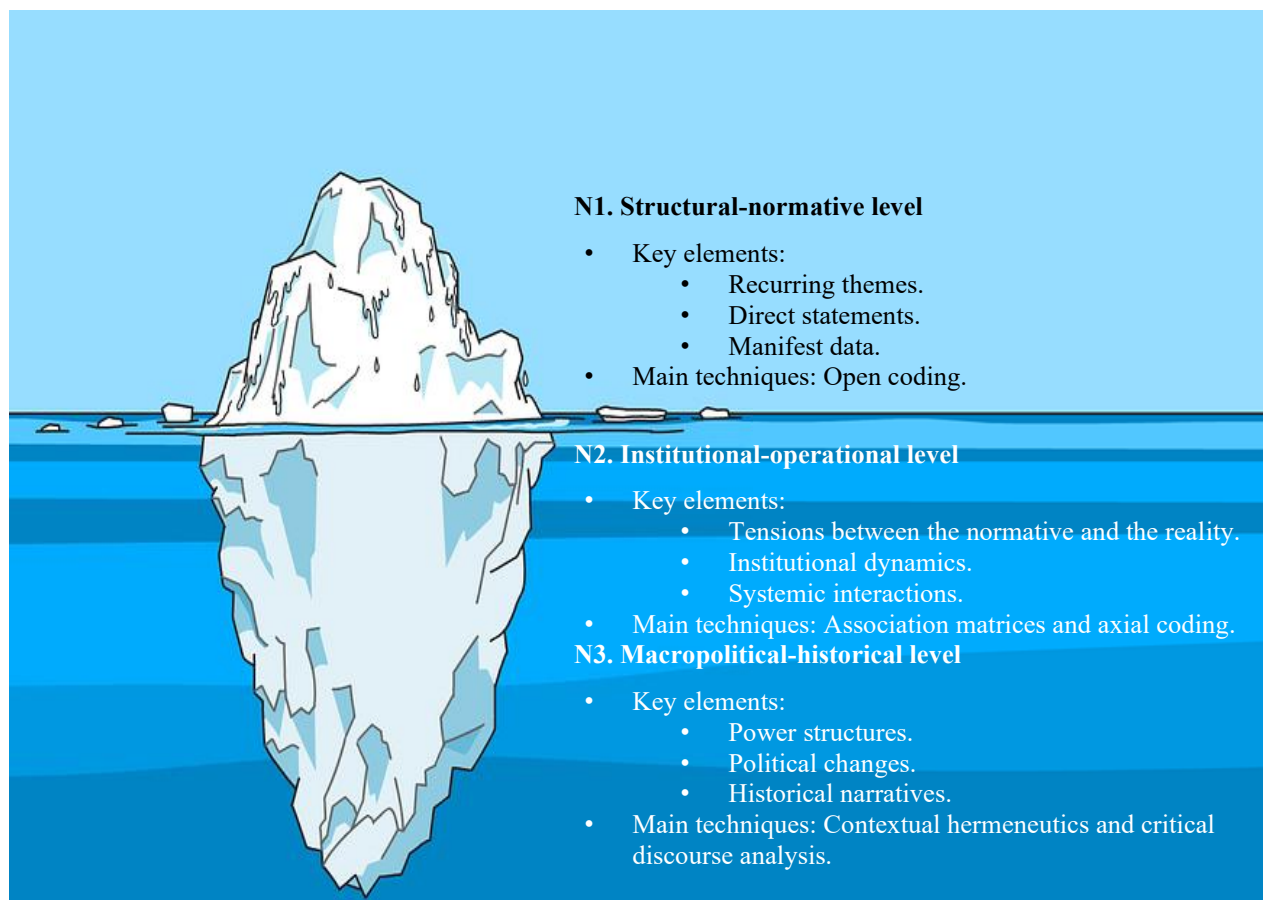
3. Method

The Integrated Multilevel Analysis (IMA) proposes a qualitative, process-oriented methodological design. Its structure integrates three interrelated levels of analysis, allowing researchers to move from the description of manifest elements to the contextualized interpretation of underlying dynamics, thereby facilitating a holistic understanding of complex phenomena.

3.1. Operationalization of the model

To support the understanding of IMA's logic, one may refer to the metaphor of an iceberg, as illustrated in Figure 1.

Figure 1. Iceberg metaphor illustrating the three interrelated levels of IMA



Note. Image by unknown author is licensed under CC BY-NC-ND.

This analogy represents the levels of analysis as different depths of inquiry. The analysis of complex phenomena requires going beyond the immediately observable (tip of the iceberg),

requiring a systematic investigation into the submerged operational structures and the broad historical and socio-political contexts that constitute their basis. Each level builds on the previous one, and comprehensive understanding emerges from the articulation of the three, as shown below.

