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Representations of Educational Quality: OECD's Education at a Glance Agenda

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Doctorate Degree (PhD) in Public Policy

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April 2026

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Abstract

This thesis offers the most comprehensive longitudinal thematic analysis to date of *Education at a Glance*'s indicators across its first thirty editions (1992–2023). Drawing on a quantitative content analysis of the publication's complete indicator set, it investigates how *Education at a Glance* has constructed cross-national comparability and projected evolving representations of *educational quality* over time.

The thesis shows that the publication is marked by substantial internal reconfiguration, visible both in the thematic incidence of indicators and in the metadata categories through which education systems are rendered measurable. On this basis, it develops an original periodisation of *Education at a Glance* into four distinct phases, each associated with shifts in the publication's analytical orientation and organisational architecture.

The analysis also situates the emergence of PISA within the longer trajectory of *Education at a Glance*. It shows that orientations later associated with PISA were already taking shape in the late 1990s, before its formal approval, while also indicating that the output-oriented turn described in parts of the literature was more fragmented, unstable, and short-lived than commonly assumed.

Finally, the thesis argues that *Education at a Glance* projects a predominantly macro-systemic and external representation of education, in which quality is inferred mainly from investment inputs and selected endpoints rather than from educational processes themselves. In this respect, the publication offers only limited insight into socio-economic inequality and intersectional disadvantage, while projecting representations of national workforce capacity more strongly than thick accounts of *educational quality*.

Keywords: OECD, Education at a Glance, Education, Agenda, PISA, Representations

Resumo

A presente tese oferece, à data, a mais abrangente análise temática longitudinal do *Education at a Glance* ao longo das suas primeiras trinta edições (1992–2023). Com base numa análise quantitativa de conteúdo dos indicadores da publicação, investigamos de que modo o *Education at a Glance* construiu a comparabilidade transnacional e projetou representações de qualidade educativa ao longo do tempo.

A tese mostra que a publicação é marcada por uma substancial reconfiguração interna, visível tanto na incidência temática dos indicadores como nas categorias de metadados através das quais os sistemas educativos são tornados mensuráveis e comparáveis. A partir desta constatação, desenvolve uma periodização original do *Education at a Glance* em quatro fases distintas, associadas a mudanças na orientação analítica e na arquitetura organizacional da publicação, bem como nas formas de descrição estatística da educação.

A análise situa o surgimento do PISA na trajetória do *Education at a Glance*, demonstrando que as orientações posteriormente associadas ao PISA já se encontravam em consolidação no final da década de 1990, antes da sua aprovação formal. Ao mesmo tempo, indica que a viragem orientada para os resultados, descrita na literatura, foi mais fragmentada, instável e de curta duração do que geralmente se supõe.

Por fim, a tese defende que o *Education at a Glance* projeta uma representação predominantemente macrossistémica e externa da educação, na qual a qualidade educacional é inferida sobretudo a partir de investimentos e resultados, em detrimento dos processos educativos. Neste aspeto, a publicação oferece uma visão limitada da desigualdade socioeconómica e da desvantagem interseccional, ao mesmo tempo que projeta representações da capacidade da força de trabalho nacional com maior ênfase do que relatos sobre a qualidade educativa.

Palavras-chave: OCDE, Education at a Glance, Educação, Agenda, PISA, Representações

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1. Introduction: Research Scope, Theoretical Grounding and the Global Landscape of Educational Governance

The late twentieth and early twenty-first centuries mark a period of prominence in the Organisation for Economic Co-operation and Development (OECD) global influence on the design of education policies (Rinne, 2008; Seitzer et al., 2021; Sorensen et al., 2021) and the reconfiguration of governance instruments in education policy (Mahon & McBride, 2009; Niemann & Martens, 2018; Nóvoa & Yariv-Mashal, 2003). Despite the extensive literature on this matter, much remains to be explored, particularly regarding how these perspectives were materialized and how they evolved, namely since the emergence of the educational indicator architecture in the late 1980s with the creation of the Indicators of Education Systems (INES) Project (Martens, 2007), at the genesis of *Education at a Glance* and PISA (Grek & Ydesen, 2021; Ydesen, 2019a).

This dissertation is premised on a search for understanding how different thematic priorities have evolved over time. We seek to identify which themes and emphases OECD indicators have rendered salient and which issues have been relegated to a marginal position. Put differently, we ask which themes and policy issues the OECD indicators socially construct as problems requiring policy attention.

To that end, it analyzes OECD's longest-standing periodical publication in the field, *Education at a Glance*, which the organization presents as an expression of consensus on how to assess the state of education systems (OECD, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023). Through quantitative content analysis of the 913 indicators of the first thirty publications, the dissertation aims to provide the most detailed and comprehensive analysis of OECD education indicators, offering insight into the development of the publication's thematic agenda over time. We seek to understand how the priorities foregrounded in the document have evolved and how the publication has projected and reshaped its concepts of educational quality over time (see Engel & Rutkowski, 2014).

The decision to focus on indicators is intended to privilege the substantive elements through which *governance by comparison*, is materialised, anchored in quantitative instruments (e.g., Henry et al., 2001; Grek, 2009; Grek & Ydesen, 2021; Steiner-Khamsi et al., 2024). In this study, these instruments are understood, in line with Kingdon's framework, as devices through which problems are socially constructed (1984/2013).

The dissertation is positioned at the intersection of salience studies, conceptualized through agenda and agenda-setting theories, comparative education research, and representation studies, which are employed herein as conceptual anchoring tools for the analysis. This chapter delineates the context of our work, its significance and potential contributions, its methodological framework, and the overarching structure of the thesis.

1.1 The Thesis

This thesis problematises *how the OECD's educational priorities have evolved over time*. The guiding interest is a methodological doubt that calls for a systematic examination of claims widely accepted in the literature.

In view of its status as the OECD's longest-running publication in education and as an expert consensus benchmark for interpreting the state of national education systems, *Education at a Glance* provides an appropriate empirical anchor for a longitudinal design.

The thesis focuses on the indicators and associated metadata in *Education at a Glance* as anchors of cross-national and longitudinal comparability and as a basis for a critical analysis of how the topics deemed priorities in EaG's assessment of education systems have evolved.

Put simply, the analysis is grounded in *what the OECD consensus measures when analysing national education systems, and how it projects the concept of educational quality*. The objectives of the thesis are set out below.

1.1.1 Objectives

1.1.1.1 Objective 1: Longitudinal Analysis of the EaG Thematic Agenda

In their analysis of the thematic chapters used in *Education at a Glance* between 1995 and 2007, Teodoro and Estrela (2010) presented the most comprehensive thematic assessment of the publication to date. The authors report a shift towards output-oriented indicators during the 1990s. In parallel, they identify a stabilization of the publication from 2001 onwards, evidenced by a more consistent thematic arrangement of its chapters.

We extended this exploratory analysis, as seen on Table 1.1, based on EaG's first thirty editions' (1992-2023) chapter organisation, grouping the chapters according to the *Education at a Glance*

2023 (OECD, 2023) indicator framework[1]. The extension of the same methodology shows an initial period from 1992 to 2001 characterised by continual reconfiguration of chapters, followed by a phase of stability in the publication's structure from 2002 to 2017, with only marginal changes from 2018 onward.

When the entire period is considered, it becomes clear that the chapters' organisation consolidated progressively. The earliest stable configuration formed around indicators of *access, participation, and progress* from 1996 onward, then around *inputs* from 1997, and only later at the level of *outcomes and outputs* from 2002.

Our extension of this exploratory methodology from 12 to 30 editions brings new questions. If the methodology is taken as sufficiently robust, it is difficult to argue for a sustained trend toward a growing focus on *output and outcome* indicators. Its adoption invites us to consider whether the publication underwent an episodic shift in the early 2000s that coincided with the emergence of PISA, or whether, instead, there was progressive evolution across the two subsequent decades.

A further question arises from including the first two editions of EaG. It concerns the need to verify whether the apparent trend toward a focus on *outcomes and outputs* mainly reflects sequencing, since *outcomes and outputs* were the last to achieve a stable form, only after *access participation and progression* and after *inputs.*

Several years after the study by Teodoro and Estrela (2010) new issues emerge. While the evidence suggests organisational stabilisation, it also prompts a fundamental question of whether *Education at a Glance* has remained unchanged since 2001.

Our proposal draws on this exploratory study and seeks to examine these tensions more closely. Through a broader longitudinal analysis and a more detailed methodology, we aim to determine whether the indicators, understood as materially determinative elements in models of comparability, have changed over time and, if so, in what ways.

[1] For further detail consider Table 3.6.

Table 1.1

Chapter Structure in Education at a Glance Editions(1992-2023) Grouped by Thematic Categories

	92	93	95	96	97	98	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Demographic, Economic and Social Context	X																													
Contexts of Education		X	X				X	X																						
Demographic, Social and Economic Context of Education				X	X	X																								
Costs, Resources and School Processes	X	X	X																											
Costs of Education and Human Financial Resources				X																										
School Environment and School/Classroom Processes				X																										
Financial and Human Resources Invested in Education					X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
Financial Resources Invested in Education																									X	X	X	X	X	X
The Learning Environment and the Organisation of Schools					X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
Teachers, the Learning Environment and the Organisation of Schools																									X	X	X	X	X	X
Access to Education, Participation and Progression				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Outcomes of Education	X																													
Results of Education		X	X																											
Graduate Output of Educational Institutions				X																										
Social and Labour Market Outcomes of Education					X																									
Student Achievement and Adult Literacy				X																										
Student Achievement					X		X																							
Student Achiev. and the Social and Labour Market Outcomes of Education						X																								
The Transition from School to Work						X																								
Labour Market Outcomes of Education				X																										
Graduate Output of Educational Institutions					X																									
Learning Outcomes of Education								X																						
Individual, Social and Labour Market Outcomes of Education							X	X																						
The Output of Educational Institutions and the Impact of Learning									X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

*According to *Education at a Glance 2023* Framework

1.1.1.2 Objective 2: Situating the Emergence of PISA in the EaG

The histories of PISA and *Education at a Glance* intersect, since both emerged as prominent components of the effort inaugurated under the INES Project. However, this relationship has so far been addressed only in a rather tentative manner, with limited attempts to examine in a substantive and longitudinal way how it has materialised over time, and with conflicting reports of when it has effectively started this turning point.

Lingard and Grek have called for an integrated reading of these instruments as constitutive elements of the INES Project, which they see as having played a normative and legitimising role in promoting a "global ideology of educational management and change", closely associated with the rise of new public management policies (Lingard & Grek, 2007, p. 11).

As Niemann et al. (2017, p. 2) recall, "PISA is not a stand-alone project". Instead, it is embedded in a broader set of OECD activities which, from the mid-1990s onwards, marked a turning point, as the organisation began to collect systematically statistical data on education, grounded in an understanding of education as a key driver of social and economic development.

This turn is closely linked to the difficulties reported in the early phases of the INES Project in reporting learning outcomes. As is apparent in the first edition of *Education at a Glance*, there were marked difficulties and gaps in the availability of data on private expenditure, curriculum and outcomes of schooling, in contrast with more general input indicators and student flows, areas in which countries had greater familiarity and experience (OECD, 1992, p. 15).

More concretely, one of the initial problems arose from the scarcity of learning outcomes data, since the only available figures were produced by the International Association for the Evaluation of Educational Achievement (IEA). The disseminated data were produced by IEA and only subsequently compiled and presented in *Education at a Glance*. This sequencing rendered the data largely obsolete, since any element of novelty had already disappeared by the time the indicators were released (Lundgren, 2011, p. 26).

This dissatisfaction led to action. Within the INES Project, which was organised into different networks, Network A, responsible for the development of learning outcomes indicators, elaborated a new strategy that was presented to INES members in 1995. This strategy called for the use of new data sources for the regular compilation of student assessment statistics, among other measures aimed at making this work operational (Morgan, 2011).

The strategy was subsequently approved in September 1997, when the Secretary General was authorised to establish a "decentralised Programme for Producing Student Achievement Indicators on a Regular Basis", with a mandate running until 31 December 2001. The resolution also authorised the creation of a Board of Participating Countries (BPC), with responsibility for overall supervision, as well as the establishment of dedicated fund accounts for the programme (OECD, 1997a).

There does not, however, appear to be consensus on where a turning point in the OECD's work should be located. Drawing on Bottani's testimony, Gorur notes that although pressure to focus on attainment data was present from the inception of the INES Project, this emphasis was amplified after 2000 and came to be described as an *obsession with performance* indicators (Gorur, 2015). According to Bottani, this change materialised in 2002 with an alteration of the organisation and framework of indicators, from which point *Education at a Glance* presented itself as an assessment of education systems (Bottani, 2006).

It is also important to unpack the subtleties involved in this assumption, as it is framed in *Education at a Glance* 2001, where PISA is presented as a new commitment by national authorities to monitor system outcomes, in particular performance (OECD, 2001, p. 8). This interpretation is reinforced in the 2002 edition, the first to include PISA data and to introduce the new framework, which explicitly states that PISA "is part of a shift in focus from education inputs and institutions to outcomes" (OECD, 2002, p. 7).

In fact, despite the prominence of these claims in policy and scholarly discourse, this supposed shift has not been subjected to systematic methodological scrutiny. Beyond general assertions, there are no in-depth studies that document its evolution over time. Nor are there data that specify which issues were displaced, or whether other organisational reorientations accompanied this purported move towards outcomes. It therefore remains unclear whether any such change was gradual or episodic across the subsequent two decades, and how it interacted with other strands of OECD work, namely EaG.

In addition to the reasons already noted that justify the analytical interest of studying the indicators in *Education at a Glance*, this publication uniquely enables a longitudinal analysis that spans both the period before and the period after the launch of PISA. It therefore provides a relevant empirical basis to systematically examine these claims.

In this sense, the present study performs a relevant function. Analysing the PISA emergence within the broader INES Project necessarily entails a cross reading with *Education at a Glance*,

which offers the most suitable longitudinal instrument for mapping whether, and in what ways, this shift is reflected in the report's evolution.

There are, indeed, well-founded reasons to question whether, if it occurred at all, this shift was actually triggered by the launch of PISA or whether it can already be observed from the inception of the INES Project. Clarifying this point is central to a reconstruction of the periodisation of INES work on the comparative analysis of education systems. It also allows for a reconsideration of the respective roles of *Education at a Glance* and PISA in the development of the wider complex of international educational governance. Finally, it contributes to a clearer understanding of the genealogy of these shifts by asking whether this reorientation should be seen as beginning with the publication of PISA or as taking shape prior to it.

1.1.1.3 Objective 3: Representations of Educational Quality

Engel and Rutkowski (2014) suggest that EaG and PISA have become the principal lenses through which countries think about and seek to measure the state of their education systems. They consider that, despite frequent references to *educational quality*, the OECD does not provide a clear definition of the term, which is used without explicit delimitation. In discussing *educational quality*, they emphasise its considerable semantic openness, with meanings that depend on the analyst's perspective and shift over time.

As Underhalter's (2019) historical analysis of the debates and tensions surrounding Sustainable Development Goal 4 within the 2030 Agenda for Sustainable Development illustrates, notions of *educational quality* can be markedly divergent, reflecting different normative and conceptual understandings of education systems.

The most precise articulation of the concept advanced by the OECD appears in *School Factors Related to Quality and Equity: Results from PISA 2000* (OECD, 2005, p. 15), which sets out six understandings of *educational quality*, namely the productivity view, the instrumental effectiveness view, the adaptation perspective, the equity perspective, the efficiency perspective, and the disjointed view. Rather than a single definition, these categories propose different readings of *educational quality* and offer distinct prisms through which results may be analysed, which reinforces the elusive nature of the concept itself.

On this basis, Engel and Rutkowski read EaG as emblematic of a *productivity view*, foregrounding not only what occurs within education systems but also their entanglements with economic domains. For our purposes, the authors' point is central. The absence of delimitation and clarity helps justify the use of EaG and PISA as "the avenues by which to understand how the organization defines 'quality' education" (2014, p. 774).

This objective follows from the previous two and is interpretive in nature. It offers a critical synthesis of what the results projected by *Education at a Glance* reveal about how the state of education systems is analysed, and it traces how these representations of systems' *quality* have evolved over time.

1.1.2 *Contributions and Applications*

To our knowledge, this thesis offers the most comprehensive and granular longitudinal thematic analysis of EaG education indicators to date and constitutes the most extensive empirical examination of this corpus. It opens new paths for the study of education agendas and contributes to global education studies through an empirically grounded analysis of real-world data concerning the thematic occurrence of all indicators across the initial thirty editions of *Education at a Glance* (n = 913). Furthermore, it offers a comprehensive, evidence-based account of the evolution of OECD priorities within EaG over time, as well as the representations of educational system assessments that arise from the expert consensus attributed to EaG by the OECD.

Given its nature, this thesis lends itself to application both in the evaluation of public policies, specifically through the study of the OECD experts' consensus on how to analyse the current state of education systems, as well as in other domains. Its longitudinal scope, covering more than thirty years, makes it a suitable baseline for work in the history of education, particularly on the OECD, whether with an institutional focus or with an emphasis on the history of ideas. In addition, because it centres on a leading international organisation and explicitly addresses context, it can inform studies of modes of governance and broader reflections on normative governance, as well as analyses of governance by comparison using quantitative instruments.

Additionally, beyond advancing understanding of the OECD's evolving stance, the study provides a foundation for future work in four principal directions. First, assessing how the OECD's priorities in EaG align with or diverge from other education documents produced by the Organisation, opening space for a more nuanced and less broad-brush reading of its work.

Second, enabling comparability with the positions of other international organisations, allowing a contextual reading of where EaG's agenda converges with or diverges from other bodies' publications. Third, analysing national-level correlations or impacts associated with OECD-established priorities, making it possible to examine links between the system model projected by EaG and the adoption of public policies or the incidence of public discourse at national level. Fourth, tracing the longitudinal evolution of the Organisation's positioning on specific educational themes, enabling a clearer view of the evolving nature of key concepts.

1.1.3 *Model for a Research Plan*

The rationale behind this thesis is organized in the research model presented in Figure 1.1, which draws on the literature to shape the argument and connect it to the research design and methods.

The thesis proceeds from the premise that education policy is today shaped by transnational dynamics in which International Organisations (IOs) play a central role. Within this field, the focus is on the OECD, whose recognised relevance stems above all from the development of quantitative instruments for cross-system comparability, a trajectory that supports forms of normative governance. In this connection, we follow Liese et al.'s (2021) argument in noting that the legitimacy of International Organisations rests primarily on their capacity to generate expertise on issues regarded as relevant by policymakers. *Education at a Glance* is treated here as a privileged object of analysis, since the OECD publicly presents it as a consensual expert reference for interpreting the current state of education systems.

On this basis, the study examines the thematic focus of indicators, grounded in two theoretical premises. First, thematic salience is read as an expression of policy prioritisation. Second, policy problems are understood as discursively constructed social phenomena and are therefore mutable. These premises motivate a longitudinal analysis of the thematic salience of EaG indicators and their associated metadata across the first thirty editions, using real-world data.

Methodologically, the study draws on *agenda* studies research and on scholarship on representation and discourse. It implements a thematic coding of indicators and metadata, followed by measurement designed to identify evolution, trends and comparability across topics and editions. This design provides a coherent empirical basis for tracing changes in attention and for interpreting how EaG represents the analysis of the state of education systems over time.

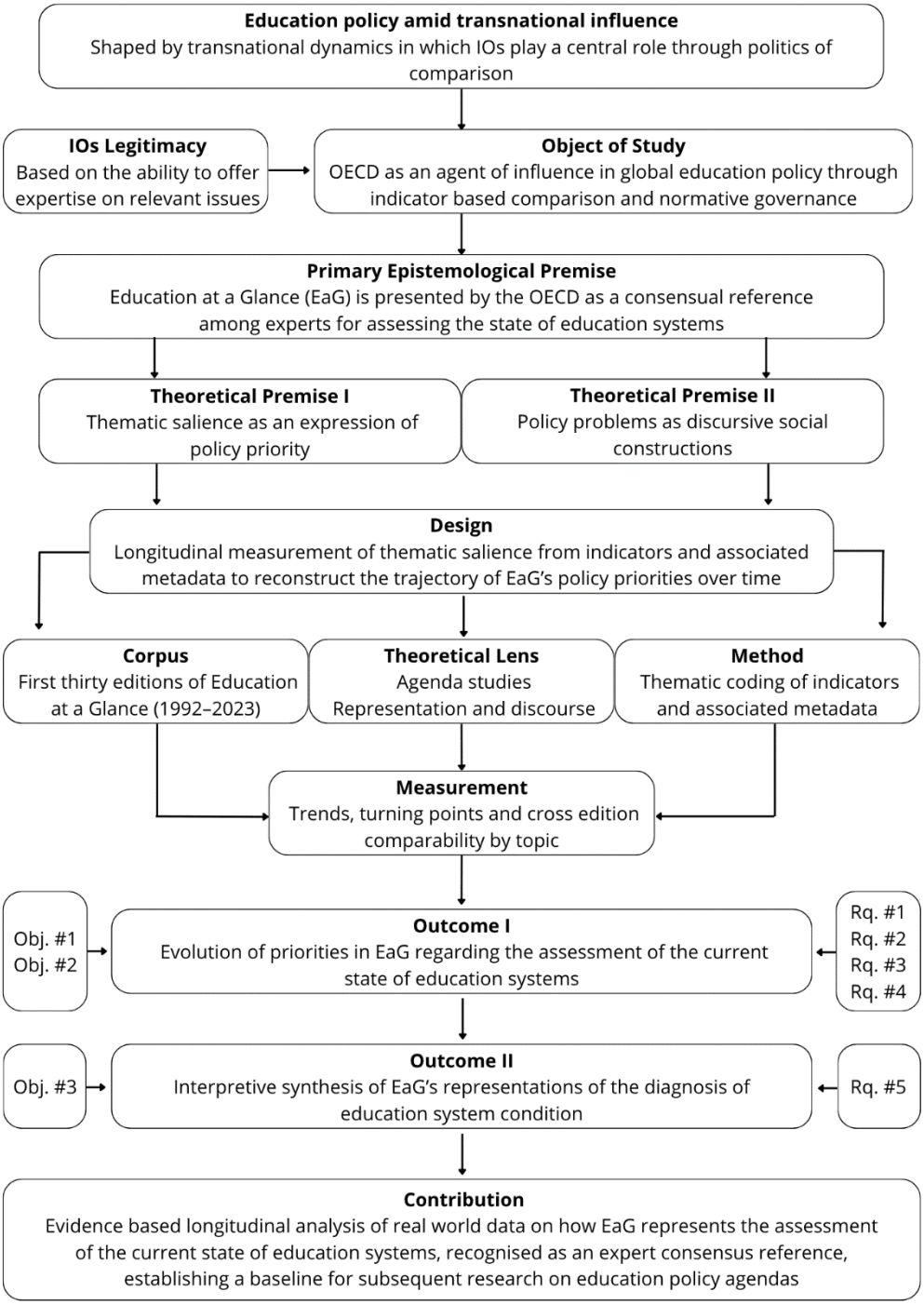


Figure 1.1

Research Model

As set out in the model, the thesis advances two interrelated outcomes. The first traces how the OECD's thematic prioritisation evolved across the thirty editions of *Education at a Glance* and draws on the first two objectives of the thesis, aligning with research questions 1, 2, 3 and 4. The second is explicitly interpretive and builds on the empirical baseline of Outcome I to offer an analysis of how *Education at a Glance* represents the diagnosis of education systems.

In effect, it serves as a proxy for how experts have understood the core elements in assessing and diagnosing the state of education systems across the period considered. It connects to objective 3 and to research question 5.

In summary, these findings deliver an evidence-based analysis of empirical data concerning the OECD's activities in education, namely on EaG. They provide a more detailed and nuanced perspective on how priorities in understanding the status of education systems have evolved and the representations they convey. The established baseline aims to facilitate future research on educational policy agendas, enabling replication at the national level, comparative analysis with other international organizations, and more detailed investigations into the topics analyzed and coded.

1.1.4 *Structure*

This thesis is organised into six chapters. This initial chapter introduces the study by providing its context, objectives, and the key theoretical concepts that ground and unify it. The second chapter is anchored in an exercise of contextualisation of the evolution of the OECD's institutional architecture in the educational field, from its early days to the process that led to the formation of the INES Project. It traces a trajectory from the creation of the Organisation for European Economic Co-operation (OEEC), with its initial focus on manpower policies and a broadly Keynesian orientation, through the subsequent evolution of the OECD. Throughout, the chapter seeks to maintain the legibility of developments in the field by attending to institutional, geopolitical, and historical contexts, as well as to the evolution of major intellectual currents that, in part, framed the organisation's trajectory and contributed to the gradual consolidation of the foundations for a form of governance by comparability, supported by the progressive development of quantitative instruments of comparison. The chapter then revisits accounts and contributions to the construction of indicators, with particular attention to the discussions surrounding the creation of the INES Project and its indicators programme. It closes with a reflection on what changed with the creation of the INES Project, and on how this

shift can be situated within a broader reading of the OECD's progressive engagement with educational governance, in light of the reconfiguration of governance at national and international levels and of the concept of globalisation.

The third chapter turns to the methodological dimensions of the study. It sets out the research questions, specifies the corpus, and details the coding framework, before concluding with a reflection on the potential limitations of the choices undertaken.

The fourth chapter presents preliminary results from the coding process. Given the nature of the coding exercise, it does not present every possible result, but rather those that render the thesis analytically legible, recognising that the dataset and the coding framework retain clear potential for further development in subsequent work. The results are accompanied by tables and figures designed to make the volume of data produced more readable. The chapter is structured around three fundamental dimensions. The first addresses the thematic distribution of indicators, offering a more global reading of their focus in light of the coding framework developed for this study. The second and third dimensions examine the metadata that compose the indicators: one focuses on policy issues, and the other on the scope of analysis undertaken.

The fifth chapter presents the discussion, structured around three subchapters, each corresponding to one of the thesis objectives. The first reflects on the longitudinal evolution of indicators in the first thirty editions of *Education at a Glance,* bringing into dialogue the organisation of the publication with analytical frameworks developed by the OECD, and proposing a tentative periodisation of the series. It also addresses the publication's oscillating and intermittent relationship with *outputs and outcomes* over time. The second subchapter examines how the publication evolved with the emergence of PISA and seeks to render legible a process which, as will be shown, points to a gradualism that precedes the publication of the first PISA report itself. Finally, the third subchapter focuses on representations of *educational quality*. It offers a more reflexive interpretation of the orientations and concepts of *quality* projected by the publication, with attention to persistent patterns over time as well as to under-represented areas, while relating these dimensions to the organisation's own public reflections on the direction the publication should follow and the trajectory it has in fact taken.

Finally, the sixth and concluding chapter brings these strands together in a concise reappraisal of the thesis's central arguments and findings. It revisits the research questions in light of the evidence presented, clarifies the study's main contributions, and reflects on the implications of the analysis for how *Education at a Glance* is read as a policy-relevant knowledge device.

1.2 Context and Relevance

1.2.1 *The OECD and the Politics of Soft Governance in Education*

Founded in 1961 with twenty founding members, the OECD is widely recognised as an organisation of major relevance and influence in the shaping of educational public policy and as a central actor within systems of global governance, capable of steering policy discourses and policy agendas (Centeno, 2017; Grek & Ydesen, 2021; Niemann & Martens, 2021; Sellar & Lingard, 2013; Sorensen et al., 2021). Its influence has been identified not only at national and local institutional levels, but also in its impact on teachers, parents, students, and the broader public (Elfert & Ydesen, 2023, p. 7).

With approximately 3,500[2] employees, the OECD has positioned itself as a global actor of considerable significance. Its relevance stems from the development of technical expertise and research capacity, and its influence is materialised through the production of indicators and comparative studies across educational systems and contexts (Elfert & Ydesen, 2023, p. 5), partly deriving its authority from the public perception of the quality of the material it produces (Henry et al., 2001, p. 17).

The OECD's consolidation as a reference actor in the educational field has, as Vera Centeno observes, attracted sustained scholarly attention in a context marked by the expansion of its influence and scope of action in educational public policy (Centeno, 2021). While education has always been part of the OECD's activities, its salience and its capacity to assert itself as an autonomous policy domain have shifted over time (Schuller & Vincent-Lancrin, 2009). In the absence of a clear formal mandate in education (Papadopoulos, 1994, p. 11), the development of this domain within the organization was far from self-evident. It advanced through a contingent interplay of external and internal factors, which together helped to position education as a prominent area of OECD activity and to extend its reach across national policy arenas.

According to Woodward, the OECD has operated as a highly influential entity within the international arena, embodying a longstanding consensus among nations committed to market-oriented and democratic principles. Its development has facilitated the cultivation of shared perspectives among countries and has contributed to the formulation of national public policies. In this context, the expert communities it has nurtured, along with the knowledge it produces

[2] Data obtained from the OECD's official webpage on organisational structure (https://www.oecd.org/en/about/organisational-structure.html), accessed on 26th October 2025.

in the form of indicators, statistics, and publications, have played an especially relevant role (Woodward, 2009, pp. 5-7).

OECD is considered to exercise a "low-key", "subtly" normative influence, understood as a means of securing a discreet positioning through the use of comparative cases and the development of technical and bureaucratic instruments (Henry et al., 2001, p. 14)[3].

This mode of influence has also been described by different authors, with varying nuances and emphases. Whereas several scholars describe the OECD's mode of operation in terms of soft power or soft governance (e.g. Grek & Ozga, 2009; Schmelzer, 2016; Sellar & Lingard, 2013; Zapp, 2021), others also characterise the organisation as a knowledge broker (e.g. Niemann & Martens, 2018; Seitzer et al., 2024).

A common characteristic among these designations is the non-coercive nature of the OECD's influence, which is rooted in a form of technical rationalism and operationalized through information and knowledge, emphasizing the extent to which its authority is derived from expertise.

Mahon and McBride (2009, p. 88) contend that the OECD has played an important role in developing what they term "inquisitive" and "meditative" modes of governance. The "inquisitive" mode centres on monitoring states and establishing models of cross-national comparability, whereas the "meditative" mode is oriented towards the dissemination of knowledge and the creation of expert networks and communities in which policy issues are collectively discussed.

Woodward (2009) proposes a framework for understanding how the OECD exerts influence in global governance. According to the author, the organisation operates across four fundamental dimensions: cognitive governance, normative governance, the legal dimension, and palliative governance. The first, cognitive governance, refers to the fact that the OECD is anchored in a shared perception of capitalist and democratic values. The second, normative governance, which Woodward considers the most relevant, concerns the production of knowledge and the formulation of shared expectations regarding the value frameworks that shape systems and public policies. The third, the legal dimension, refers to the production of soft law grounded in monitoring processes. The fourth, palliative governance, describes the OECD's role as an

[3] See also Nye, 1990.

antechamber for negotiations or discussions that subsequently take place in other international forums.

These diverse reflections on modes of governance, as well as the assumption of a normative influence exerted by the OECD on education, rest on the assertion of discursive power. As Niemann and Martens (2018) articulate, this discursive power extends beyond its strict content and regards the ability to delineate discursive boundaries between what is deemed acceptable and unacceptable. However, this discursive power to legitimise or delegitimise educational practices and systems rests not only on the substantive content of the OECD's discourse, but also on a reflection on its pragmatic dimension. This raises a fundamental question: is the issue primarily what is said, or how it is said?

The literature assigns different degrees of importance to both style and thematic focus. While some authors argue that the OECD consolidates its influence by promoting a discourse presented as "rational" and "impartial," grounded in "hard facts," which allows the authorial voice behind policy prescriptions to recede (Niemann & Martens, 2018, p. 278), others suggest that the authority of international organisations depends above all on their perceived capacity to deliver usable solutions to global problems, rather than on any presumption of neutrality or impartiality (Liese et al., 2021). Taken together, these positions indicate that presumed neutrality may contribute to legitimacy, but that the decisive element is the perceived impact, understood as the ability to offer expertise on areas and topics deemed relevant.

1.2.2 *The Landscape of Education International Organisations*

Education has increasingly taken on an international dimension, as evidenced by the growing number of initiatives in this field developed by International Organisations (Niemann & Martens, 2021, p. 164). Although, as the authors note, the vast majority of the literature focuses on a small number of organisations, there is in fact a broader set of international organisations (IO) active in education that together constitute the ecosystem within which these actors operate.

According to Niemann and Martens (2021) whose work provides a systematic overview of the landscape of education international organizations, an *education IO* comprises three complementary dimensions. First, it must include an explicit programmatic reference to education, even if not necessarily in its preamble or founding treaty. Second, it must possess an internal organisational component specifically dedicated to education. Third, it must address

matters of public policy. Based on these three criteria, the authors identify 30 education IOs, which they classify along two axes: geographical scope and thematic scope. In terms of geographical scope, most of these organisations are regional, 20, with 4 described as transregional and 6 as global. In terms of thematic scope, 11 are multi thematic, 7 have an explicit educational focus, 9 are primarily economic in focus, and 3 are specialised (Niemann & Martens, 2021).

In temporal terms, Niemann and Martens (2021) identify three patterns. First, they note a steady, gradual expansion in the number of international organisations active in education from the end of the Second World War until the mid-1990s. Second, they observe a relative stabilisation of the landscape, with only two such organisations created since 2005. The authors interpret this as evidence that international organisations were the cause, rather than the consequence, of the internationalisation of education, given that education only became a highly internationalised policy field from the mid-1990s onwards. Finally, they argue that economically focused IOs, among which they include the OECD, were latecomers in the education field.

As the authors note, global IOs in education, including the OECD, compete with one another in this field. This competition operates not only at the global level but also in regional and national arenas (Niemann & Martens, 2021, p. 173). As a consequence of this competition, several developments can be observed. First, education IOs have progressively broadened their scope of action and areas of focus over time, revealing a dynamic pattern of strategic adaptation and repositioning. Second, there is evidence of mutual imitation among IOs, which the authors describe as leading to a condition of "isomorphic polymorphism": while the thematic agendas of these organisations have increasingly converged, their internal diversity has, paradoxically, intensified (Niemann & Martens, 2021, pp. 182-183).

Jakobi, however, adds an important qualification, noting that the emergence of a global space for educational policy and the convergence among international organisations do not erase their differences in agendas and priorities (2009, p. 475). Similarly, Ydesen recognises that although soft governance may be a common denominator among IOs, they rely on markedly different instruments (2019a, p. 3).

This recognition makes it necessary to look more closely at how specific organisations position themselves within that landscape. Distinguished authors argue that the OECD, alongside UNESCO and the World Bank, has come to occupy a leading role in shaping global education

(Niemann & Martens, 2021; Elfert & Ydesen, 2023). Emerging from the post-Second World War global order, these three organisations, while converging in their treatment of education as a fundamental human right (Niemann, 2022, p. 153), display distinct ideological orientations and operate through different modes of governance (Elfert & Ydesen, 2023, p. 23).

This distinction between the organisations, as sustained in the literature, points to markedly different ideological profiles, modes of influence, and membership constellations. Henry et al. (2001, p. 17) argue that the OECD's ideological positioning lies midway between that of UNESCO and that of the World Bank. In a similar framing, UNESCO is characterised by Elfert and Ydesen as "idealistic", the OECD as a "master of persuasion", and the World Bank as a "master of coercion" (Elfert & Ydesen, 2023, p. 25).

According to the authors, these organisations can be distinguished along two main dimensions. First, at the level of ideology, UNESCO is associated with an "idealistic paradigm", while the OECD and the World Bank are aligned with an "economic development paradigm" (Elfert & Ydesen, 2023, pp. 26–27). Second, at the level of membership and governance, UNESCO is described as the most democratic of the three, whereas the OECD and the World Bank function as a far more restricted club of wealthy countries (Elfert & Ydesen, 2023, p. 197).