3.1.1. Level 1: Structural-normative (descriptive-textual analysis)

This level (henceforth N1) establishes the empirical foundation of the analysis by focusing on the identification and systematization of manifest content within the selected primary documentary corpus. It involves constructing a descriptive map of themes, concepts, statements, and explicit patterns that emerge directly from textual sources. The analysis seeks to detect recurring elements, discursive emphases, normative formulations, and potentially relevant omissions that may inform subsequent levels. This level is operationalized through open coding of text segments (Strauss & Corbin, 2014), followed by thematic categorization (Boyatzis, 1998), where codes are grouped into categories that reflect the core themes present in the documents. The guiding question for this level is: *What is explicitly stated about the phenomenon in these sources?*

3.1.2. Level 2: Institutional-operational (relational-structural analysis)

The second level (henceforth N2) explores the relationships, interconnections, tensions, and structural dynamics underlying the categories identified in N1. Its goal is to understand how normative or discursive elements interact with each other and how they relate to specific institutional, organizational, or systemic practices. This level aims to answer questions such as: *How are categories A and B related in the texts? What tensions or contradictions arise from these relationships? How are explicit norms or discourses (N1) translated into—or resisted within—operational practices in the institutional context under study?*

Axial coding (Strauss & Corbin, 2014) is used to identify central (axial) categories and explore their properties, dimensions, and relationships with other categories in terms of causal conditions, context, action/interaction strategies, and consequences. This process identifies various types of relationships: those perceived by actors, inferred by the researcher, or reflected in logical or practical contradictions, complementarities, hierarchical dependencies, or structural tensions.

Given its focus on the operational dimension, this level often requires the integration of additional data sources to provide direct evidence on practices, interpretations, and institutional logics. These sources may include internal reports, meeting minutes, observational data, and, if needed, interviews with key stakeholders. The strategy for selecting and triangulating these sources must ensure relevance to the relationships being explored and address the methodological challenges of integrating diverse qualitative data (ensuring conceptual comparability and accounting for potential biases). Relational matrices (Miles & Huberman, 1994) and other conceptual diagrams are useful tools for visualizing these interconnections and facilitating the construction of preliminary explanatory models.

3.1.3. Level 3: Macro-political-historical (contextual-interpretive analysis)

The third level (henceforth N3) broadens the analytical scope to situate and interpret the findings of the previous levels within broader socio-historical, political, cultural, and ideological contexts. The aim is to understand how the phenomenon under study is embedded in, shaped by, and contributes to larger-scale temporal and spatial processes and structures. Key questions include: *How do the identified patterns and tensions reflect historical, political, or social trends? In what ways do power structures or dominant ideologies influence or become reproduced through*

the phenomenon? What is its relationship with relevant national policies or international influences?

Methodologically, hermeneutics (Gadamer, 1998; Ricoeur, 1999) guides the interpretation of meaning, considering the historicity of the phenomenon and establishing an interpretive dialogue between past and present. This approach supports the identification and analysis of the narratives that give meaning to the findings. Critical Discourse Analysis (CDA) (Fairclough, 2001) is applied to examine how the discursive and non-discursive practices identified in earlier levels (lexical choices, textual genres, intertextuality, institutional practices) are linked to power relations, hegemonic processes, and the reproduction of inequalities. It enables the analysis of the sociopolitical implications of discourses and structures.

Systematic triangulation with contextual and secondary sources is essential at this level. It involves the selection and comparative analysis of relevant academic literature, historical documents, policy analyses, statistical reports, and sociological or anthropological studies of the context, including media analysis. The outcome is a critical and contextualized interpretation that links the specificity of the case to broader social processes and structures.

3.2. Methodological process of the IMA

The implementation of the IMA model unfolds as an analytical process that, although described in phases for clarity, is iterative, reflexive, and requires constant movement between levels of analysis and data. The initial phase of preparation and planning involves defining the phenomenon and research objectives, delimiting the case or context, and designing a strategy for the initial document selection to ensure relevance and diversity. At this stage, it is essential to anticipate and plan the collection or access to additional sources, both for N2 (institutional-operative) and N3 (contextual) as well as to assemble a research team with methodological expertise and familiarity with the phenomenon under study.

The analysis begins with coding and initial categorization, corresponding to level N1. This entails a thorough reading of primary documents to identify general themes, followed by the application of open coding to relevant textual units. The resulting descriptive codes are inductively grouped into initial thematic categories, which undergo preliminary descriptive validation (e.g., through peer review or group discussion) to ensure consistency and representativeness of the manifest content.

The next step is relational and structural analysis, operationalizing N2. Axial coding is used to explore relationships (connections, dependencies, contradictions) between the categories identified in the previous level. Relational matrices are among the tools that can be used to visualize and support the interpretation of these structural connections. In this phase, additional data sources (e.g., internal reports, interviews) are integrated and analyzed, linking this new evidence to the relationships derived from primary documents to gain a deeper understanding of institutional dynamics and the tensions between norms and practices.

Subsequently, contextualization and interpretation are addressed, corresponding to N3. The descriptive findings (N1) and relational findings (N2) are situated within historical, political, and social contexts. Systematic triangulation with various secondary and contextual sources (e.g., prior studies, statistics, relevant legislation) is carried out to enrich, validate, and deepen interpretation. Hermeneutic and CDA frameworks are applied in an integrated manner to examine meanings, power relations, and ideological influences embedded in the phenomenon. The aim is to construct

explanatory narratives that connect the findings across all three levels to broader historical and political processes.

Throughout the entire process, internal triangulation strategies are used to ensure logical coherence across levels. The final synthesis takes the form of an argued narrative, visually supported when appropriate. It is advisable to subject preliminary results to external validation (e.g., consultation with experts or focus groups) to identify potential biases and refine interpretations. Finally, researcher reflexivity is a transversal practice: explicitly articulating assumptions, deliberately managing the various analytical lenses (descriptive, relational, critical, interpretive), and transparently documenting the process (through analytical memos and research journals) all contribute to the methodological rigor of IMA. The process culminates with a reflective evaluation of the model's application and its potential for refinement.

3.3. Considerations on trustworthiness

Given the interpretive and constructivist nature inherent in the qualitative approaches integrated within IMA, traditional validation criteria must be adapted. Emphasis is placed on criteria such as credibility (achieved through triangulation, peer validation, etc.), transferability (ensured through thick descriptions of the case and research process that allow others to assess applicability), dependability (supported by transparent documentation of the analytic process), and confirmability (by clearly linking interpretations to data and making the researcher's reflexivity explicit) (Lincoln & Guba, 1985). The validation of the IMA model itself relies on its rigorous application in pilot studies and the assessment of its capacity to generate comprehensive and coherent insights.

3.4. Protocol for applying the IMA model

To support the systematic and rigorous application of the model across diverse research contexts, and to promote its replicability, a guiding protocol is proposed, complemented by specific tools for verification and triangulation. This protocol operationalizes the phases described in Section 3.2, emphasizing the importance of thorough planning, justification of sources (primary, additional, and contextual), systematic application of analytical techniques at each level, and triangulation. As complementary tools to guide and verify the coherence of this process, the following resources are provided:

- Checklist: a tool that allows researchers to verify the completion of key steps at each stage of the process (see Appendix 1).
- Triangulation matrices: To strengthen the validity of the analysis, complementary matrices are suggested. These tools follow the principles of triangulation recommended in the qualitative research literature (Denzin, 1978; Flick, 2018) and are adapted to the multilevel logic of the IMA model. Two types of matrices are distinguished: internal triangulation (see Appendix 2) and external triangulation (see Appendix 3), aimed at validating findings.

For internal triangulation the matrix is designed to contrast emerging findings across the three analytical levels. This triangulation helps assess the internal coherence of the analysis by identifying convergences or contradictions between what is normatively stated, what occurs operationally, and the structural conditions influencing both. Each row corresponds to a central theme or category, and the last column synthesizes interpretative consistency or emerging tensions between levels.

The external triangulation matrix aims to validate findings by comparing them with complementary sources. These may include academic literature, data from other studies, and consultations with experts or key stakeholders. This triangulation reinforces the credibility of results by verifying whether identified patterns hold beyond the primary corpus. Each column records, for each category or finding, the evidence from the study, its external comparison, and observations derived from the validation process. While the protocol and matrix examples provide a structured guide, they are intended to be flexible and adaptable to the specific characteristics of each phenomenon, context, and dataset addressed by the research.

4. Results

To validate the model, it was implemented in a case study focused on the assessment and visibility of the research work carried out by teacher educators within Uruguay's public teacher education system, managed by the Teacher Education Council (Consejo de Formación en Educación, CFE). This case was considered appropriate due to its complexity, which involves normative dimensions (policies and official documents), institutional-operational aspects (practices within teacher training centers, program management), and historical-political elements (the trajectory of recognition of research within this specific educational subsystem, and national science and technology policies).

The analysis was based on a corpus of 38 public documents, including official websites, institutional reports from the CFE and the National Administration of Public Education (Administración Nacional de Educación Pública, ANEP)—an autonomous body that encompasses the CFE—, educational policy statements (Development Plans, 2023 Curriculum Proposal), key legislation (such as the General Education Law and Law n°19.889), and documents from specific research support programs (e.g., the Program to Support the Development of Research in Education – PRADINE).

It also included resolutions from the Central Governing Council (Consejo Directivo Central, CODICEN)—the highest authority within ANEP—, documents from relevant collective actors (such as the Technical Teaching Assemblies of the CFE (Asambleas Técnico Docentes, ATD-CFE)—teacher participation bodies—, the Union of Teacher Educators (Sindicato de Docentes de Formación en Educación, SIDFE), and the ALICIA Network (Red ALICIA)), as well as sources related to the national Science and Technology system, including materials from the National Agency for Research and Innovation (Agencia Nacional de Investigación e Innovación, ANII), and the National Researchers System (Sistema Nacional de Investigadores, SNI).