The study of these organisations becomes even more relevant when viewed through the lens of globalisation. As Knodel et al. (2014) argue, education has served as a laboratory for observing the transformation of the nation-state, with international actors as key drivers of change. Policy formation processes have become increasingly interdependent, competitive, and diffuse. In effect, the emergence of a global education policy field is best read as part of a broader reconfiguration of the role of the nation-state within expanding global connections and interdependencies. Whereas the construction of policy problems and solutions was previously centred at the state level, this work is now increasingly undertaken by international organisations (Rizvi & Lingard, 2010, pp. 2-3, 56).

1.2.3 *Education at a Glance as a Milestone in Global Educational Indicators*

Elfert and Ydesen argue that the reason why OECD, UNESCO and the World Bank came to occupy leading positions in shaping education policy in the post–Second World War period is their strategic investment in the production of indicators and statistics (Elfert & Ydesen, 2023, p. 112). In parallel, Zapp (2021) observes that, over the past forty years, international organisations have intensified knowledge production and expanded their publishing activity

across multiple domains, reading this as, among other things, an effort to assert position and consolidate legitimacy.

Knowledge and expertise are understood as instruments of power in policymaking. This view is endorsed by Barnett and Finnemore (2004, pp. 20–29), who argue that knowledge lies at "the heart of bureaucratic power" and legitimises the expert authority exercised by international organisations (IOs).

As Littoz-Monnet (2017) argues, the strategic mobilisation of expert knowledge by *international bureaucracies* serves multiple functions in the policymaking process: informing and guiding policy, legitimising action, depoliticising decisions, substantiating policy positions, and minimising institutional insecurity.

In the globalised context of education policy, the mobilisation of knowledge by international organisations takes on an additional dimension: it becomes a driver of the evolving governance of education. It signals the growing interdependence between national and international actors and contributes to what Rizvi and Lingard (2010, p. 117) describe as a shift "from government to governance".

Against this backdrop, the revival of interest in Comparative Education since the late twentieth century assumes a central role as a mode of governance (Nóvoa & Yariv-Mashal, 2003). Within this governance-by-comparison landscape, the OECD stands out as a central actor, described as "a behemoth of transnational influence on education policy making" (Seitzer, 2021, p. 1) and associated with an "OECD-*fication* of global education policy" (Niemann & Martens, 2018, p. 3).

In the OECD, this change, labelled the *comparative turn* by Martens (2007), is credited with moving education from a marginal position within the organisation to one of prominence, with the collection of international indicators becoming the foundation of the OECD's work in education. Bürgi and Tröhler (2018, p. 75) interpret the launch of *Education at a Glance* as both a symbol and an indication of the comparative turn suggested by Martens. Other authors concur, characterising the development of *Education at a Glance* as a "milestone" in the evolution of educational indicators and statistics (Elfert & Ydesen, 2023, p. 128). As Elfert and Ydesen observe, its significance lies not in serving as a historical or retrospective analytical tool but in establishing a monitoring instrument. This shift toward systematic and recurrent monitoring would later pave the way for the development of the Programme for International Student Assessment, PISA (Elfert and Ydesen, 2023, pp. 128 to 129).

Gorur (2015, pp. 578–579) views the publication as highly influential among policymakers and broader in scope than PISA. The author describes it as a "remarkable document" that enables comparability across education systems, noting the large volume of information it provides. For their part, Engel and Rutkowski (2014, p. 773) regard the publication as "a leading example of the OECD's work in educational indicator collection and reporting."

Currently, *Education at a Glance* is the OECD's longest-running regular publication in education. First released in 1992 and published continuously every year since 2000, it has been described by the Organisation as "the authoritative source for information on the state of education around the world" (OECD, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023)[4]. As presented by the OECD, the publication "reflects a consensus among professionals on how to measure the current state of education internationally" (OECD, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023)[5]. However, despite the relevance attributed to *Education at a Glance* (EaG), it remains a central but neglected piece on global education studies. The publication has received scarce in-depth study, with the vast majority of existing contributions failing to go much beyond its historical roots.

1.2.4 *What are Education Indicators*

Although the OECD's modern development of education indicators can be traced back to the 1960s (Gouëdard, 2021, p. 7), partly as an extension of work produced by social scientists in other fields (Wyatt, 1994, p. 100), it is in the late 1980s and early 1990s that surges a renewed interest in indicators, as part of a broader global trend that was not exclusive to the education sector (Erkkilä & Piironen, 2014, p. 344) nor confined to the OECD itself.

As Wyatt (1994, p. 99) argues, the concept of education indicators is not new, with roots reaching back to the nineteenth century. Yet its late-twentieth-century revival, particularly within the OECD, is best read in relation to the strengthening of evidence-based policy mechanisms and to the growing emphasis on state accountability for the performance of education systems (Bottani & Tuijnman, 1994, pp. 24–25; Wyatt, 1994, p. 103).

[4] The expression undergoes minimal variations in detail over the years, keeping the central claim intact (*cf.* OECD, 2014, 2015).

[5] The expression undergoes minimal variations in detail over the years, keeping the central claim intact.

As Lehtonen (2015, pp. 77–78) notes, indicators constitute a remarkably heterogeneous class of policy instruments, and multiple definitions coexist in the literature (Gallopín, 1996, p. 102; Wyatt, 1994, p. 104). Indicators may be mobilised to quantify and assess different expressions of social life, encompassing both relatively concrete dimensions such as educational attainment levels or suicide rates, and more subjective dimensions such as perceptions and well-being (see Branch & Origgi, 2022; Kroll & Delhey, 2013).

Indicators are tools "to measure or evaluate a particular characteristic of interest" (Gudmundsson et al., 2016, p. 138). In this dissertation, we adopt the definition of indicators as "quantitative measures on the state of education systems" (Gouëdard, 2021, p. 7).

Indicators are often understood as instruments that rationalise debate and introduce a veneer of objectivity into public and political discussion (Lehtonen, 2015, p. 76). However, indicators "are never pure or value-neutral representations", being inherently subjective (Gudmundsson et al., 2016, p. 139). As Gallopín (1996, p. 102) stresses, indicators are also semiological devices, that is, representations of reality. It is precisely this representational quality that renders them intelligible within a framework of the social construction of policy problems, an understanding that lies at the core of this thesis's conceptual framework and is set out more fully in the pages that follow.

1.2.5 *Questioning Readings of OECD Narratives on Education*

Recent scholarship has shed light on the complexity and diversity of the OECD's positions in the field of education, highlighting important richness. These developments partially support the earlier argument by Henry et al. that, although the OECD has since its founding been credited as a broker and disseminator of an eminently neoliberal reading, its work in education has adopted a more "ambiguous" stance (Henry et al., 2001, p. 4).

Studies by various scholars have progressively brought this understanding to the fore, showing both the dynamic nature of the OECD's positions and the diversity of its work in the field of education. Several authors note that this diversity is visible at the level of concept formation. In this regard, Senior and Sahlberg (2025) show that the OECD's understanding of equity has evolved since 2000 and has also gained increasing prominence. Others point to a discursive evolution in the OECD's work on specific levels of education, such as Hunter (2013) in his study of the organisation's changing discourse on higher education. Istance (2011) likewise maps methods and themes addressed by the OECD across the education field.

With a different approach, Seitzer (2021) analysed 941 OECD documents produced between 1955 and 2019 using topic modelling, with half of the publications analysed published after 2001. The analysis indicated changes in the frequency of topic mentions over time and confirmed that the OECD addresses a relevant multiplicity of topics. A further study reinforces this view by presenting the OECD's education work as having developed "not one but multiple views on education". This plurality was considered to stem in part from the organisation's internal multiplicity and from the different ways in which its structures handle the field, which supports the perception that "the OECD is not a homogenous actor". As the authors emphasise, "it appears that even though the OECD is mostly known for its influence through PISA, its main focus is not PISA at all" (Seitzer et al., 2021, pp. 206 to 208).

Regarding the evolution of *Education at a Glance*, a number of studies help to trace the publication's development. Noteworthy examples include Sedel (2004), Mendes et al. (2009), Teodoro and Estrela (2010), and Lemos (2014), which, although not exhaustive in this regard, help to map the incidence of chapters and to reflect on its indicators.

To conclude, the literature establishes that the OECD's engagement with education is diverse, evolving and more than a single narrative, yet important questions remain about how this diversity is structured and how it changes over time. The next subchapter sets out where the literature still falls short and explains how the study advances the field.

1.2.6 *Where the Literature Falls Short and How This Study Advances the Field*

The present work benefits from a consolidated body of literature on the OECD as an actor of global influence in education policy, and from a small but growing body of studies on the discursive subtleties and on the evolution of the OECD's discourse in the educational field. Building on earlier contributions, this thesis advances the field through a more nuanced characterisation of the OECD as a non-monolithic organisation and through the rejection of potentially caricatured portrayals of the organisation. In our view, the study of public policy in a global context requires the close scrutiny of international organisations, and a critical reading of their work calls for increasing detail and a progressively evidence-based approach.

Despite its significance and diversity, the literature displays limitations that merit attention. The methods surveyed range from the ambition and breadth of topic modelling approaches, as in Seitzer (2021) and Seitzer et al. (2021), to more contained designs as in Teodoro and Estrela

(2010), Istance (2011) or Hunter (2013). Our work endeavors to establish a balance between these approaches, prioritizing detail over breadth.

Why detail over breadth? While clearly valuable and well-suited to handling large volumes of data, existing applications of topic modelling in this area do not address our objectives. If the size of the corpus expands its reach beyond what manual coding can achieve, it tends to place heterogeneous publications of differing relevance on an equal footing, which constrains comparability. In addition, an emphasis on textual mention frequencies does not sufficiently engage with the organisation's quantitative instrumentation and with governance by comparison, at the heart of our study. Our study focuses on the substantive elements of the indicators and on the metadata associated with them, which makes topic modelling, even if a sophisticated approach, ill-suited to our specific purposes.

Our model proceeds from Jakobi's argument that the primary influence of international organisations operates at the level of agenda setting, shaping the themes and framings of public policy (Jakobi, 2009, p. 474). It also rests on the premise, aligned with Woodward's understanding of functional and thematic evolution (2001) and with Senior and Sahlberg (2025), that the OECD's discourse and its treatment of policy issues are evolutionary and dynamic.

Accordingly, we select *Education at a Glance* as the empirical anchor, since it enables a longitudinal analysis of a monitoring instrument that the OECD presents as a consensual reference among specialists for assessing the current state of education systems and that spans more than three decades of the Organisation's work in education. While this entails a reduction in breadth, concentrating on a single wide-ranging series strengthens the credibility of year-on-year comparisons and mitigates the noise introduced by heterogeneous document types. The analysis of the first thirty editions, spanning 1992 to 2023, provides both breadth and fine-grained detail, enabling a rich longitudinal analysis.

We additionally propose a characterisation of how consensus around interpretations of educational systems' status articulated in the document has evolved over time. This exercise adds to a small and heterogeneous set of publications on representations in education (*e.g.* Berkovich and Benoliel, 2018; Martikainen, 2020) and, most notably, to a small set of publications focused on EaG, particularly on its historical roots (e.g. Bottani, 2006; Gorur, 2015).

1.3 Conceptual and Theoretical Grounding

1.3.1 *The Politics of Attention*

The present analysis[6] is grounded in the development of salience studies, particularly those focusing on agendas and agenda-setting. Both lines of research are concerned with the identification of prioritisation, based on the implicit assumption that the selection and hierarchical ordering of priorities is inevitable. It thus rests on two core premises: first, the existence of a potentially infinite universe of topics and the consequent necessity of selection; second, the impossibility of accessing all available knowledge, which implies that action is largely dependent on second-hand realities and a multitude of externalities (Martins, 2025).

Although agenda-setting and agenda studies stem from distinct scholarly traditions that are not always in dialogue, often marked by tensions and competing claims to theoretical primacy (see Martins, 2025), this study focuses on policymaking approaches, aligning with the public policy strand of research.

The work of Cobb and Elder (1971) is widely regarded as foundational in the field of public policy studies (Zahariadis, 2016). As the authors noted at the time, their focus was precisely on how political issues are created, where they originate, and the factors that determine why some receive attention while others do not (Cobb & Elder, 1971). While at the time the authors referred to the process as "agenda-building," the term "agenda-setting" gradually became more widely used to describe the same phenomenon (Zahariadis, 2016, p. 6).

Derived from an interpretation grounded in an economy of attention or, to borrow the title of Jones and Baumgartner's (2005) seminal work, *the politics of attention*, salience studies are based on the premise that the social construction of problems and attributed relevance does not necessarily correspond to their objective magnitude. In other words, thematic prominence is neither a mirror of a problem's actual scale, nor is political prioritisation strictly governed by pure rationality (Martins, 2025).

As Epp highlights, the amount of attention given to problems is the decisive factor in shaping policy action (2018). In this sense, the study of agenda-setting in public policy can be understood as the study of change, problem construction, policy alternatives, and decision-

[6] The subchapter that follows builds on theoretical insights developed in previous work by the author (Martins, 2025), produced during doctoral research and here adapted to the scope of the present study. While the content has been restructured, translated, and refined to fit this thesis, several sections reproduce or closely reflect formulations from the aforementioned publication.

making processes (see Baumgartner et al, 2006; Baumgartner & Jones, 1991; Kingdon, 1984/2013).

Characteristically, given the high level of specialisation within the field of Public Policy, distinct models of agenda-setting analysis can be identified. These include problem-centred agenda-setting, actor-centred agenda-setting, exogenous models, and non-decision-making models (Robinson, 2000). Likewise, along another axis, studies can be distinguished according to their focus on either the formal and procedural dimensions of agenda-setting or its informal and substantive aspects (e.g. Pollack, 1997; Bocquillon & Dobbels, 2014). Put differently, research may be oriented toward the analysis of power relations between actors and institutional architectures, or toward more diffuse forms of influence that operate beyond formal structures, including unwritten or unofficial dynamics.

1.3.2 *Salience Studies*

Although the distinction between *agenda* studies and *agenda-setting* studies is not always clearly drawn in the broader literature (Martins & Miranda, forthcoming), it is important to delineate their differences explicitly. Unlike *agenda* studies, which focus on the identification of a list of priorities (Zahariadis, 2016), *agenda-setting* studies aim to establish a causal relationship. In other words, they seek to verify and explain the transfer of salience from one agenda to another.

According to expanded *agenda-setting* models proposed by Manheim and Albritton (1983), Rogers and Dearing (1988), and Soroka (2002), three core agent-centred agendas can be identified: the public agenda, the policy agenda, and the media agenda. Salience transfer may occur not only between these agendas but also, as Soroka highlights, across different sub-agendas within each of them. This dynamic is observable namely in communication studies focused on intermedia *agenda-setting* and within the broader field of public policy.

As such, the empirical verification of *agenda-setting* implies the verification of a causal relationship, rather than merely a coincidence of agendas. Following Castells's definition of *power* and *influence*, it presupposes the observation of a power relation, that is, an asymmetrical dynamic in between actors (2009, p. 11). *Salience* is thus a relational and relative notion (Rogers & Dearing, 1996). This understanding entails an implicit assumption of *conflictuality*, as it becomes evident that not all power relations carry the same weight, nor do all issues achieve equal levels of visibility.

Schattschneider, regarded as an influential precursor to the development of *agenda-setting* theory within the field of public policy (Rogers & Dearing, 1996), argued *in The Semi-Sovereign People* (1960) that *salience* plays a crucial role in defining or expanding arenas of *conflict*, making its very determination an exercise of power:

> As a matter of fact, the definition of the alternatives is the supreme instrument of power; the antagonists can rarely agree on what the issues are because power is involved in the definition. He who determines what politics is about runs the country, because the definition of the alternatives is the choice of conflicts, and the choice of conflicts allocates power. (Schattschneider, 1960, p. 68)

Salience thus delineates the perimeter where the narrative conflict unfolds. As an etiology of prominence, *agenda-setting* essentially constitutes the study of *power* relations (Martins, 2025).

Despite their evident differences, *agenda* studies and *agenda-setting* share a common conceptual foundation, grounded in the assumption of the relevance of studying political priorities. While *agenda-setting* focuses on the study of the causes of *salience*, *agenda* studies are limited to identifying the priorities within a given agenda. In this sense, *agenda* research can be seen as a prior layer that frames the broader scope of *agenda-setting*, as it does not seek to explain the dynamics underlying the emergence of specific thematic *salience*. Rather, it confines itself to identifying what is rendered visible or invisible, adopting a perspective oriented towards the substantive object of study rather than the dynamics that shape it.

As previously noted, this thesis prioritises the identification and characterisation of political priorities, the *agenda*, rather than causal accounts of agenda formation or of the influence exerted between agendas and sub-agendas, as typically examined in *agenda-setting* research.

1.3.3 *How Conditions Become Problems*

Our work is particularly influenced by Kingdon's (1984/2013) contribution, especially his reflection on the role of indicators in the constitution and social construction of problems. Kingdon's terminology broadly aligns with the conceptual distinctions advanced above, though it introduces certain nuances that reflect the polysemy found across different authors. In Kingdon's formulation, the term *agenda* refers to the list of issues to which political actors pay

attention at a given time, with the *agenda-setting* process understood as the narrowing down of priorities to be addressed (1984/2013, p. 3). The study of priority selection, in this case, concerns the transfer of salience between a set of sub-agendas: from systemic to institutional agendas, and from institutional agendas to decision agendas (see Zahariadis, 2016, p. 5).

Although the agenda setter may appear subsumed within Kingdon's definition, their presence remains implicit. This is explicitly verifiable throughout his work. As Zahariadis and Petridou (2024) point out, Kingdon does not draw a clear distinction between agents and processes. This ambiguity echoes broader critiques regarding his reliance on a metaphor that is considered vague (Zahariadis & Petridou, 2024).