The dataset for this study is available in open access (Umpiérrez Oroño et al., 2025). The documents were coded according to the level of analysis in which they were mainly used (e.g., N1.1 for the first document used at N1).

4.1. Multilevel analytical process

4.1.1. Level N1: Mapping explicit discourse

The initial analysis identified explicit references to research in the normative and institutional documents of CFE and ANEP. Through open coding and thematic categorization, three central categories emerged: 1. Institutional Framework (discussions concerning the formal, potentially university-level status of teacher education and the autonomy of the educational system with respect to the Ministry of Education and Culture [MEC]), 2. Academic Structure (internal organization, including references to units such as Academic Departments or the newly introduced

Teaching Performance Hourly Units (Unidades Horarias de Desempeño Docente - UHDD), a system for allocating teaching hours), and 3. Incentives and Dissemination (specific programs and resources for conducting research), along with their corresponding subcategories (see Table 2). This level revealed a recent official discourse (post-2020) that rhetorically emphasizes the importance of research and the aspiration toward a university character for teacher education (N1.3; N1.4). However, it also exposed ambiguities in practical implementation, for instance, in the allocation of time within the UHDD (N1.12).

Table 2. Categories of the structural-normative level for the case studied

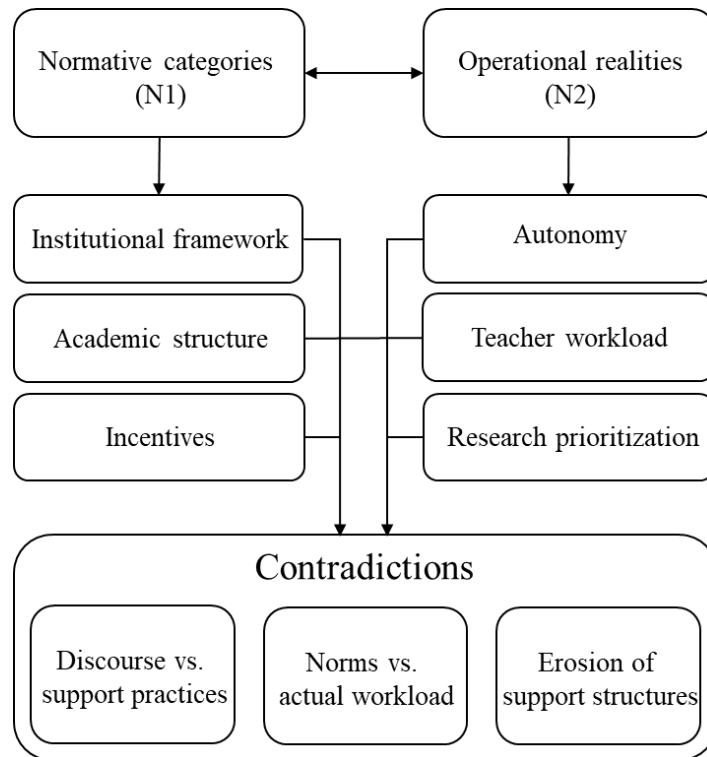
Category	Subcategory	Functional description	Related documents in the dataset
1. Institutional framework	1.1 University status of teacher education and research	Refers to official discourses and reforms promoting a university-level teacher education system where research is a central component.	N1.1; N1.2; N1.3; N1.4
	1.2 Autonomy of ANEP–CFE	Involves changes in the institutional structure defining the relationship between ANEP-CFE and the MEC	N1.1
2. Academic structure	2.1 Academic Enablers	New academic roles created to support the implementation of curricular reforms	N1.10
	2.2 Teaching Workload Model (UHDD)	Refers to reorganization of teacher workload to include research, extension and teaching responsibilities.	N1.11; N1.12; N1.13
3. Incentives and dissemination	3.1 Promotion of educational research	Refers to national and institutional programs (e.g., PRADINE) aimed at fostering research within teacher education.	N1.5; N1.6; N1.7; N1.8; N1.9; N1.14; N1.15; N1.16
	3.2 Professional development in research	Policies and instruments designed to support in-service teacher educators in pursuing graduate studies or research sabbaticals.	N1.17; N1.18; N1.19; N1.21; N1.22
	3.3 Dissemination of research	Initiatives and policies supporting publication, presentation, and communication of research results to academic and educational communities.	N1.20; N1.23

Note: Developed by the author.

4.1.2. Level N2: Exploring relationships and tensions

This level deepened the analysis of the relationships between normative categories (N1) and operational realities, integrating documents that reflect the perspectives of various stakeholders (the SIDFE union, ATD-CFE assemblies, and the ALICIA Network). Axial coding and association matrices were applied, leading to the emergence of categories that highlighted key tensions: institutional change/erosion, weakening of the academic structure, insufficient/discontinuous incentives, communication barriers, and difficulties in prioritizing research. The relational analysis revealed significant contradictions, which are summarized in Figure 2:

Figure 2. Tensions between discourse and practice



Note: Developed by the author.

- **Discourse vs. support practices:** The official discourse promoting research (N1, see Table 2) contrasts with stakeholders' perceptions of the discontinuity and instability of support programs such as PRADINE and the lack of adequate resources (N2: N2.24; N2.29).
- **Norm vs. actual workload:** Although research is formally recognized as part of the teaching role (N1, as shown in Table 2), it is operationally sidelined due to the de facto prioritization of teaching and administrative tasks. The implementation of the UHDD is interpreted by stakeholders as a mechanism that does not guarantee protected time for research, leading to work overload (N2: N2.24; N2.26; N2.28; N2.27).
- **Erosion of support structures:** The elimination or redefinition of structures such as the national academic departments is perceived by stakeholders as a weakening of the institutional supports for research (N2: N2.26).

By incorporating the voices and experiences of stakeholders through their documents, this level was key in identifying the structural and operational tensions that highlight the gap between political-institutional discourse and the everyday practice of research.

4.1.3. Level N3: Contextualization in broad dynamics

At this level, the tensions identified in operational practices (N2) and the official discourses documented at the normative level (N1) are situated within the broader political, historical, and institutional context of Uruguayan education policy. Triangulation with macro-level documents and secondary sources allowed for a contextualized interpretation of the findings and revealed three key dimensions, as illustrated in Figure 3.

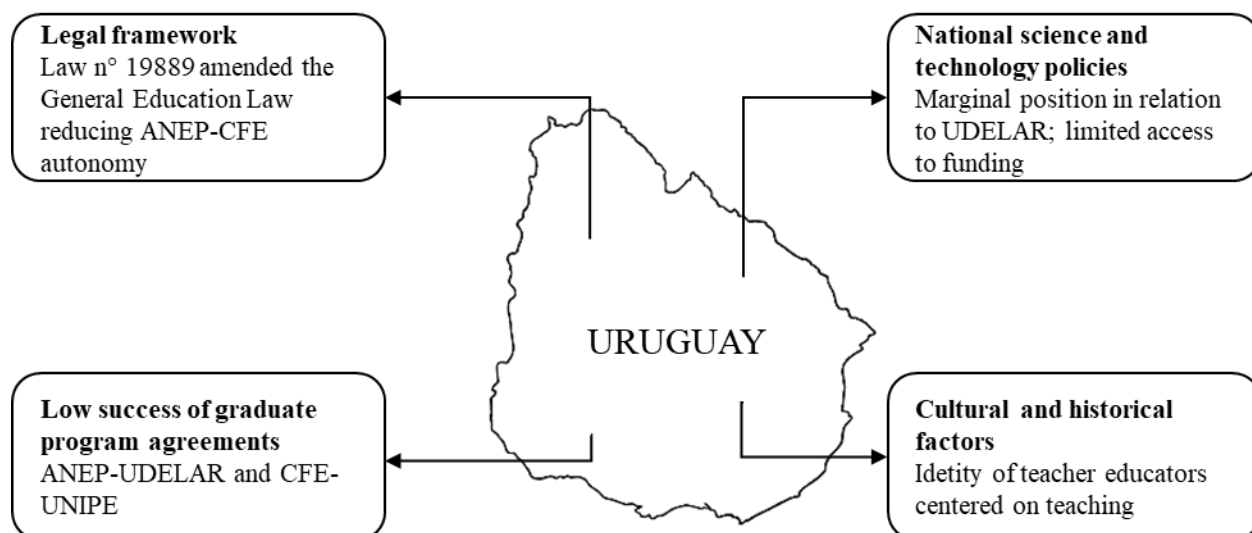
- Legal and institutional framework: Law n° 19.889 (N1.1) introduced significant changes to the General Education Law (N1.2), which, according to stakeholders' interpretations (N2.26), reduced the autonomy of ANEP/CFE and expanded the influence of the MEC. One of the most salient shifts was the removal of the proposal to establish an autonomous University of Education, perceived by actors (N2.27) as a political barrier to the full institutionalization of teacher education within the university system—an essential step for legitimizing research as a core academic function.
- National science and technology policies: The role of teacher education within Uruguay's national innovation system was also examined. Documents from ANII (N2.30), as well as secondary analyses (e.g., Bortagaray, 2017; Castaings, 2019), revealed the marginal position of teacher training institutions relative to the Universidad de la República (UDELAR) and other accredited entities. This is reflected in their underrepresentation in the National Researchers System (SNI) and in limited access to competitive research funding—challenges that reinforce structural constraints on the development of research capacities within CFE.
- Cultural and historical continuities: The interpretation also considered deeper cultural legacies. Studies such as Cox et al. (2021) point to a strong historical identification of teacher educators with the teaching role, which may continue to influence institutional priorities despite more recent discourses promoting research. This tradition has implications for how research is valued, supported, and implemented on the ground.