As Smith (2018) summarises, Kingdon's work introduces the *Multiple Streams Framework*, which accounts for the various dimensions involved in the decision-making process. Kingdon grounds his theory in the independence of the streams, asserting that their convergence within a given policy window is necessary for an issue to gain prominence (Herweg et al., 2023, p. 20). Table 1.2 adapts and extends Smith's original mapping by detailing the key concepts associated with each stream, as interpreted within the scope of this study.

The empirical focus of this dissertation lies in the thematic study of the indicators developed by the OECD over the first thirty editions of *Education at a Glance*. As such, the analysis is theoretically situated within the *problem stream*.

Kingdon's framing of the *problem stream* positions *problems* as socially constructed phenomena (Herweg et al., 2023, p. 22). In this context, indicators are presented as key elements in defining conditions as problems. According to Kingdon, indicators not only contribute to determining whether a problem exists, but also to assessing its magnitude and detecting changes in the underlying reality. As he observes, shifts in indicator results are often interpreted as changes in reality itself (1984/2013, pp. 91–92). The definition and credibility of indicators are therefore considered politically significant, particularly since, according to Kingdon, the measurability of a given issue grants it greater political relevance compared to non-quantified matters (ibid., p. 93).

Table 1.2

Kingdon's Multiple Streams Framework (adapted and extended from Smith, 2018, p. 12)

Concepts	Description	Key Elements / Actors
Problem Stream	How conditions become to be seen as problems	"Indicators", "Focusing Events", "Feedback", "Load"
Political Stream	Forces at play in the political arena	"Party Ideology", "National Mood", "Balance of Interests"
Policy Stream	How solutions are produced and selected	"Value acceptability", "Technical Feasibility", "Resource Adequacy", "Network Integration"
Policy Window	Opportunity for change: joining the streams	"Coupling Logic", "Decision Style", "Institutional Context"

1.3.4 *The Dynamics of Representation*

The understanding of policy problems as socially generated and constructed points to a constructivist dialogue and to a reflection on representation, power and discourse, themes addressed by a substantial body of classic literature.

Drawing on Blumer's proposition (1971, p. 298), social problems "are fundamentally products of a process of collective definition instead of existing independently as a set of objective social arrangements with an intrinsic makeup." In other words, problems come to be understood as such through processes of meaning attribution, that is, through a selective process of social recognition.

These reflections on the social construction of meaning cut across multiple academic fields beyond sociology and public policy. Much of our understanding can be borrowed from narrative and semiological studies, where the focus on the arbitrariness of signification offers an explanatory basis for the inherently conflictual and power laden nature of meaning making in social life.

As asserted by Saussure's foundational reflection on the linguistic sign (1916/1967), the association between the signifier and its corresponding signified is always arbitrary. It results from historical and social factors and may, over time, be subject to shifts in meaning. This arbitrariness remains open to social rewriting, allowing new relations to be established between signifiers and the ideas associated with them. This interpretation implied that meaning is contingent upon shared conventions.

Extending this line of thought, Barthes noted (1957/1972, pp. 107-125) that any object can be appropriated interpretively through the semiological relation established between language and the socially constructed mental image associated with it. In his account, signification, understood as the inquiry into the formation of ideas and the construction of layers of meaning, is essentially a deformation, a distortion. On this view, a given signifier carries multiple layers of signification. Using his own example, a rose does not refer only to a flower; it also connotes second-order concepts that are unified through the process of signification.

The construction of shared meanings lies at the centre of studies of representation, with language understood as the privileged medium through which such meanings are built, whether by signs or by symbols. While a focus on shared meanings might seem to suggest a uniform view that underplays social diversity, it actually points to an unequal, asymmetrical dialogue among social actors (Hall, 1997).

As Bourdieu argues (1991, p.170), symbolic power stems from the capacity to transform the vision of the world and is defined not by language in itself but by the power relations among interlocutors. The arbitrariness identified by Saussure should therefore not be read as accidental but as motivated by forces and relations of power. Bourdieu thus situates, in his work (see 1972), symbolic struggles over the assertion of meaning as an integral aspect of a broader interpretation of power relations.

This perspective aligns with two fundamental understandings. Firstly, it recognizes the conception of language as inherently political. As Barthes observed, language is not neutral, even when it appears de-ideologized. The appropriation and naturalization of meanings amount to a depoliticization of meaning, insofar as this process functions as a purification that renders meanings *innocent* (1957/1972, pp. 140-142). Secondly, it advocates for an approach attentive to the implicit and the unsaid. As van Dijk (2011) notes, a key characteristic of discourse concerns not only what is explicitly stated but also what is implied and presupposed.

If perceptions of the world often depend on the capacity to establish a dominant narrative (Peixinho, 2024, p. 66), our analysis of representations proceeds in two steps. First, it measures how *Education at a Glance* allocates attention across topics over time, using salience as an indicator of priority. Second, it reads these patterns of attention as the basis for the representations of educational systems' status projected by a document that the OECD presents as an expert consensus reference, widely interpreted as influential in global education policy discourses.

2. The Dynamics of Gradualism: Indicators and the Politics of Comparison

The OECD's emergence as a key actor in the international educational landscape has been extensively documented in the literature. As numerous scholars have noted, the organisation is widely recognised for its influential role in shaping global education policy (e.g., Addey, 2018; Centeno, 2021; Elfert & Ydesen, 2023; Gorur, 2015; Grek, 2010; Lingard & Sellar, 2016; Martens, 2007; Seitzer et al., 2024; Steiner-Khamsi, 2012; Syväterä et al., 2023; Tröhler & Bürgi, 2018), as well as in the field of higher education (e.g., Amaral & Neave, 2009; Bamberger & Kim, 2023; Eggins, 2014; Shahjahan, 2012).

This chapter uses a historically grounded, document-based approach to examine the OECD's emergence as a key player in international education. It does not aim to provide a complete chronological account. Instead, it offers a genealogical perspective on significant institutional moments, using primary and secondary sources to show how education increasingly became a central focus of OECD activities.

In this chapter, we revisit many of these contributions, seeking to articulate and, where relevant, deepen them through a perspective that foregrounds the gradual nature of the trajectory undertaken by the OECD. At the same time, we aim to render intelligible a process shaped by historical, political, and academic contingencies.

This chapter explores the dynamics of gradualism in the making of international educational governance, with particular attention to how the OECD progressively established what may be understood as an indicator-based system of governance. Through the incremental development of quantitative and comparative instruments, the organisation laid the foundations for the indicators architecture recognised today. This cumulative process reflects not only an incremental evolution, but also the growing authority of quantification in framing what counts as educational progress.

2.1 OEEC's Focus on Productivity and Manpower

The Organisation for European Economic Co-operation (OEEC), predecessor of the OECD, was established in 1948. Initially mandated to support and implement the Marshall Plan, the organisation progressively broadened its scope of activity (Pierre, 2025), laying the foundations for much of the OECD's future institutional structure.

Despite benefiting from what King[7] (2001, p. 337) described as a prevailing optimism regarding the role of science and knowledge in post-war social and economic development, neither science nor education featured in the organisation's original design. These themes emerged only indirectly and in a subdued manner. It was the recognised need to improve workforce qualifications that gradually opened the space for their introduction.

In fact, although British efforts, supported by the United States as early as 1947, called for the creation of a Science Committee within the OEEC, these were initially thwarted by French opposition. Nevertheless, a compromise was eventually reached with the establishment of a Working Party on Scientific and Technical Information, representing a narrowing of both the scope and ambition of the original proposal. Nevertheless, during its year of existence, this group worked intensively, focusing on the development of networks and study methodologies aimed at understanding and improving productivity (King, 2001, p. 338).

The presentation of the results of the Working Party's efforts was met with surprise and criticism, as national delegates were caught off guard by the breadth of the work carried out. However, as King notes in a first-hand account of undeniable interest, the recommendations were approved without the delegates fully realising that they exceeded the group's original scope and mandate, as well as the implications of the proposals put forward:

> The report was duly presented to the OEEC Council. The Council was surprised and shocked at the extent of this 'uncontrolled' activity within a single year. Many of the ambassadors made the criticism that operational projects such as those we had initiated were inappropriate for their inter-governmental body. It was significant that none of them appeared to have noticed that our activities fell outside the mandate they had initially agreed for us! The storm subsided and they began to discuss our recommendations. I doubt if many of the ambassadors were seriously interested in the substance of the recommendations or understood their significance, but they were unanimously accepted. Why? Because they held out the promise of extra Marshall Plan funds to each of the member countries." (King, 2001, p. 339)

This working group was subsequently discontinued in 1952 and transformed into the Committee for Productivity and Applied Research, notoriously focused on the development of

[7] Alexander King was co-director of the European Productivity Agency of the OEEC and Director-General for Scientific Affairs and Education of the OECD.

productivity and manpower. This orientation soon led to the creation of the European Productivity Agency (EPA) within the organisation in 1953, underscoring the inseparability of training and economic development, an understanding that would become a defining feature of both the OEEC and, subsequently, the OECD. As Brusse & Griffiths report, this process proved to be of increasing relevance within the organization (Brusse & Griffiths, 1997, p.27).

While numerous authors have highlighted the challenges and difficulties associated with establishing the agency (Papadopoulos, 1994; Brusse & Griffiths, 1997; Boel, 2003), it is important to recognize that the level of commitment dedicated to this structure reflected a strong emphasis on fostering a prosperity grounded in knowledge-based economies, an emphasis that also translated into a recognised impact on the dissemination of key concepts and practices.

Papadopoulos effectively summarizes: with the creation of the EPA and subsequent work, "the human factor in economic development began to appear centre stage" (Papadopoulos, 1994, 22). As Bent Boel emphasises, although the agency had a brief existence from 1953 to 1961 and a beginning described as "a chaotic start" (2003, p. 61), its establishment and operations represent an important advancement in the realm of international cooperation, highlighting the critical role it played in fostering collaborative efforts:

> The EPA was the first intergovernmental organization ever created to promote productivity in its member countries. It was also an important aspect of European cooperation in the 1950s since it embodied the high ambitions of some of its promoters and since its yearly budget represented on average forty percent of the OEEC's total expenditures. (Boel, 2003, p. 249).

Following the establishment of the EPA in 1953, new signs reinforced the OEEC's commitment to a vision of prosperity grounded in a knowledge-based economy, leading to a strengthening of the organisation's activities and structure. If, in the initial phase, the work was aimed at identifying, mapping, and prospectively identifying the dynamics of supply and demand for a qualified workforce (Papadopoulos, 1994, p. 26), the international tensions resulting from the Cold War environment gave a new impetus and context to expanding the scope of the work developed, namely through the creation of the Office of Scientific and Technical Personnel (OSTP), in 1958, managed by Alexander King who then became both the Deputy Director of EPA and the Director of OSTP:

> While the ground within OEEC had been well prepared for the establishment of OSTP, the decision itself came about under almost emergency circumstances. As in the earlier case of the EPA, the initiative came from the US, but this time as a direct consequence of the Sputnik shock. Russian success in space was attributed to the quality of Soviet scientific and technical personnel and of the educational system behind it. (Papadopoulos, 1994, p. 23)

The shock caused by the launch of the Sputnik satellite in 1957 effectively reinforced existing warnings about the need to develop scientific capacities in a broader sense. It is important to highlight that the creation of the OSTP reflected a growing awareness that pursuing a strategy to enhance the qualifications of OECD economies necessarily requiring upstream transformations, particularly in education systems. Its short life[8] thus marked not only an expansion of the organisation's scope of work but also a deepening and coordination of efforts to improve manpower qualifications (see Papadopoulos, 1994, p. 23).

With the development of the OSTP, new approaches and areas of intervention began to take shape, initiatives whose impacts would prove both immediate and enduring.

> Over the next three to four years a vigorous programme of activities was put in motion in pursuit of these objectives. Some of these activities, having served their initial purpose, faded away. Others opened up new and broader vistas which eventually consolidated the educational interest of the Organisation and shaped its future development. (Papadopoulos, 1994, 25)

Indeed, the early 1950s within the OEEC marked *productivity* as the central issue for Western Europe, as highlighted in the organisation's Fourth Annual Report, dated 1952, with other social issues and problems subordinated to it. The intensification of this path, initiated in the post-Second World War period, first under the leadership of the United States and soon embraced by other Western bloc nations, is, according to Schmelzer, part of a broader *growth ideology* (2016, pp. 132-140) in which the OECD would come to play a relevant role.

[8] The EPA was dismantled in 1961, with some of its activities integrated into the newly established OECD (Bürgi, 2019, p. 23).

In this regard, it is worth mentioning Bürgi's (2019) reflection on the introduction of what the author characterises as an epistemological matrix of the concept of *productivity*, strongly encouraged by the United States as a tool for the acculturation of European countries. The author suggests that the term was grounded in the principles of international competitiveness and globalisation, functioning not only as an instrument of economic intervention but also as an ideological vehicle built on the ambition of collective prosperity.

It thus becomes evident that the role of education began to emerge indirectly, and partly incidentally. The different contributions signal that the trajectory of the OEEC throughout the 1950s reveals a progressive, though initially incidental, institutional opening towards the strategic role of science and education in fostering economic growth and productivity. While the organisation remained formally focused on administering the Marshall Plan, it gradually evolved into a platform for broader policy development in the areas of productivity and manpower. The OEEC trailed a form of silent institutionalisation, embedding science and education within the technical discourse of economic development. By linking training to productivity and positioning qualification as a prerequisite for growth, it not only expanded the scope of its activities but also redefined the relationship between economic and education policy. As Bürgi points out, by the end of the decade, this indirect yet deliberate integration had laid the groundwork for what would become a central pillar of the OECD's educational work (2019).

2.2 The First Years of the OECD

The OEEC's inability to establish a pan-European free trade zone, alongside the emergence of two opposing blocs within the organisation, with France and the United Kingdom at opposite poles, generated tensions that hindered its development and ultimately led to institutional paralysis. The efforts of the British and *the seven* to advance such a free trade area met with strong French opposition[9]. In response, these countries formally created the European Free Trade Association (EFTA) in 1960, offering an alternative model of integration that further

[9] *The Six* refers to the founding members of the European Economic Community (EEC), established by the Treaty of Rome in 1957 (France, West Germany, Italy, Belgium, the Netherlands, and Luxembourg). The *Seven* designates the group of countries (United Kingdom, Austria, Denmark, Norway, Portugal, Sweden, and Switzerland) that opposed supranational integration and later formed the European Free Trade Association (EFTA) in 1960. All thirteen countries were members of the OEEC. See Schmelzer (2016, pp. 44–47) for an overview of these divisions and Boel (2003) for additional institutional context.

weakened the internal cohesion of the OEEC, already diminished by the loss of its original role in administering the Marshall Plan. This situation, marked by functional crisis, internal antagonism, and diminishing influence in the broader European integration process, contributed to the redesign of an organisation which, though weakened, had become politically delicate to dismantle entirely. To the aforementioned weaknesses was added the recognised need to strengthen transatlantic relations in the context of the Cold War, marking a shift from the United States' initial position of remaining outside the OEEC as a full member (Schmelzer, 2016).

Negotiations for the formation of the OECD began at the Western Powers Summit Meeting in December 1959. As discussions progressed, three core areas of disagreement emerged among the participating states: the institutional relationship with the existing Development Assistance Group (DAG), the internal decision-making framework of the new organisation, and diverging national perspectives on trade policy. These tensions became particularly visible during the OEEC Special Economic Committee's meeting in January 1960 and reflected broader divergences in policy priorities and expectations regarding the new organisation's mandate and governance (Masujima, 1999, p. 74). This committee, convened in Paris on 12–13 January 1960 in response to the Heads of Government declaration of 21 December 1959, brought together representatives from thirteen countries and the EEC Commission, including the United States, which played a leading role through its delegation headed by Under Secretary of State C. Douglas Dillon. The meeting was strategically scheduled to precede the OEEC Council session of 14 January and became a key forum for articulating U.S. proposals for institutional reform, setting the tone for subsequent negotiations over the future OECD framework (U.S. Department of State, 1993, doc. 95).

The made public Memorandum of Conversation between the United States delegation and Dutch Foreign Minister Luns, dated 12 January 1960 in Paris, during Secretary Dillon's visit, made explicit the U.S. proposal that the new organisation should be designed within an eighteen-month timeframe, and that a working paper drafted by officials would be more appropriate than a report for ministers. The memorandum also clearly indicated the U.S. intention to exclude OEEC staff members from involvement in the drafting process. As the document shows, the United States initially envisioned a group composed of only three representatives comprising one from the OEEC, expected to be represented by the U.S., one from the EEC *Six*, and one from the EFTA *Seven.* The American perspective was that the new organisation should be modernised and refined in such a way as to allow for the full participation of the United States and Canada. Meanwhile, the OEEC would continue to operate

on an interim basis throughout the negotiation and transition period (U.S. Department of State, 1993, Document 97). The document was ultimately produced by a Group of Four that brought together representatives associated with the three groupings and, subsequently, a Greek representative, whose inclusion appears to have served as a balancing element between the two blocs (Masujima, 1999, p. 376).

Despite the institutional and political complexity surrounding the transformation of the OEEC into the OECD, the transition was marked by continuity and discretion. Internally, it represented a moment of tension and reorganisation; externally, however, it attracted little attention from either national administrations or the general public. As Schmelzer (2016, pp. 52–53) explains, the process was largely unnoticed and involved a significant degree of structural continuity, as the OECD inherited not only its predecessor's Secretariat but also the existing committees, policy domains, and working methods.

The establishment of the OECD[10] on September 30, 1961, marked the beginning of a new phase in the evolution of the initiatives previously undertaken by the OEEC. This transition, while leading to organizational reconfiguration, did not impede the progress achieved to date in education and science[11]. Thus, it can be observed that key functions and core staff from both the EPA (Schmelzer, 2016, p. 138) and the OSTP were absorbed into the OECD. The OSTP continued to operate during the 1960s under the name of Committee for Scientific and Technical Personnel (CSTP), until its eventual transformation into the Education Committee in 1970 (Papadopoulos, 1994) .

With a strengthened emphasis on economic growth (Papadopoulos, 1994), issues related to education and science were brought to the forefront of political debate. This renewed focus allowed education and science to occupy a central position within the broader agenda of policy reform and international cooperation. This involved creating the necessary conditions to address the implementation of concerns related to both education and science systems within the existing framework:

[10] Formed by 20 countries, the OECD's founding members were: West Germany, Austria, Belgium, Canada, Denmark, Spain, the United States, France, Greece, Ireland, Iceland, Italy, Luxembourg, Norway, the Netherlands, Portugal, the United Kingdom, Sweden, Switzerland, and Turkey.

[11] To be read in this regard: "The transformation, in 1961, of the OEEC into the OECD implied no discontinuity in its educational work" (Papadopoulos, 1994, 37).

> Under the entrepreneurial leadership of Alex King and Ron Gass, the CSTP was quick to cash in on the new opportunities opened up by the economic growth objective. The rapid shift in programme priorities towards the economics of education, which was initiated even before the OEEC disappeared, was in fact an inspired, intentional move designed to secure a lasting place for education within the organisation. (Papadopoulos, 1994, 37)

The agility and responsiveness of the leadership at the time proved decisive, mobilising efforts to organise an event that would not only enhance the visibility of existing work but also establish the conditions for its further development. Moreover, it was also considered important to secure a space for the OECD's affirmation within the emerging field of international education policy, particularly given that education was not explicitly mentioned in the OECD Convention (Schmelzer, 2016, p. 205). The "Conference on Economic Growth and Investment in Education", held in Washington D.C. in October 1961, laid the groundwork for the subsequent international debate on the need to expand education systems throughout the 1960s and to reinforce investment in both education and science (Papadopoulos, 1994).

As reported in the General Report of the 1966 follow-up meeting by Roger Grégoire (1967b, p. 21), the Washington Conference sought to evaluate, based on a study led by Professor Svennilson (see Papadopoulos, 1994, p. 38; Teixeira, 2019, pp. 563-564), the quantitative effort needed to expand education across the OECD area up to 1970. Particular attention was given to demographic projections and enrolment trends. Framed within broader discussions on the role of education as a driver of economic growth, this assessment encouraged member countries to intensify their efforts to widen access to secondary and higher education. The prospective analyses presented at the conference highlighted that meeting future demands would require a substantial investment in these levels of education, aiming to ensure a rapid increase in the number of diploma holders.

As documented in the archival records of the John F. Kennedy Presidential Library and Museum (1961), Walter W. Heller, in his conference address *Education as an Instrument of Economic Policy*, described the role of participants as being "to educate about education," stressing the importance of raising public awareness about the economic implications of educational investment. As he succinctly stated, "the choice lies between paying for schools or paying for ignorance" (p. 11).

The significance of the conference is attested by Schmelzer's account, which highlights its decisive contribution to the OECD's lasting affirmation in the field of public education policy (2016, p. 207). This perspective had already been advanced by Soumelis (1989, p. 167), who emphasised the conference's role in fostering a favourable political climate for increased educational investment, thereby enabling the rapid expansion of education systems across OECD countries throughout the 1960s. These views are further synthesised in the first-hand testimony of Papadopoulos, who underlines both the professional legitimisation of education policy and its political resonance within national governments:

> The Washington Conference stands out as a landmark in the OECD educational story. It set the agenda for much of the work which followed, within both OECD and Member countries themselves, on the future development of education, in terms of its growth, structures and planning instruments and methodologies. In retrospect, it is the political significance of the event that deserves to be underlined. It was the first OECD-sponsored Conference to be held in the United States; (…) It also marked the turning point in the attitude of some of the European Member countries which, like Germany, had earlier shown hesitations about letting OECD get involved in what they regarded as a cultural domain foreign to the objectives of the Organisation. But above all, the Conference, by providing professional legitimisation of the expansion of education, contributed significantly to convincing ministers of finance and other politicians of the interest they had in allocating the additional finance required to support this expansion. (Papadopoulos, 1994, 40)

Thus, one can observe the formal adoption of much of the work developed in the context of the Washington Conference. The conference proved to be relevant and a precursor to the results of the Third Conference of European Ministers of Education, held in 1962 in Rome. Resolution No. 9 of that Conference collectively recognised the need to reinforce investment in education and to establish appropriate mechanisms for monitoring and development. This recognition allowed the structuring of a line of action based on educational planning and the advancement of work within the scope of the economics of education (Papadopoulos, 1994).

The OECD's work in the field of education would be further reinforced throughout the 1960s by a range of initiatives, including the promotion of permanent educational planning structures within member states and the influence exerted to encourage investment in educational expansion (Schmelzer, 2016).

Most notoriously, the years following the Washington Conference were marked by the work of the Study Group in the Economics of Education (1960–1965), established under the auspices of the Committee for Scientific and Technical Personnel. Composed of independent economists and educational planners, the group was tasked with applying academic expertise to both theoretical and practical questions regarding the relationship between investment and economic progress (OECD, 1964, p. 4).

The discussions within the group, focused both on the broader relationship between education and economic growth and on more specific issues such as financing and educational planning, would establish it as instrumental in popularising *human capital* policies (Schmelzer, 2016, p. 207). However, they also revealed underlying tensions. While the Washington Conference provided substantial convergence regarding the path on which to structure economic growth within the OECD space, it also revealed posthumous divergences on how to achieve the expansion of education and science systems:

> If the Washington Conference indicated that the views of economists interested in exploring the economic relevance of education were present, the structure and content of the debate indicated that there were already emerging some differences vis-à-vis the positions of the pioneers in human capital theory. The main one was the view that the expansion of education should be led and planned by governments, which contrasted with the assumptions underlying human capital theory (and Chicago economists), that privileged an expansion of education supported by market supply and demand forces and based on individual decisions and rationality. Moreover, whereas the debates at the Washington Conference emphasised the consumption and social motivations of education, the human capital pioneers tended to underline the investment and economic motivations underlying educational decisions. These emerging differences would consolidate in the following years, especially with the establishment of the Study Group on the Economics of Education. (Teixeira, 2019, 564)

As outlined in the preface to the volume Economic Aspects of Higher Education (Friis, 1964), the working group explicitly aimed to encourage and stimulate independent thinking among economists, educators, and policy makers. The objective was to foster responses to both theoretical and practical dimensions that could meaningfully contribute to and enrich the organisation's work. In other words, the group sought to promote original and critical

engagement that extended beyond institutional boundaries, aiming to foster a platform for dialogue and the examination of diverse perspectives and trends.

This group comprised academics who advocated for different approaches, notably contrasting the Keynesian perspective with theories more aligned with *human capital* (Teixeira, 2009), reflecting not only diverging analytical traditions but also the effervescence and rising popularity of a particular concept and framework, as noted by Friis:

> It has become commonplace to stress the link between investment in education and economic progress. But it is easily forgotten how recent in origin this concept is and what efforts were needed to bring about its general acceptance and the consequent recognition of the need for an educational policy specifically aimed at economic growth. The story of the development of this concept has been the story of the Study Group in the Economics of Education of the OECD […]. (Friis, 1964, p. 7)

2.3 The Mediterranean Regional Project

The maturation of the OECD initiative led to the emergence of a structured focus on educational planning, as noted by Teixeira (2019). The work of the Study Group in the Economics of Education played a pivotal role in shaping the Organisation's early views on the economic importance of education. By organising conferences and disseminating their proceedings, the group contributed to raising institutional interest in education and increasing awareness of ongoing research in the fields of *human capital* and the economics of education. Importantly, the group promoted a sceptical stance toward market-based solutions for education systems, favouring instead a planning-oriented approach (see Emmerij, 1967; Gass, 1967). This perspective continued to shape OECD activities in the field, particularly through the sustained involvement of group members in later initiatives. In this context, key programmes such as the Mediterranean Regional Project (MRP) were launched, further consolidating both the centrality of planning and the influence of *human capital* theories in OECD educational action (Lemos, 2018).

The recurring use of superlatives by different authors regarding MRP[12] is illustrative of the dimension and importance attributed to this program. The MRP constituted the first educational planning experience undertaken by the OECD (Teixeira, 2019), garnering considerable resources and commitment (Papadopoulos, 1994).

It is worth noting the distinctive genesis of the Mediterranean Regional Project (MRP), which did not originate from a centralised OECD mandate, but rather from the expressed interest of a group of member countries. The initiative began in 1960, when the Portuguese Government formally requested OECD support in setting educational goals and designing a national strategy to improve population qualifications. This request catalysed interest from other Mediterranean countries facing similar challenges, namely, low levels of qualification, limited educational infrastructure, and insufficient investment in education. As a result, the MRP was launched, targeting six countries: Portugal, Spain, Italy, Greece, Yugoslavia, and Turkey. The aim was to foster medium and long-term economic and social development through strategic investment in education (Papadopoulos, 1994).

The project's primary objective was the elaboration of 15-year prospective studies identifying the educational needs of each country and devising corresponding action plans. With a planning horizon set from 1961 to 1975, multidisciplinary national teams, composed of economists, statisticians, and education experts, were established. The OECD assumed a coordinating role, providing technical support and assisting in the formation and training of these national teams (Papadopoulos, 1994; Teixeira, 2019).

Even with different operationalisation characteristics across countries, and notwithstanding qualitative differences between education systems, the project enabled access to a meaningful documentary and statistical collection (see Teixeira, 2019). However, this is not where the greatest value of the exercise resided, as Papadopoulos emphasised. For him, the principal merit of the Mediterranean Regional Project (MRP) lied in the impetus it provided for the careful and systematic planning of interventions within education systems, ensuring their alignment with broader sectoral governance strategies. This integrated approach marked an important step

[12] Pedro Nuno Teixeira refers to this as "the first major international experience of educational planning" (2019, 567). Papadopoulos argues that "in the annals of the OECD operational activities no project was endowed with more extensive support – financial, intellectual and political – or received more sustained critical scrutiny, conceptual and methodological, or greater public attention, and publicity than the Mediterranean Regional Project (MRP)." (1994, p. 43)

forward in embedding education planning within national development frameworks (Papadopoulos, 1994).

It is also worth highlighting the uniqueness of the MRP at the time, an aspect of interest both within and outside the OECD framework. Although the project began with what Papadopoulos described as a "methodological void", it allowed for the experimental development of new approaches anchored in prospective exercises and in the assumption of a relationship between economic growth and the qualification of the workforce (Papadopoulos, 1994, p. 46).

The MRP concept served as a model for the establishment of the Educational Investment and Planning Program (EIP). While the MRP focused on educational planning in developing countries within the OECD area, the EIP was directed towards highly industrialised countries whose educational systems were undergoing rapid expansion (Papadopoulos, 1994; Teixeira, 2019; Soumelis, 1989). Starting in 1962, the project contributed to expanding the spectrum of educational planning action:

> The EIP programme, contrary to the MRP, covered a much broader domain of educational planning and contributed heavily to the evolution of educational planning, thinking and practice in the Member countries. Inspired initially by the 'social demand' approach to quantitative educational planning, it carried an a priori acceptance of a multiplicity of objectives governing educational policy. It thus moved rapidly beyond the quantification of stock and flow categories and the resource implications of alternative projections to such aspects as the processes of education, the diffusion of planning activities involving wider participation in policy planning, long-term perspective planning, etc. Thus the E.I.P contributed to the broadening of the scope and perception of educational planning. (Soumelis, 1989, p. 169)

This broadening of both the understanding and scope of educational planning enabled a shift in focus that went beyond purely quantitative concerns, incorporating qualitative dimensions and opening the process to a wider range of actors and sectors involved in the design and implementation of public policies (Soumelis, 1989). Both the emphasis on planning and the space for experimentation generated through OECD-led country reviews made it possible to advance methodologically grounded work, particularly with regard to promoting the

comparability of approaches and data collection techniques (Soumelis, 1989; Papadopoulos, 1994; Teixeira, 2019)[13].

2.4 A Detour on the Economics of Education

Notably, the dawn of the 1960s was marked by the emergence of the Economics of Education as a distinct sub-discipline within Economics, developed in part to provide public decision-makers with analytical tools and guidance. In its early phase, spanning the 1950s and early 1960s, the field was largely centred on manpower forecasting. However, this approach gradually lost momentum due to a confluence of factors: the rigidity of the proposed solutions, which often confined policymakers to a narrow administrative logic; the system's failure to absorb the rapidly growing number of secondary and higher education graduates, many of whom were the product of expansive public policies; and the growing need for mechanisms that could support regular short and medium-term reassessments (Blaug, 1972).

In the publication *30 Years of Collaboration with the OECD* (1990), Kjell Eide identified two additional factors that contributed to the development of the economics of education, referencing a framework that had taken shape during the 1950s. The first was the so-called *Sputnik Shock*, which exposed the inadequacies of the American educational model at a time when the OEEC was already operational. The second factor pointed to the growing interest and engagement among American academics in the field of economics of education throughout the 1950s (p. 5). Indeed, education had not always been regarded as a priority by governments. As highlighted in the World Bank publication *Education for Development: An Analysis of Investment Choices*, the shift observed in the 1950s and 1960s was largely driven by an emerging interest in the economic value of education (Psacharopoulos & Woodhall, 1985). This period marked a clear change in perspective: education began to be viewed as an investment rather than merely a form of consumption:

> In the early 1960s it was considered a "basic human right" associated primarily with consumption. However, its value as an investment that can increase future productive capacity

[13] Edition no. 27 of the *OECD Observer*, published in 1967, is of particular historical interest in this respect, not only for its critical assessments of the limitations of existing methods and data, but also for its reflections on the future role of statisticians in education and the anticipated impact of computerisation on their work (see Emmerij, 1967; Gass, 1967).

> came to be recognized, so that now both ends are taken into account when priorities are being established for the allocation of funds. (Psacharopoulos & Woodhall, 1985, p. 15)

The flourishing of the Economics of Education in the 1960s went hand in hand with its growing recognition and influence, an evolution in which the historical context played a decisive role. The decade was strongly shaped by *human capital* theories, in a climate of rapid economic growth that enabled convergence between growth theorists and the emerging field of the economics of education (Teixeira, 2000). According to Pedro Nuno Teixeira, the development of the economics of education and *human capital* theory were "two sides of the same coin," as "the emergence of the economics of education as a separate field of economic analysis is explicitly linked with the development of *human capital* theory" (Teixeira, 2000, p. 275).

The emergence of modern human-capital theory has been attributed to the work of authors such as Schultz, Denison, Becker, and Krueger. Nevertheless, as various scholars have argued, the idea of investing in education to promote economic growth was far from novel. Numerous authors recognised the early influence of figures like Mincer, Walsh, Solow, and Fabricant, as well as the foundational contributions of classical economists such as Adam Smith (1723-1790), whose work informed and inspired the thinking of modern human-capital theorists during the 1960s (see Blaug, 1976; Sobel, 1978; Psacharopoulos & Woodhall, 1985; Teixeira, 2000; Marginson, 2017).

This renewed emphasis on the connection between education and economic growth paved the way for investments aimed at broadening the social support base that began to take shape in the 1960s. The dominant policy currents of the time concerning the role of the state in the economy also favoured a greater emphasis on social investment:

> The political context presented also some interesting features that promoted the emergence of human capital theory and the economics of education. On the one hand, the spread of the Keynesian gospel paved the way for higher expenditures, including expenditures on education. In fact, the government was supposed to play, in the Keynesian framework (and based on a skepticism toward market mechanisms), a more visible role in economic management (Skidelsky 1988). In the case of education, the increase in public expenditures seemed to be not only socially popular but also economically meaningful (Svennilson 1966). (Teixeira, 2000, p. 263)

As Marginson highlighted, "founding modern *human capital* theory was the product of a particular historical moment that favoured its genesis and spread" (2017, p. 2). The 1960s, within this backdrop of a renewed understanding of the need for educational investment, were characterised by the eruption of an intense period of expansion of education systems (see Noui, 2020; Macfarlane, 2024; Papadopoulos, 1994; Schofer & Meyer, 2005).

2.5 Educational Planning and the Development of the Quantitative Dimension

As proposed by Schmelzer (2016, pp. 200-202), the renewed centrality of economic growth was crucial to understanding this period, triggering what he describes as a "virtuous cycle", a tautological dynamic in which investment in education strengthened the sector's own financing capacity through the promise of future growth. In this context, the "human capital revolution", in which the OECD played a key role, contributed to a theoretical and political redefinition of the relationship between growth, economy, capital, and citizenship. Development was no longer seen as dependent solely on capital and labour, but now included a third essential factor: *human capital*.

This shift, coupled with mounting pressure to increase public investment and rapidly expand educational provision, encountered considerable obstacles due to the lack of prior experience and expertise in educational planning. It was within this context, marked by urgency and innovation, that educational planning intersected with the emerging field of the economics of education. This convergence played a vital role in developing quantitative tools to analyse education systems and positioned educational planning as an operational arm of the *human capital* approach.

Educational planning came to be understood as a rational and systematic process for guiding the development of education in alignment with broader societal objectives. As Coombs (1970) noted, this involved the application of analytical methods to ensure that education systems responded more effectively and efficiently to the evolving needs of individuals and society. This conceptualisation marked a shift towards a more integrated and policy-driven approach to education.

Amid growing educational demands during the 1960s, the pressure on secondary and higher education became particularly acute. These sectors, being the most resource-intensive, posed

substantial forecasting challenges due to the interplay of demographic dynamics, economic imperatives and social expectations. This situation underscored the importance of equipping education ministries with specialised planning functions, developed in coordination with research institutions and public finance bodies. Long-term projections for enrolment and teacher supply, alongside investment in physical infrastructure, were seen as essential for steering expansion effectively. Moreover, the availability of reliable statistical information and ongoing forward-looking studies became foundational to the development of more methodical planning practices, both within national contexts and through pioneering work under OECD auspices (Papadopoulos, 1994).