To further contextualize these dynamics, a set of macro-level documents (N3.33–N3.38) was incorporated into the analysis. These include postgraduate agreements between ANEP–UDELAR (N3.33) and CFE–UNIPE (N3.34), which represent strategic efforts to reposition teacher education within a university-oriented academic framework. These collaborations reflect longstanding aspirations toward institutional autonomy and highlight unresolved tensions regarding the academic status of teacher training in Uruguay.

Additionally, internal governance reforms, such as the contested reform of Chapter XIV of the CFE statute (N3.35) and the weakening of the Secretariat for Research and Graduate Studies (N3.36), indicate persistent struggles around formal regulation and research management. These reforms, although framed as technical, are deeply embedded in wider policy debates over control, institutional hierarchy, and academic legitimacy. Public-facing initiatives like “CFE se expone” (N3.38) and the PRADINE commission records (N3.37) provide evidence of attempts to increase the visibility of institutional research. However, these initiatives must be interpreted within a broader discourse of legitimation—seeking to position teacher education as a knowledge-producing field within a higher education landscape historically dominated by universities.

In sum, triangulation with these macro-political and historical sources provides a deeper lens through which to understand the observed gaps and tensions between institutional discourse and practice. The findings suggest that teacher education in Uruguay occupies a transitional and ambiguous institutional space, positioned between the evolving expectations of higher education and the constraints of an administrative model still shaped by centralized control.

Figure 3. Structural contexts influencing teacher education reform in Uruguay



Note: Developed by the author.

The hermeneutic and critical interpretation made it possible to understand the operational difficulties (N2) not as issues of internal management, but as symptoms of a broader struggle for recognition and autonomy within a national academic and political field that has historically assigned a secondary role to knowledge production in teacher education. Recent political decisions (N1.12; N1.1) were interpreted as part of a dynamic that reinforces this structurally disadvantageous position.

4.2. Internal and external triangulation

As part of the IMA’s methodological strategy, systematic procedures of internal and external triangulation were applied to strengthen interpretive validity and ensure coherence across analytical levels. Internal triangulation involved comparing findings emerging from each level (structural-normative, institutional-operational, and macro-political-historical) around key categories such as research incentives, university status, academic structure, and protected research time. This process made it possible to identify consistencies, tensions, and shifts between official discourses (N1), institutional actors’ perspectives (N2), and broader structural dynamics (N3). Table 3 summarizes how these categories were articulated across levels, highlighting both interpretive coherence and critical points of friction relevant to the case.

Table 3. Internal triangulation for the pilot study

Theme / Category	N1: Structural-Normative	N2: Institutional-Operational	N3: Macro-Political-Historical	Synthesis / Coherence
Incentives for research	Official promotion of programs like PRADINE and support for research dissemination (N1.5–N1.9, N1.20–N1.23).	Perception of discontinuity, instability, and limited resources in implementation (N2.24, N2.27, N2.29).	National science and technology policies marginalize teacher education in funding schemes and research systems (N2.30; Bortagaray, 2017; Castaings, 2019).	Coherent tension: Normative promotion is undermined by operational gaps and systemic exclusion at the macro level.
University status and autonomy	Discourse on transition toward university-level	Perception that legal-institutional reforms (e.g., Law	Removal of proposal for an autonomous University of Education	Strong interlevel coherence showing a blocked

	status for teacher education (N1.1, N1.3).	19.889) reduce ANEP/CFE autonomy (N2.26–N2.27).	seen as political restriction (N3.35, N1.1).	institutionalization path for teacher education as a knowledge-producing field.
Teaching workload and UHDD	Introduction of UHDD model aimed at balancing teaching, research, and extension (N1.11–N1.13).	Interpreted as contributing to work overload and failing to protect research time (N2.24, N2.26, N2.27, N2.28).	Reflects longstanding prioritization of teaching over research within cultural and institutional traditions (Cox et al., 2021).	Reveals contradiction between policy intent and institutional culture and constraints.
Support structures for research	References to academic units and professional development programs (N1.10, N1.17–N1.22).	Weakening of academic departments and lack of stable governance structures (N2.26).	Ongoing reconfigurations in research governance (e.g., restructuring involving PRADINE, N3.36).	Partial coherence; some reforms suggest progress, but erosion of support structures persists, showing mixed and contested institutional change.

Note: Developed by the author.

External triangulation, in turn, incorporated secondary sources (academic literature, legislation, policy documents) and preliminary validation through consultation with two experts in Uruguayan education policy. This strategy enabled the findings to be placed in dialogue with external interpretive frameworks, assessing their plausibility and contextual relevance. Table 4 presents representative examples of this process, showing how the evidence gathered aligns with, complements, or problematizes external sources and expert contributions.