Nevertheless, interpretations of the educational planning trend diverge on certain dimensions. As previously mentioned, Soumelis (1989) argued that planning contributed to a deepening of qualitative concerns within educational systems. In contrast, Papadopoulos (1994, p. 50) suggested that the rise of educational planning drew attention primarily to data collection, reflecting a gradual shift in focus from qualitative to quantitative dimensions. Despite these differing perspectives, what appears uncontested is that the rise of educational planning spurred the development and refinement of tools grounded in quantitative analysis. This emphasis on data and measurement methodologies is apparent across multiple accounts and reinforced by the practical demands of projecting and managing educational expansion.

It is also worth noting, as Soumelis (1983) outlined in a retrospective analysis for the OECD, that while educational planning had existed previously, the 1960s marked a period of major development for the field. This evolution was driven by both external and internal motivations. Externally, planning responded to a complex triangulation of pressures: the demand for qualified manpower, the growing emphasis on equal opportunities in access to education, and the need to ensure the economic viability of proposed solutions, often assessed through rate-of-return analyses. Internally, although less explicitly developed in the chapter, motivations were linked to the education system's own imperatives of survival, expansion, and internal stability, which in some instances could resist or diverge from external expectations.

Fundamentally, it is important to note that the 1960s did not signify the discovery of educational planning *per se*, but rather a period in which it gained pronounced centrality and underwent notable development, framed by the rapid expansion of educational systems and sustained economic growth (Soumelis, 1983). However, this enthusiasm for educational planning soon revealed a clear mismatch between the ambitious scope of the approach and the limitations of

the statistical instruments and empirical bases available at the time. In parallel, external pressures, linked to demographic growth, labour market needs, and demands for social equity, intensified the drive to institutionalise planning as a central governance tool in education, often outpacing the methodological maturity of the field:

> Educational planning, in its early years, had to operate with a very poor statistical system. This was repeatedly stated whenever serious planning work had to be done. It was generally felt that statistics of education were inadequate in coverage, precision and analytical value in comparison with most other social and economic statistics. (Soumelis, 1983, p. 44).

In this regard, Soumelis (1983) identified three major publications that marked the transition from the 1960s to the 1970s. The first was the release of *Methods and Statistical Needs for Educational Planning* in 1967, commonly referred to as the "Green Book"[14]. This report was developed in response to a resolution adopted by the European Ministers of Education during their fourth Conference, held in London in 1964, and aimed at establishing a foundation for the statistical comparability of education data across countries (OECD, 1967).

The publication didn't end up having the desired success, with participants describing the quality of its indicators as "catastrophic" and the overall effort as "too simplistic and primitive" (see Martens, 2007, p. 45). The document faced challenges partly due to its complexity, which exceeded the capacity for replication by national governments at that time. Additionally, the non-binding nature of the OECD Council's Recommendation, intended to support the document, presented an obstacle to its effective implementation and influence. Nevertheless, the publication would prove to be a fundamental basis for the subsequent development of the Yearbook of Educational Statistics in 1974 and 1975 (Papadopoulos, 1994).

The second publication identified in this regard is Richard Stone's 1971 work *Demographic Accounting and Model Building*. As noted by Soumelis (1983, p. 45), this study sought "to bridge the work in mathematical modeling and data systems," an interpretation later corroborated by Papadopoulos (1994). However, as Papadopoulos acknowledges, the initiative ultimately fell short of its ambitions due to a mismatch between the model's complexity and

[14] "The handbook has been prepared by the Secretariat of the OECD Directorate for Scientific Affairs in co-operation with experts in educational planning and statistics in OECD Member countries". (OECD, 1967, p. 6)

the actual technical and institutional capacities of countries to apply and benefit from it effectively[15].

Finally, Soumelis also highlighted the importance of *Classification of Educational Systems* (OECD, 1972), a series of country reports designed as a "supplement" to the 1967 *Green Book*. As the publication itself affirms, it aimed to contribute to the development of a "conversion key" that would facilitate the application and interpretation of statistical methods across countries. This effort not only sought to standardise approaches but also to enhance the instruments of comparability (OECD, 1972). In essence, it served as a reference framework intended to align national educational structures with a broader international comparability model (OECD, 1972).

It should be noted, however, that the OECD publications reflecting the organisation's commitment to educational planning during this period are by no means limited to the three aforementioned examples. As also noted by Soumelis, *Indicators of Performance of Educational Systems* (OECD, 1973) stands out as a particularly relevant contribution. This publication clearly underscored the growing recognition of the need to shift emphasis from input-oriented indicators towards output-oriented measures, thereby reflecting an evolving understanding of how to analyse the performance of educational systems (OECD, 1973).

2.6 Establishing the Foundations for Comparability

The initiatives undertaken, such as the publications *Methods and Statistical Needs for Educational Planning* (OECD, 1967) and *Classification of Educational Systems* (OECD, 1972), closely aligned with the objectives later formalised in the creation of the International Standard Classification of Education (ISCED) by UNESCO in 1976. These efforts reflected a sustained commitment to improving educational planning and systematisation, but more fundamentally, to advancing the comparability of national education systems.

The advancement of educational planning and the development of quantitative-based instruments throughout the 1960s and 1970s marked sizable progress in the field. The 1970s, in particular, are recognised as a period of reorientation in international organisations'

[15] "But this also turned out to be abortive, for no country was yet in a position, or even willing, to install a comprehensive demographic accounting system of the kind proposed in the report". (Papadopoulos, 1994, p. 53)

engagement with educational statistics (Elfert & Ydesen, 2023). However, it is important to acknowledge the cumulative nature of these developments, which laid the foundation for later key comparative tools such as *Education at a Glance* and PISA.

While the post-Second World War era witnessed the rise of International Organisations (IOs) and the creation of instruments that enabled both convergence and public policy development (Teixeira, 2019), these advancements did not emerge in a vacuum. Rather, they built upon earlier, sometimes inconclusive, initiatives and technical efforts. Tracing these developments retrospectively presents a considerable challenge: the cumulative and diffuse nature of progress makes it difficult to identify all contributing elements, publications, or turning points. This complexity suggests that any attempt at exhaustive historical reconstruction will necessarily be partial or incomplete.

What emerges, instead, is a pattern of incremental, cumulative development, in which successive initiatives build upon one another and, over time, create the conditions for more decisive moments to unfold. Instead of identifying a single point of origin, it is more appropriate to recognise that the strengthening of comparability instruments during the 1960s and 1970s resulted from sustained efforts. These advances were only made possible by the alignment of political will with the gradual consolidation of technical knowledge and tools.

In the specific case of ISCED, Elfert and Ydesen (2023) argue that its development was shaped by two pivotal factors: the growing political focus on education in the United States beginning with Lyndon B. Johnson's administration in 1963, and the long-standing statistical work of UNESCO since 1947. Other scholars have suggested that the historical roots of ISCED can be traced as far back as the 19th century, well before UNESCO's foundation (see Smyth, 2008), further highlighting the deep historical layers that shape these developments.

The various contributions and layers of historical analysis consolidate the view that the development of educational classification systems was a gradual and cumulative process. The relevance of referencing the International Standard Classification of Education (ISCED) lies, in part, in the pivotal role it would come to play in shaping the architecture of OECD educational indicators, particularly in the design and interpretation of instruments such as the *Programme for International Student Assessment* (PISA) and *Education at a Glance* (EaG). Although the OECD did not develop ISCED, it became instrumental in advancing the organisation's educational initiatives from the 1990s onwards.

This trajectory is not without earlier antecedents. UNESCO's 1958 Recommendation on the International Standardization of Educational Statistics preceded the formal creation of ISCED by two decades and provided a crucial foundation for the organisation's statistical work in education (Smyth, 2008). Its relevance extended beyond statistical harmonisation, as it also sought to enable greater articulation across different education and training systems and to support the international recognition of qualifications.

In 1963, in pursuit of these objectives, UNESCO joined forces with the International Labour Organization (ILO), which had itself developed the International Standard Classification of Occupations (ISCO) in 1958 (Smyth, 2008):

> From the beginning there was general agreement that the purposes of the new classification were to facilitate international compilation and comparison of educational statistics as such and their use in conjunction with manpower and other economic statistics. Although the first of these purposes had also been the aim of the 1958 Recommendation, the second was new and was largely to determine the way in which ISCED would be developed. In the manpower field the closest available classification was the ISCO, which had been conceived very broadly as a comprehensive classification of the world of work essentially defined as the universe of occupations. In a similar fashion it was decided that ISCED would be a comprehensive classification of education defined as the universe of "organized and sustained communication designed to bring about learning. (Smyth, 2008, p. 29)

If ISCED can, in part, be interpreted as an effort by UNESCO to assert its position within an increasingly competitive landscape among international organisations, it is important to note that, at the time of its launch, it was already somewhat outdated. ISCED followed the downward trajectory of interest in educational planning that had characterised the late 1960s and early 1970s (Smyth, 2008; Elfert & Ydesen, 2023). As will be further explored, although ISCED would prove to be a decisive instrument and a point of future collaboration between the OECD and UNESCO, it also became a site of contestation and latent institutional rivalry between the two organisations (Elfert & Ydesen, 2023).

2.7 Challenging UNESCO's Authority

The territorial dispute between UNESCO and the OECD regarding educational affairs has been a notable presence since the early days of both organizations (Ydesen & Grek, 2020). A noteworthy element of this discussion is found in the article published in the OECD Observer in February 1964, titled "*Establishment of Official Relations between OECD and UNESCO*". This article illustrates not only a strict cooperative dynamic but also highlights the efforts to delineate areas of action and mutual recognition aimed at preserving the distinct roles of both institutions:

> The new link between OECD and UNESCO will be one of mutual co-operation from which both Organisations will benefit; and it will ensure the avoidance of overlapping in the areas in which they share a common interest. (OECD, 1964, p. 39)

The aforementioned article, while seemingly benevolent, underscores the perspectives put forth by various authors regarding the underlying tensions and conflicts associated with the emergence of different international organizations within the educational landscape.

Elfert and Ydesen (2023) signal that both the OECD and the World Bank have worked to diminish the influence of UNESCO since the 1960s. The authors identify two fundamental factors that have contributed to the strengthening of the World Bank and the OECD, along with a corresponding decline in UNESCO's prominence. The first factor was the limited commitment of the United States to UNESCO, coupled with its significant engagement with the World Bank and the OECD. The second factor was the complexity inherent in UNESCO's institutional structure (Elfert & Ydesen, 2023). The authors delineate the distinctions in identity among the organizations, emphasizing that UNESCO emerged as a platform for diplomacy within the context of the Cold War. In contrast, the OECD and the World Bank exhibited markedly different attributes:

> The OECD's focus on classical economics, productivity and manpower politics reflects the logic of the Cold War rivalry between two economic and political systems, liberal capitalism in the West and communism in the East (Spring, 2015). The World Bank used its financial power to contain communist influence in "Third World" countries, and the Bank's loans and grants

> "rewarded like-minded regimes for preserving their free market economies" (Steiner-Khamsi, 2006, p. 25), while UNESCO served to a much greater extent as platform for East-West diplomacy. (Elfert & Ydesen, 2023, p. 24)

In fact, there is a tendency to present UNESCO in this period as a space disinvested from conflictual dynamics, marked by greater conceptual purity regarding concerns with education:

> While the OECD and the World Bank functioned as agents of the "economics of education", UNESCO never endorsed the economistic and instrumental approach to education and stayed quite consistent in its humanistic-idealistic worldview (Elfert, 2018; Jones & Coleman, 2005; Rubenson, 2006). Against this background, we will conceptualize UNESCO as the "idealist", the OECD as the "master of persuasion", and the World Bank as the "master of coercion". (Elfert & Ydesen, 2023, p. 25)

However, such a categorical perspective on UNESCO is not easily reconciled with the 1958 Recommendation or with the initiative to develop ISCED, both discussed above. The ambition to build a comprehensive framework enabling the comparability and articulation of education and workforce development indicators sits uneasily with such an understanding. There is evidence that UNESCO has assumed, even if episodically, clearly instrumental perspectives towards education. Illustrative examples include the dispute between UNESCO and the World Bank on education for development, reported by the authors themselves in the same volume (2023, pp. 77-108) or the summary of the symposium[16] of UNESCO that took place on 23-25

[16] "The reform of incentives must be judged against the wider issues of unemployment, rising wage levels, expanding school enrolments and the accelerating costs of education. At present, because salary differentials are often linked to formal levels of education, an automatic relationship is created which raises the cost of labour rather than lowers it with every improvement in education. The rising cost of labour increases the cost of education and training, inhibits the growth of employment, and often leads in the end to a reluctance to expand education or training further, in spite of obvious needs for both these measures. As incentives to encourage individuals to undertake further education or training, the present salary differentials between different levels of education are usually far more than sufficient. In contrast, the differentials between different types of work and training and between rural and urban salaries are often far less than is needed for development. Reform should correct these differentials but in ways to break any links which would continue the automatic upward drift in salaries. Several approaches are considered, but in practice all are likely to involve some inflation. This also must be faced, by avoiding cost-of-living clauses in wage settlements, and by accepting the inevitability of some inflation if progress is to be made". (UNESCO, 1968, p. 247)

May 1966 and was published in “Manpower aspects of educational planning” (1968). Taken together, these examples suggest that a conceptualization premised on organizational ideological purity is an overstatement, best read in context and in light of the authors’ broader body of work and the reported substantive ideological and geopolitical tensions highlighted in the bibliography.

As different authors make visible, this space of dispute and conflict extended from internal organisational dimensions to broader geopolitical ones, constituting, in part, different expressions of intersecting power interplays.

Tensions between the OECD and UNESCO were visible at multiple levels, from divergences in the areas of expertise that structured each organisation’s workforce to a wider framing in which the conflict is interpreted as a dispute between American and European traditions (Elfert, 2019). As observed by Menashy and Manion (2016), UNESCO encountered considerable challenges in establishing its authority during its initial decades. As documented, UNESCO was from the beginning markedly a space for power struggles, tensions and various conflicts, as illustrated by the exhaustive history of the organization’s beginnings presented by Claude Maurel's doctoral thesis:

> L’Unesco est en théorie apolitique [annexe 14] ; mais il n’y a presque aucun enjeu, même culturel, qui ne soit pas lié de près ou de loin à la politique, même si les avis divergente au sujet de l’autonomie du culturel par rapport au politique. Malgré ce caractere théoriquement apolitique, l’Unesco a été, comme les autres organisations internationales, en permanence affectée par les enjeux politiques internationaux, ainsi que l’observent à la fois les politologues et les anciens fonctionnaires de l’organisation. (Maurel, 2006, p.171)

Part of this contested landscape should be read in light of the tensions between the United States, the USSR, and non-aligned countries. These dynamics shaped interactions within and around UNESCO, and they are essential for understanding the contextual conditions that influenced the development of the OECD’s initiatives in education.

A retrospective reading shows that the relationship between the United States and UNESCO has been marked by a complex interplay of collaboration and divergence over time, reflecting

a dynamic marked by intermittent engagement and varying degrees of distance[17] in a history marked by ongoing tension (see Porter, 2023).

It should not be read as unrelated to this observation what several authors emphasise as the evolving power dynamics within the organisation over time, noting a progressive dilution of Western countries' influence since its establishment in 1946, partly as a result of the accession of some 70 countries from Africa, Asia, and Latin America in its first two decades. (Elfert, 2017). It is important to highlight that, in 1946, of the 18 members of the Executive Board, 10 were part of the Western bloc. By 1984, despite the organization expanding to 51 members of the Executive Board, the number of representatives from the Western bloc remained unchanged. This loss of relevance will be even more noticeable in the Secretariat. This progressive loss of political power would accompany a progressive loss of interest in the organization since the 1960s (see Joyner & Lawson, 1986).

The North American perspective will be one of progressive distancing in the face of what it will consider as the growing politicization of the structure, an aspect to which education will not be alien (Joyner & Lawson, 1986, p. 49). However, tensions between UNESCO and the United States were not unique. As Louis Howard Porter (2023) elucidated, the Cold War strain was also previously evident in the relationship between UNESCO and the USSR, which was also marked by considerable tension.

Initially absent from the organization[18], the USSR opposed what it viewed as an attempt to standardize world culture based on a bourgeois interpretation of the causes of the war. This stance put the organization's claim to universality at risk from the very beginning (Maurel, 2006). This opposition can be understood as part of a broader foreign policy strategy regarding international organizations. However, this approach changed dramatically after the death of Stalin in 1953, leading to unexpected commitments from the USSR to adhere to UNESCO and the ILO, marking a reversal of its previous foreign policy (Porter, 2023). The context of

[17] The United States announced on 22 July 2025 that it would withdraw from UNESCO, with the withdrawal scheduled to take effect on 31 December 2026. This followed the U.S. decision to rejoin UNESCO in July 2023, after a previous withdrawal announced in October 2017 that took effect on 31 December 2018. Earlier still, the United States had withdrawn from UNESCO in 1984 and subsequently rejoined in 2003.

[18] Note, however: "Bien que non membre de l'Unesco, l'URSS s'efforce toutefois d'exercer une influence elle". (Maurel, 2006, p. 202). The author further points out: "C'est par l'intermédiaire des autres États socialistes présents à l'Unesco (la Pologne, la Tchécoslovaquie et la Hongrie, membres, et la Yougoslavie, observateur) que l'URSS y fait entendre sa voix" (idem, p. 203)

accession coincides with a period of organization of Arab and Latin American countries against Western domination.

> Entre 1948 et 1952, les États extra-occidentaux, principalement les États latino-américains et arabes, s'organisent pour lutter contre la prédominance des États occidentaux, et à cet effet expriment des revendications régionalistes. (Maurel, 2006, p. 95)

Accession was accompanied by investment in the organization's national monitoring infrastructure, namely through the creation of the Soviet UNESCO Commission in 1955 and later the Soviet UNESCO Delegation, with the aim of following and monitoring the work and establishing diplomatic ties with the organization's workers and delegates. Still, the capacity for involvement proved to be much lower than the level of organization in the United States of America (Porter, 2023).

The USSR's dissatisfaction with Western dominance of the organization was evident, leading to pressure to admit employees to the organization, positions where Europeans and North Americans dominated. Despite the organization's attempt to improve regional balance among the workforce, it was faced with the perception of disqualification of Soviet candidates. This situation would mean that, in the 1960s, despite paying 17% of the organization's budget, the USSR would only have 5% of the places in the organization, a situation similar to that experienced in other IOs (Porter, 2023).

The USSR's permanence and investment in the organization would, however, prove to be fruitful, with the substantial entry of new countries into the organization, partly resulting from the decolonization of previous European empires (Porter, 2023). These changes would transform the organization.

Maurel argues that, effectively, there are three distinct periods that mark the beginning of UNESCO's life. A first, between 1945 and 1953, with an exclusive presence from Western Countries. A second, between 1954 and 1959, marked by the entry of the USSR and the emergence of contamination of the Cold War environment. And a third moment, from 1960 onwards, marked by the massive accession of African countries (Maurel, 2006). This context[19]

[19] For a more exhaustive description see the 1169 pages long "L'UNESCO de 1945 à 1974" (Maurel, 2006).

will serve as a backdrop on which, in parallel, the geopolitical exercise on educational policies within OECD will be played.

2.8 Recognizing Internal Complexity

It is considered that the IOs have had a relevant role in the dissemination of *human capital* theories. Different authors highlight the role of OECD and the World Bank (see. Teixeira, 2000; Elfert, 2019; Elfert & Ydesen, 2023). Others emphasize that UNESCO was in fact the first to promote the *human-capital* theory (see Marginson, 2017, p. 2). Indeed, the history of International Organizations (IOs) in the field of education is intertwined to the evolution of educational theories. But, as several authors have emphasized, viewing international IOs as monolithic entities, reducing them to overly simplistic labels, creates a distorted understanding of their internal complexities and the diverse perspectives that exist within them.

As Teixeira highlighted, several elements indicate that the OECD encountered internal resistance to *human capital* theories. Despite an initial expression of interest and apparent discursive support, the OECD showed material resistance to the concept of educational expansion, a stance that the positions of economists and members of the organization's staff were not unrelated to, revealing a complex internal interplay in the adoption of the theory (Teixeira, 2019). Similarly, as Centeno widely documented, the internal dynamics experienced within the organization, namely in the late 1960s and 1970s, were of decisive importance in developing the organization's work in education, namely through the institutionalization of education within the structure (2017; 2021). The history of the institutionalization of education within the OECD exemplifies this internal institutional complexity.

2.9 The Institutionalization of Education Within the OECD

The establishment of the Centre for Educational Research and Innovation (CERI), in 1967 (Centeno, 2019)[20], is widely acknowledged as a pivotal moment in the history of the OECD's work in education and in the broader process of institutionalizing education within the organization (Bürgi, 2017). Although education had an "inferred" role in OECD until 1975 (Addey, 2018, p. 389), Vera Centeno asserts that the inception of CERI marked the first step

[20] "In July 1967 the Council approved the setting up of CERI for an initial two-year period, beginning on 1 January, 1968" (Papadopoulos, 1994, p. 63).

towards a more comprehensive approach to the educational sector within the organization (2019)[21].

In fact, the 1960s were marked not only by the institutional transition from the OEEC to the OECD, with the latter's creation in 1961, but also by a period of reassessment of the educational activities within the structures inherited from the OEEC, partly driven by increasing demands and the resources allocated to education (see Papadopoulos, 1994).

In this context, a critical evaluation was undertaken within the organisation, particularly concerning the Scientific and Technical Personnel Program (STP), created in 1958, which, although initially supported by contributions from the United States of America, transitioned as an integral part of the OECD budget (Bürgi, 2017). Carried out in 1964, the *Review of the Operational Activities of the Organization* heavily criticized the program, leading to several activities being discontinued or reoriented. Budget and staff reductions in STP[22] led to a redistribution of competencies within the organization, with the Secretariat assuming a greater focus on public policy analysis. Likewise, a new orientation was introduced for countries to finance their participation in the program's activities, with particular prejudice to Mediterranean countries (Papadopoulos, 1994).

As Vera Centeno points out (2019), the review, undertaken merely three years following the establishment of the OECD, aimed to reduce operating costs previously financed by the United States of America. The fact that it highlights a strong criticism of the structure responsible for the limited educational activities reveals the difficulties encountered at that time.

Following the report, the Committee for Scientific and Technical Personnel (CSTP) organized a self-evaluation of its activity undertaken by three of its members. This resulted in a report in 1965 focusing on these dimensions, in which interest in the school curriculum was highlighted.

The emphasis on curriculum development coincided with a renewed interest in ensuring that the relevance and quality of education kept pace with its quantitative expansion (Papadopoulos, 1994). The report's tone is marked by a sense of urgency regarding the need to adapt education

[21] Please take note of the observation: "the creation of CERI did not in itself mean a radical change of the OECD's internal policy on educational matters, as the goal of the OECD's education work remained to supply technical assistance to member countries". (Centeno, 2019, p. 71)

[22] In the OEEC, the programme fell under the responsibility of the Office for Scientific and Technical Personnel (OSTP). These institutional arrangements were later carried over into the OECD's organisational architecture: OSTP was placed under the DAS, and the Governing Committee was reconstituted as the Committee for Scientific and Technical Personnel (CSTP) (Papadopoulos, 1994, p. 23).

systems to emerging societal challenges, an emphasis that would in turn motivate the creation of a structure capable of providing such a response.

This report allowed the OECD to glimpse the potential for developing and articulating quantitative and qualitative dimensions (see Papadopoulos, 1994, p. 60) and was therefore pivotal to the establishment of the Centre for Educational Research and Innovation (CERI) in the late 1960s. CERI began operating on 1 January 1968, following a proposal submitted to the OECD Council. The initiative received notable support from the Ford Foundation, which contributed one million dollars to fund a two-year experimental programme, conditional on the creation of effective arrangements to secure genuine and sustained collaboration between member countries and the OECD (Papadopoulos, 1994).

Centeno believes that the creation of CERI was interpreted as an opportunity to maintain the OECD's educational activities in the face of the fragility of the CSTP:

> The impression conveyed in both the Papadopoulos (1994) account and the internal documents is that this endeavor was the opportunity for which the Secretariat was waiting to secure the continuation of the OECD's educational activities and to put forward a concrete educational program. In fact, the future of the CSTP and consequently of education within the OECD remained rather uncertain. (Centeno, 2019, p. 70)

CERI was created with a special status of reinforced autonomy within the structure in relation to other programs and member countries. Therefore, CERI would be separate from CSTP, with its program deriving directly from the Secretariat. Collaboration between the two programs would be "optional" (Centeno, 2019, p. 71).

Centeno (2019, p. 72) noted that the establishment of the CERI was characterized by an unconventional process. The initiative did not receive substantial support from the CSTP members, who expressed reservations regarding its creation. This new entity's introduction, particularly in areas with potentially overlapping functions, led to internal tensions[23], especially

[23] Centeno explicitly states: "The creation of CERI triggered a disunion between the main organizational actors. The official national delegates seated round the CSTP table, contrary to their counterparts on the Council, started to argue that the CSTP could and should deal with education policy. Contesting how the Secretariat set up the CERI, the CSTP maintained that it was the only body within the OECD with the authority to tackle education policy matters (CERI/GB(68)3 and STP/M(68)3, annex). The lack of communication and the duplication of work in the two years following CERI's creation were evident.

considering that the CSTP sought to expand its mandate[24] without success. At the same time, CERI was poised to assume important responsibilities. During its initial years, CERI faced several uncertainties regarding its future viability. These concerns were somewhat analogous to those that prompted scrutiny of the activities of STP. Centeno (2019) notes that despite additional support from Shell N.V. alongside contributions from the Ford Foundation, CERI's operating costs surpassed the available funding. Additionally, difficulties were felt in effectively integrating with national authorities.

Despite these uncertainties, CERI came to function as a central hub for the emerging effort to render education intelligible through both quantitative and qualitative forms of evidence. In Bürgi and Tröhler's account (2020), this move contributed to legitimising an expanded scope of influence and engagement within the educational field.

As documented, the educational expansion of the 1960s contributed to the reorientation of OECD's work in education, bringing concerns such as equity and relevance more clearly into view. Nevertheless, as Bürgi observes (2017), enhancements in planning structures were not paralleled by a corresponding commitment from member countries, many of which lacked comparable national capacities in the early 1960s. This disparity limited the translation of initiatives into tangible changes on the ground. Although planning agencies had become more widespread by the late 1960s, the field was characterized by increasing dissatisfaction with the adaptability and policy relevance of its outputs. This discontent facilitated a renewal of educational planning by broadening its scope to include qualitative dimensions, governance, and implementation. Bürgi describes this as an ability to "capitalize on their own failure" (2017, p. 296). Bürgi and Tröhler summarise: difficulties in educational planning were not met with retreat but with a shift towards a more reinforced, comprehensive, system-wide planning approach (2020, p. 84).

Instead of bringing a closer union between organizational actors and a harmonization of programs, CERI triggered an internal disjunctive process". (2019, pp. 72-73)

[24] Note: "The CSTP was merely entitled to estimate countries' progresses and needs, and not yet officially to formulate policies. Furthermore, the Council had successively suggested that the CSTP's scope of action should remain the same. Although up until then the CSTP had complied with the Council's demands, vis-à-vis the creation of the CERI, it suddenly expressed its interest in tackling education policy. The assignment of significant responsibilities to the CERI and what was perceived as its meddling in policy issues appear to have been the reasons for the swift repositioning of the CSTP, whose main concern was then the distinction and separation between research activities and policy-oriented activities (CERI/GB(68)3)." (Centeno, 2019, p. 72)

2.10 The Managerial Paradigm

The June 1968 issue of the *OECD Observer* dedicated 20 pages to the creation of the Centre for Educational Research and Innovation (CERI) and to the OECD's broader educational initiatives, offering a detailed and valuable account of this noteworthy development. This publication, in the aftermath of the French Student Strike of May 1968 (see Maurin & McNally, 2008), offers a valuable insight into the reflections and rationale behind the developments of the time, as revealed through the contributions of Ron Gass, Gareth Williams, Denis Kallen and Ladislav Cerych, key actors at the time. Their contributions framed the discussion around critical concerns regarding *educational quality*, the effectiveness of financial investments, and the resultant impact of such investments in a context marked by turbulence in the sector.

As stated in the publication, educational systems at the time were confronted with considerable challenges that intertwined multiple sectoral domains, reflecting the convergence of tensions resulting from a process of rapid expansion, effectively creating a stress test for the various education systems. This growth, orthogonal in nature, was all the more complex as it involved not only the broadening of the social base at the lower qualification levels, but also the expansion of access to both secondary (see Kallen, 1968) and higher education (see Cerych, 1968).

The identified difficulties would legitimise the rationale underlying the establishment of CERI, given the recognised need to respond to the growing complexity and scale of educational systems:

> The growth of educational efforts in a quantitative sense has however led to the need to use the new resources to do new things - in a word to innovation. This is the reason underlying the setting-up of a new OECD Centre for Educational Research and Innovation (CERI). (…) This work of the CSTP will be strengthened by the creation of the CERI which will have a special mandate to: promote and support the development of research activities where appropriate; promote and support pilot experiments with a view to introducing and testing innovations in the educational system; promote the development of co-operation between Member countries in the field of educational research and innovation. (OECD, 1968, p. 13)

In this regard, the reflection presented by Gass is illustrative, highlighting the complexities of the "education revolution", an aspect motivated by what he described at the time as a new

balance of forces in which the educational system assumed new preponderance, as a consequence of its expansion, the budgetary weight acquired but also in terms of the absorption of intellectual capital across different countries. The author further reflected on a structural shift regarding the reconfiguration of mechanisms of social mobility, positing a transition from the "self-made man" to the "education-made man" (Gass, 1968, p. 14)[25].

It was also noted at the time that this change in quantitative dimension would also inevitably have qualitative consequences:

> There can be little doubt that many of the great qualitative changes in education are being forced by the simple fact that more and more children are going to school and university for longer periods. (…) More children mean different children, with different backgrounds and abilities, and different purposes, hence the debate on " comprehensive " secondary education and the " diversification " of higher education, dealt with elsewhere in this issue. (Gass, 1968, pp. 14-15).

Indeed, there was an early awareness that expanding the social base of education would generate greater complexity and plurality within education systems themselves. These systems were not only larger in numerical terms, but were also absorbing new social dynamics that had to be taken into account. The recognition of this complexity, together with a personalist understanding of the need for meaningful balance and articulation among educational systems, society, families, and the labour market, emerged as a central concern in justifying the relevance of educational planning (Gass, 1968).

It is nonetheless worth noting that Williams, for his part, referred to this as "another education revolution". Although characterised by rising enrolment rates across all educational levels, by the widening of the social recruitment base of education systems, and by the incorporation of innovation within those systems (Williams, 1968, p. 18)[26], this revolution was accompanied by a transformation of equal magnitude in the planning and management of educational systems:

[25] "One far-reaching consequence of this expansion of numbers is a change in the balance between the educational system and society itself. The educational "establishment" has become more powerful. It is responsible for the expenditure of a major part of national budgets. It consumes the lion's share of the output of the universities in terms of qualified manpower. It has become the principal avenue for social advancement now that the "education-made" man has replaced the "self-made" man." (Gass, 1968, p. 14).

[26] "When people speak of the educational revolution of the Nineteen Fifties and Sixties they are usually referring to the rapid increases in enrolments at all levels of education and to the broadening of

> Only among a very small group of specialists is it perceived that the revolution in educational management is equally as significant as the other two. Indeed, the successful expansion and technological innovation depend in large part upon the efficiency with which these changes are managed. Student riots may in part reflect the failure of educational administrators to keep pace with changing conditions in education, in the same way that labour unrest often reflects industrial management failures. By the same token, however, it is the changes in the magnitude of the overall tasks that the educational system sets itself, and the developments in educational technology that have sparked off almost revolutionary developments in management right from the level of the individual classroom to that of the national or federal administration. (Williams, 1968, p. 18)

It is in this context that Gass argued that it was necessary to keep pace with the "managerial revolution" that had already taken place in various sectors, including industry, defence, and other areas of public administration, highlighting the educational sector's lag in the adoption of modern management and organisational practices (Gass, 1968, p. 15). This understanding reflected a broad-spectrum integrative approach, marked by considerable ambition, which regarded the articulation between qualitative and quantitative dimensions as essential, while also recognising the need to address educational sectors as integrative of adjacent policy areas. This perspective was further reinforced by evidence of a widening conceptual ambition, now also encompassing concerns related to pedagogical and curricular design, as well as a balance between a personalist vision of the educational model and the need to develop sound public management practices (Gass, 1968).

This wide conceptual framework was also evident in Williams's article (1968), even when considering infrastructural challenges facing educational systems. In it, we find references to a wide range of issues, including the need to optimise student timetables and, consequently, the use of available resources; questions related to student mobility and school transportation; student selection processes within educational institutions; the construction of models for institutional analysis and management; expenditure control in schools; and the need to

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educational opportunities for the mass of the people which sometimes accompanies the enrolment increases. Alternatively, in other cases they mean the great advances being made in knowledge about the learning process and the effective application of technologies from other spheres that this new knowledge is making possible." (Williams, 1968, p. 18).

maximise teachers' instructional time. In theory, the reflection on educational systems was posited to possess a totalizing potential, covering virtually all dimensions of social life. It suggested a comprehensive and integrated approach whereby nearly any social issue could be subsumed under the educational agenda.

This perspective was nevertheless bounded by the forewarning raised by Gass about the need to consider the specificities of educational systems, along with the intangible elements that sustain them, thereby rejecting, at least in theory, either a generalist or a strictly productivist approach to education systems (Gass, 1968). In line with this perspective, Gass drew attention to the need for educational planning to include an aspirational element, grounded in a clear and future-oriented political vision. As would be made evident, a purely technical dimension or an ambition limited to administrative efficiency was not understood as compatible with the scope of the so-called "managerial revolution", which was explicitly framed as a technical instrument in the service of an educational policy clearly diverging from past conceptions:

> We are led to the conclusion that the indispensable attempt to plan education, to seek the efficient allocation of resources, or to control and manage its growth must come to grips with the question " for what? ". Here lies the essential talking point between planners and educators. Further, the question cannot be answered without reference to the future. (…) Thus, the educational revolution has to be directed towards the future. It has to be conceived in relation to goals for the future. It reflects not only the pressures coming from the past, but the fact that the social function of education is changing from the transmission of traditional values to the rising generation, towards equipping them with the concepts and techniques that will enable them to deal with the problems of the years ahead. (Gass, 1968, p. 15)

In this historical record, it becomes unavoidable to mention the concern not only with system inputs but also with system outputs. More fundamentally, it becomes clear that these are interpreted as instruments in the service of educational policy, an aspect consistent with the aforementioned shift away from a purely administrative or strictly technocratic vision, from which emerges a clear understanding of their ineffectiveness when detached from a guiding political orientation:

> Efficient performance or productivity if that word is acceptable is nothing more nor less than the economic use of "inputs" to achieve "outputs". But herein lies the difficulty. To measure "outputs" it is necessary to know what the purposes of education are; and to be able to measure progress towards them. (Gass, 1968, p. 15)

OECD representatives' considerations regarding a vision for the future are, therefore, non-negligible elements in the reconstruction of this formative process of the institutionalisation of education within the organisation. The identified challenges presented in this historical record are highly relevant. While it is true that there was a clear focus on the expansion of educational systems, there was also a visible awareness of the need to reconfigure those systems in order to accommodate increasingly diverse publics and to reinforce plurality. As will be further developed throughout this number of *OECD Observer*, the democratisation of the system was, from early on, an integral part of this strategy, with implications for pedagogical practice itself, even as it was accompanied by a careful reflection on the need to do so without harming system stability (see Gass, 1968).

2.11 The Seventies and Stabilization of the Growth Paradigm

The 1970s are often described as a period of disruption and uncertainty, contrasting with the relative stability and optimism that characterised the previous decade. For international organisations such as the OECD, this shift brought about a profound re-evaluation of the economic and social assumptions that had underpinned post-war policy frameworks. The contrast between these two decades was not lost on contemporary observers. As Gérald Eldin, then OECD Deputy Secretary General, noted in January 1980:

> The division of history into decades is of course an arbitrary one. Nevertheless, there is a striking contrast between the quiet expansion of the Sixties and the treacherous course that had to be navigated during the Seventies. (Eldin, 1980, p. 9).