Table 4. External triangulation for the pilot study

Finding / Category	Primary source (study)	Secondary / External source	Expert / Stakeholder consultation	Consistency / Observations
Promotion of research (PRADINE)	Normative discourse on PRADINE as key support mechanism (N1.5–N1.9)	Bortagaray (2017), Castaings (2019) – highlight weak institutional support	Experts confirmed gap between discourse and funding continuity	Triangulated consensus: PRADINE is perceived as central yet fragile; sustainability questioned in all sources.
Research as part of teaching role	Legal and programmatic inclusion of research in teaching functions (N1.3, N1.4)	N2.25, N2.32 – mention structural problems for research	Experts noted formal inclusion often lacks enforcement mechanisms	Discrepancy between normative inclusion and operational realities confirmed; legislation symbolic without clear enforcement or budgeting.
Autonomy of CFE	CFE’s university aspiration present in national documents (N1.2, N1.3)	Chapter XIV reform (N3.35) – weakening of the academic structure and spaces for research	Experts emphasized loss of autonomy and political resistance to CFE’s university role	High consistency; political resistance to institutional autonomy recognized across levels and sources.

Institutional marginalization in science and technology	Underrepresentation in ANII, SNI, and access to competitive funds (N2.30)	Bortagaray (2017); Castaings (2019)	Experts described this marginalization as “structurally embedded”	Strong confirmation of structural barriers for teacher education within national science and innovation frameworks.
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Note: Developed by the author.

Together, these two forms of triangulation—internal and external—contributed to strengthening the methodological consistency of the model and deepening the explanation of the tensions between discourse, practice, and institutional history identified throughout the study.

5. Discussion

The implementation of the IMA in the pilot study provided a foundation for reflecting on the methodological model, its theoretical underpinnings, practical demands, and potential contributions. The results not only contributed to the analysis of the case but also allowed for an evaluation of the model's added value to the field of qualitative research on complex phenomena.

The main strength of the IMA, empirically confirmed, lies in its structure designed for the systematic integration of analytical levels, responding to the stratified nature of social reality (Hodder, 1994). The pilot study illustrated how a deep understanding of the precarious presence of research within teacher education required going beyond initial textual description (N1). It was the model's capacity to guide the connection between these explicit topics and underlying institutional dynamics (N2), and then to articulate both levels with the broader historical-political matrix of structural marginalization (N3), informed by policy and legal analysis (Bortagaray, 2017; N1.1), that enabled the construction of a coherent and multidimensional explanation. This process validates the premise that complex phenomena, particularly in domains such as education policy, operate across and must be analyzed through multiple interconnected levels (Ball, 2021; Mainardes, 2018). The IMA, by operationalizing this connection, facilitates the construction of structural and context-sensitive causalities, overcoming the limitations of methodological approaches that tend to isolate levels of analysis.

Moreover, the articulated combination of systematic coding (Strauss & Corbin, 2014), critical discourse analysis (Fairclough, 2003, 2010), and contextual hermeneutics (Ricoeur, 1999; Gadamer, 1998) within the multilevel structure generated a richer understanding than any of these approaches would have produced independently. For example, the initial empirical rigor and relational analysis (N1 and N2) provided the structured foundation upon which critical interpretation (CDA in N3) could unpack power relations embedded in legislative discourse, and the hermeneutic perspective (N3) could situate institutional dynamics within historical trajectories of recognition. This confirms that the IMA proposes a reasoned and methodologically guided integration, in which each theoretical approach enhances the others within a coherent framework, responding to the need for analytical strategies that connect text, practice, and sociopolitical context (Ball & Mainardes, 2011, 2024; Mainardes, 2018).

In terms of implications, the IMA offers a framework that can help researchers address complexity in a systematic way without sacrificing contextual sensitivity. Its emphasis on the explicit and justified integration of diverse data sources (documentary, testimonial, contextual) at levels N2 and N3 avoids superficial analyses based solely on normative discourses and enables a closer engagement with the complexity of the phenomenon (Bowen, 2009; Hodder, 1994). The

inclusion of critical and hermeneutic perspectives ensures that the analysis not only describes and explains, but also interrogates deeper meanings, power relations, and ideological implications, aligning IMA with reflective and emancipatory approaches to social research. Comparatively, while other structured methods such as Framework Analysis (Ritchie & Spencer, 1994) are valuable for managing and comparing thematic data, the IMA distinguishes itself through its intrinsic goal of integrating analytical levels that incorporate relational-operational and contextual-critical dimensions as essential to explaining complexity.

It is also important to acknowledge and discuss the methodological challenges and demands posed by the model's implementation. The depth of analysis it enables requires significant investment in terms of researcher competencies, time, and resources. Expert handling of multiple qualitative techniques (advanced coding, CDA, hermeneutics) and a deep knowledge of the specific field and context are prerequisites for carrying out well-founded cross-level connections and contextualized interpretations (N3). This suggests that IMA is more suitable for experienced researchers or multidisciplinary teams, and less so for initial explorations in entirely new fields. Time management and access to diverse sources (particularly for N2 and N3) are practical factors that require careful planning.

Perhaps the greatest challenge lies in managing the complexity of multilevel triangulation and interpretative synthesis. Linking findings from different levels and sources, without resorting to oversimplification or forced connections, requires a high degree of analytical rigor and constant reflective practice (Lincoln & Guba, 1985). Transparent documentation of the analytical decision-making process can ensure confirmability. The interpretive transition between levels, especially toward N3, demands explicit theoretical and empirical justification to preserve the credibility of the analysis. These challenges do not invalidate the model but underscore the need for a conscious, rigorous, and self-critical application.

6. Conclusions

The main contribution of the IMA lies in its capacity to overcome analytical fragmentation by articulating descriptive, relational, critical, and interpretative techniques. By guiding the researcher throughout the process, the model facilitates a holistic understanding that goes beyond what would be possible through methodological approaches applied in isolation. Its flexibility and ability to integrate diverse data sources make it an adaptable tool for various fields and types of complex phenomena. While implementing the IMA requires researchers to possess advanced methodological competencies, substantive knowledge of the field, significant time investment, and constant reflective practice, these demands are proportional to the depth and richness of understanding that the model enables. The challenges identified do not diminish its potential; rather, they highlight the importance of a conscious and rigorous application.

Looking ahead, the IMA invites application across different thematic domains and cultural contexts, as well as exploration of its adaptation to integrate digital and visual data or to articulate with quantitative approaches in mixed methods designs. Future research could focus on refining its operational procedures, developing didactic tools for its teaching, and further exploring the epistemological challenges of multilevel integration. The IMA is proposed as a methodological response to the complexity of the social world—one focused on knowledge generation and capable of accounting for the realities we seek to understand and, potentially, transform.

Funding: no funding has been received for this study.

Acknowledgements: Dr. Silvia Umpiérrez and Dr. Claudia Cabrera Borges have provided their expert opinion on the external triangulation of the results.

Conflict of interest: the author declares that there are no conflicts of interest related to the writing of this article.

Author contribution: conceptualization of the model, literature review, manuscript preparation, selection of primary documents, creation of the study's database, data analysis, and revision of the final version.

Data availability: the study data are available in Mendeley Data at the following link: <https://doi.org/10.17632/xv8j4sbfwt.1> and have been referenced within the article.

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Appendix 1. Checklist for applying the IMA model

Process Stage	Verification	
1. Preparation and planning	Yes	No
Has the phenomenon and study objectives been clearly defined?		
Have relevant and diverse documentary sources been collected (e.g., institutional reports, laws, academic articles)?		
Is the research team familiar with the phenomenon and trained in key techniques such as qualitative coding, axial analysis, and hermeneutics?		
2. Initial coding and categorization	Yes	No
Have documents been reviewed to identify initial themes and patterns?		
Have descriptive codes been assigned to relevant textual units?		
Have codes been grouped into preliminary categories based on emerging patterns?		
3. Level-based analysis	Yes	No
• Structural-Normative Level (N1)		
Have explicit patterns, recurring themes, and direct mentions been identified in the documents?		
Have categories been peer-reviewed or group-discussed for consistency and representativeness?		
• Institutional-Operational Level (N2)		
Have relationships between categories been explored using axial coding?		
Have relational matrices been constructed to represent structural connections?		
Have underlying structures related to institutional or organizational dynamics been identified?		
• Macro-Political-Historical Level (N3)		
Have findings been contextualized within broader historical, political, and social dynamics?		
Has triangulation with secondary sources been performed to enrich interpretation?		
Have explanatory narratives been developed to connect analytical levels?		
Have new sources been incorporated to deepen the analysis?		
4. Validation and refinement	Yes	No
Has internal triangulation been conducted to verify coherence across analytical levels?		
Have results been reviewed by external experts or focus groups?		
Have methodological adjustments been made based on feedback received?		
5. Presentation of results	Yes	No
Has a narrative report been prepared highlighting connections between levels and their implications?		
Have diagrams and visualizations been included to support interpretation?		
Have practical proposals and recommendations been derived from the findings?		
6. Reflection and continuous improvement	Yes	No
Has the protocol been evaluated to identify strengths and areas for improvement?		
Have methodological decisions, key findings, and adjustments been documented?		

Note: Developed by the author.

Appendix 2. Example of internal triangulation matrix

Theme / Category	N1: Structural-normative	N2: Institutional-operational	N3: Macro-political-historical	Synthesis / Coherence
[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]

Note: Developed by the author.

Appendix 3. Example of external triangulation matrix

Finding / Category	Primary source (study)	Secondary / External source	Expert / Stakeholder consultation	Consistency / Observations
[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]

Note: Developed by the author.