Declining economic growth[27] during the 1970s led to increasing scrutiny of public commitment to educational expansion (Psacharopoulos & Woodhall, 1985). The rise of critical perspectives, which argued that education, rather than producing broad social benefits, primarily reinforced existing inequalities and generated mostly individual returns, alongside growing concerns over overeducation, contributed to a growing reluctance to maintain high levels of public investment in the sector (Teixeira, 2000).

This loss of confidence extended beyond education policy itself, reaching the very foundations of the prevailing growth paradigm. Within the OECD, this was framed as "an ideological crisis of the growth paradigm", a dynamic that gained momentum from the late 1960s onwards (Schmelzer, 2016, pp. 240–242).

As Schmelzer noted (2016), during the late 1960s, internal reflections within the OECD increasingly questioned whether sustained material growth had effectively translated into greater societal well-being. Drawing on welfare economics, key voices such as King advocated for a reorientation of economic policy objectives, arguing that rising social costs were not captured by conventional growth indicators like Gross National Product (GNP). He proposed the development of alternative welfare metrics and the institutionalisation of environmental rights. These ideas gained traction throughout the 1970s, marking a broader shift in OECD discourse towards addressing the systemic "problems of modern society" and recognising the interdependence between economic performance and social and environmental well-being. This questioning of the quantitative dimension of growth reflected, in part, the OECD's own effort to develop strategies for different countries to cope with the negative consequences of growth (Schmelzer, 2016, pp. 257–262).

It is not surprising that the relation previously established between education and economic growth would surface during the 1970s, a period marked by crisis, through critical reflections on what was increasingly perceived as a crisis within the educational system itself. References

[27] As noted in Sylvia Ostry's retrospective analysis published in issue no. 103 of the *OECD Observer*, dated March 1980: "The past ten to fifteen years have been characterised by increasing instability in the world economy. Signs of social and political tension became evident in the late 1960s associated with the Vietnam conflict, the emergence of the post-war student generation and the ratcheting up of inflationary pressure. The earlier 1970s were dominated by such events as the collapse of the fixed exchange rate system, the unparalleled peacetime commodity and food price boom and the outbreak of the oil crisis. The deflationary demand and policy response to these events culminated in the unprecedented experience of "slumpflation" in 1974-75 from which the recovery has been hesitant and rather uneven as between countries. When the upswing finally began to show some self-sustainable features, a second "oil shock" hit the oil-importing countries in 1979, probably submitting the world economy to a renewed period of stagflation" (Ostry, 1980, p. 13).

to a broader crisis in the educational research paradigm became recurrent throughout the 1970s and early 1980s. Blaug, for example, described *human capital* theory as "in crisis" (1976, p. 849); Levin referred to "The Identity Crisis of Educational Planning" (1979); and Coombs[28] warned of an "unfolding world crisis in education" (1968, p. v), later reinforced in posterior publication (see Coombs, 1985). This decline in enthusiasm was mirrored by a sharp reduction in the academic visibility of *human capital* theory and the economics of education in leading economic journals after the mid-1970s (Teixeira, 2000). As several authors have argued, the crisis in educational planning extended beyond methodological or technical limitations, casting doubt on the very social value of education (Teixeira, 2019; Bürgi, 2017).

Thus, a key component of the OECD's educational agenda throughout the 1970s was the pursuit of new relationships and analytical approaches linking education with its broader social context. In a converging sense, a shift can be observed from education policies primarily focused on quantitative growth towards policies placing additional emphasis on qualitative dimensions.

This *dialectic of qualitative growth* (Schmelzer, 2016, p. 267) gave rise to what Papadopoulos refers to as "second-generation educational planning", a framework that guided the OECD's activities throughout the 1970s. As he described, this second generation was marked by a more speculative nature, a broader thematic and temporal scope, and the inclusion of a wider range of social variables. This reconfiguration represented an expansion in the scope of action, with implications for the organisation's relationships with other areas of governance. It also introduced greater attention to local-level analysis and to the individual roles of actors within education systems, within a context of an expanded temporal framework for planning itself (Papadopoulos, 1994).

The internal reconfiguration carried out by the OECD itself, namely through the restructuring of the Education Committee[29] and the Centre for Educational Research and Innovation (CERI), enabled the organisation to effectively adapt to this expanded ambition and scope of action. This included issues such as the physical infrastructure conditions of schools, teacher-related matters (including salaries, supply and demand, initial training, etc.), innovation, and

[28] First Director of the International Institute for Educational Planning (IIEP), founded in Paris by UNESCO in 1963.

[29] "The decision taken in 1974 to detach Education from the Science Directorate which in exchange got Industry and Technology and amalgamate it into a new Directorate for Social Affairs, Manpower and Education under Ron Gass, was not entirely fortuitous" (Papadopoulos, 1994, p.121).

governance across both primary and secondary education, as well as higher education. It also extended to curricula and even teaching and learning processes (Papadopoulos, 1994).

It was in this context that the first OECD Ministerial Conference on Education took place in October 1978, nearly 17 years after the organisation's founding, and was regarded as a political response to the challenges posed by a period of deepening economic difficulty. One of its main conclusions was that there was no need to increase investment in education, a position partly motivated by the declining birth rate, but also by a perceived weakening of the correlation between education and employability. The focus shifted instead towards enhancing the quality of education, promoting greater social equity in access, and strengthening the democratic governance of educational institutions (Papadopoulos, 1994, pp. 142–145).

Despite some variation in emphasis, there is broad agreement among authors in identifying the 1970s as a decade of pronounced turbulence and transition. Papadopoulos (1994, pp. 135–136) characterises this period as one of rupture, marking a shift from sustained economic growth to stagnation and eventual retreat, including in the educational domain. Schmelzer (2016, p. 287) similarly argues that the growing critique of the growth model did not signal a rejection of the notion of growth itself, but rather a prolonged stagnation of the dominant paradigm. In this evolving context, Rizvi and Lingard (2009, p. 438) emphasise that European countries, particularly throughout the 1970s and 1980s, sought to temper the rise of United States-style market liberalism by promoting social agendas that reaffirmed the role of education as a core dimension of social policy, rather than merely as an instrument of economic strategy.

2.12 A New Urgency

The late 1980s and early 1990s were marked by a renewed confidence in the role of education (Teixeira, 2000, p. 271), as well as by a revived interest in the development of social indicators (Schmelzer, 2016, p. 311), a context that began to take shape during the final stages of the Cold War.

The emergence of structures and initiatives dedicated to the development of social indicators within international organisations was both a cause and a consequence of this renewed interest. This process was shaped not only by the momentum generated through national initiatives but also by the mutual emulation of work across institutions. It was within this dynamic that the OECD launched the Indicators of Education Systems (INES) Programme in the late 1980s.

Viewed as "a tipping point in the history of education governance globally", the INES Project shaped frameworks, methods, and discourses, creating tools for the affirmation of the OECD as a dominant player in the field of educational policies worldwide (Grek & Ydesen, 2021, p.133).

Created in 1988, the International Indicators of Education Systems (INES) Project, developed by the OECD, resulted from concerted efforts to improve the quality and comparability of data on education policies, playing a central role in the production of indicators for educational systems (Bottani, 1996). This milestone was not only a response to latent discontent with the causal models and low practical applicability of the work produced, namely by the OECD in the early 1980s (Bottani, 1998, p.62), but also to the need to overcome a parochial[30] dynamic that was not in line with an increasingly globalist perspective.

As evident in the different contributions, the perception of the need to reinforce cooperation efforts in the face of a noteworthy reconfiguration of the international environment appeared to be widespread, as a growing consensus on globalisation's challenges seemed to frame all the reflection and efforts at the project's origin. This was emphasised by existing records stressing the need to reinforce cooperation efforts among OECD countries in the face of a reconfiguration of the international environment. The understanding was that this reconfiguration could be extended to areas of eminently social performance, as was the case with education:

> Equally striking is the shift in international competition which appears to be leaving the strictly economic realm to take on a broader dimension and affect society as a whole. This creates special constraints for social policies in general and education in particular. Education and training appear more and more as one of the key factors likely to influence productivity and competitiveness in the long term. While this is in line with some of the classical thinking of the economic returns of educational investment and the theory of human capital, it is a theme now imbued with a social and global urgency it did not possess before. This brings with it claims for better accountability and more effective school control which it is important to recognise, understand and monitor.
>
> Probably the major lesson which the changes we witnessed over the past four years should bring home to us is that no nation or group of nation lives in isolation. We have lived for decades in a world organised by the international order inherited from Yalta, a clear-cut division of influence

[30] Expression used by Robert Crocker in an analysis regarding the development of international indicators in the area of education (Crocker, 2002, p. 123).

> zones; and it becomes more and more apparent that - in politics, in economics, as in social or environment issues - globalisation is now the key word. (Alexander, 1994, p. 16)

Thomas J. Alexander's[31] intervention clearly assumes the subtext present in Bottani's[32] records about what he characterised as the *international dimension of Education* (Bottani, 1996) and contributes to clarifying the ideological reorientation taking place at the time, in which education started to consolidate not merely as a social right or developmental good, but as a strategic policy lever in the context of global competition.

As a fact, as the 1980s progressed, new educational policy priorities established in different OECD countries contextualised a new aspirational phase of system development. The search for increasing the international competitiveness of each country directed the focus towards the expansion of systems, but, at the same time, also towards their reach. The focus was not only on expanding secondary and higher education systems but also on their quality. However, this focus on strengthening international competitiveness presupposed the need for adequate positioning and knowledge of the comparative context, strengthening the concern for reliable indicators. The assumption of weaknesses at this level lead to the mobilisation of existing resources to create these indicators (Bottani & Tuijnman, 1994).

This debate was primarily mobilised by the United States of America, whose involvement, although not exclusive, proved decisive (Grek & Ydesen, 2021, p. 129). The motivation was not purely external. The *A Nation at Risk* report, published in 1983 by the United States National Commission on Excellence in Education[33], sparked substantial debate and marked a crucial turning point in the reevaluation of interest in indicators. The report's tone was impactful,

[31] Director for Education, Employment, Labour and Social Affairs at the OECD between 1989 and 2000.

[32] Principal Administrator of the Centre for Educational Research and Innovation at the OECD between 1976 and 1997.

[33] In the introduction to the report "A Nation at Risk" we can read: "Secretary of Education T. H. Bell created the National Commission on Excellence in Education on August 26, 1981, directing it to examine the quality of education in the United States and to make a report to the Nation and to him within 18 months of its first meeting. In accordance with the Secretary's instructions, this report contains practical recommendations for educational improvement and fulfills the Commission's responsibilities under the terms of its charter. The Commission was created as a result of the Secretary's concern about "the widespread public perception that something is seriously remiss in our educational system. "Soliciting the "support of all who care about our future," the Secretary noted that he was establishing the Commission based on his "responsibility to provide leadership, constructive criticism, and effective assistance to schools and universities." (National Commission on Excellence in Education, 1983, p.9)

underlining the urgency and importance of educational policy reform (Bottani & Tuijnman, 1994; Gorur, 2015):

> Our Nation is at risk. Our once unchallenged preeminence in commerce, industry, science and technological innovation is being overtaken by competitors throughout the world. This report is concerned with only one of the many causes and dimensions of the problem, but it is the one that undergirds American prosperity, security, and civility. We report to the American people that while we can take justifiable pride in what our schools and colleges have historically accomplished and contributed to the United States and the well-being of its people, the educational foundations of our society are presently being eroded by a rising tide of mediocrity that threatens our very future - as a Nation and a people. What was unimaginable a generation ago has begun to occur – others are matching and surpassing our educational attainments.
>
> If an unfriendly foreign power had attempted to impose on America the mediocre educational performance that exists today, we might well have viewed it as an act of war. As it stands, we have allowed this to happen to ourselves. We have even squandered the gains in Student achievement made in the wake of the Sputnik challenge. Moreover, we have dismantled essential support systems which helped make those gains possible. We have, in effect, been committing an act of unthinking, unilateral educational disarmament. (National Commission on Excellence in Education, 1983, p. 5)

From a discursive point of view, the report was deeply rich and unavoidably disruptive. The association between the educational system and the warmongering imaginary referred to an approach that positioned educational systems and policies as vitally relevant to the State while reinforcing the subtextually instilled conflictual competitive dimension. The message was latently clear. America was on the verge of losing the "war":

> History is not kind to idlers. The time is long past when America's destiny was assured simply by an abundance of natural resources and inexhaustible human enthusiasm, and by our relative isolation from the malignant problems of older civilizations. The world is indeed one global village. We live among determined, well-educated, and strongly motivated competitors. We compete with them for international standing and markets, not only with products but also with the ideas of our laboratories and neighbourhood workshops. America's position in the world

> may once have been reasonably secure with only a few exceptionally well-trained men and women. It is no longer. (National Commission on Excellence in Education, 1983, p. 6)

The records emphasizing the relevance of this report (e.g., National Center for Education Statistics, 1997; Bottani and Tuijnman, 1994; Bryk and Hermanson, 1994; Wyatt, 1994) open a path to an interpretation situating the genesis of the global movement that led to the establishment of the OECD as a global broker on educational policy as a product of Cold War tensions. More than a curiosity or a temporal coincidence, a careful analysis of the mentioned records allows us to infer a renewed paradigm regarding the role of educational policies, understood as urgent and strategically vital for the external affirmation of nations.

Consistent with the concerns expressed in the report and this new paradigm, the OECD and the United States Department of Education met in Washington in November 1987 to respond to this identified need in the first of two preparatory events. Even though this first meeting did not result in a work plan, it was nonetheless successful in establishing consensus on the methods to be pursued (Bottani & Tuijnman, 1994).

This meeting was followed by the Second International Conference on Educational Indicators in Poitiers, in 1988 (National Research Council, 1995)[34], and then by the First INES General Assembly in Semmering, in 1989 (Bottani, 1996).

Not incidentally, the process of the creation of INES was marked by the deliberate exclusion of UNESCO, reflecting the geopolitical tensions of the time with the United States, which had withdrawn from the organisation in 1984 (Grek & Ydesen, 2021).

2.12.1 *Building the Indicators*

For the development of the INES Project, it proved necessary to organise the project itself, adapting its internal configuration to the specificities and complexities of the task, while also assessing the very limits of the feasibility of cross-country comparability (National Research Council, 1995; Grek and Ydesen, 2021). As reported by Bottani (1998), the development of the indicators required innovation in processes that would enable the implementation of genuine international cooperation, allowing the initial resistance, particularly from education academics

[34] For exhaustive chronology see National Research Council (1995) and OECD (2000a).

and key policymakers, to be overcome. This cooperation aimed to ensure permanent feedback between the OECD Secretariat and member countries, regular progress evaluations, and active engagement of the various participants. The complexity of the task justified such measures, not only because of the number and diversity of people involved and the sensitivity of educational matters, but also due to the political implications of the work itself. It was in this context that the decision was made to develop the work through a system of networks, led by designated countries, flexible and less formal structures designed to foster trust among participants and to free the organisation of the project from excessive institutional influence (Bottani, 1998).

Existing records on the construction of INES indicators underscore the complexity of the entire process and echo what Rizvi and Lingard describe as an essential component of policy analysis: the "rejection of epistemological innocence" (2010, p. 63). As Gorur (2015, p. 586) noted, "INES regarded this project as one where science was in the service of policy".

Indeed, the development process of the INES Project was characterised by a progressively diminished role of researchers and an increasing predominance of policymakers, who began to assume a dominant position from the very first INES Project General Assembly, held in Lugano, Switzerland, in September 1991, approximately one year prior to the publication of the first *Education at a Glance* report. As Gorur (2015) notes, this marked a turning point in the balance of influence, where the growing dominance of policy actors in the process began to take clear shape.

In this regard, the studies presented at the INES Project General Assembly, held in Lugano and later compiled in *Making Education Count: Developing and Using International Indicators* (OECD, 1994), are particularly noteworthy. The contributions gathered in this volume span a wide range of topics, including reflections on the usefulness, challenges, and precautions in developing an educational indicator system, as well as technical, theoretical, and historical considerations on the role of indicators in education. Across the richness and diversity of these contributions, a number of clear common threads nonetheless came into focus. To begin with, participants moved decisively beyond a narrowly technocratic framing, acknowledging that the design of any such instrument is unavoidably shaped by interpretive judgements and therefore carries an irreducible subjective dimension. In parallel, there was a marked sensitivity to the risks, constraints, and possible unintended consequences that attend initiatives of this scale and ambition. Finally, the discussion coalesced around a shared understanding of what indicators

are and are not: how they are defined, what they can usefully illuminate, and the essentially instrumental character of their role within policy and practice.

2.12.1.1 A Political Exercise

The understanding of a non-neutral and inherently political exercise in the design of indicators is latent throughout several contributions. Within the various reflections presented in *Making Education Count: Developing and Using International Indicators* (OECD, 1994), numerous examples substantiate the refutation of any assertion that the process of defining indicators is inherently apolitical. These examples include the intrinsically political nature of indicator definition (Fasano, 1994, p. 55); the role of framing and how indicators highlight specific political issues while downplaying others (Nuttall, 1994, p. 81); the value-laden dimension embedded in the design of indicators (Darling-Hammond, 1994, p. 357); and the symbiotic relationship between policy formulation and operationalisation within multi-level governance contexts (Hopkins, 1994, p. 167).

Even where some authors gesture towards a balance between the technical and political dimensions (e.g., Hermanson, 1994, p. 50), Bottani and Tuijnman ultimately emphasise the predominance of the political dimension:

> The development of a set of international indicators is not merely a technical exercise planned and controlled by statisticians, but first and foremost it is a political one. An indicator is not simply a numerical expression or a composite statistic. It is intended to tell something about the performance of a behaviour of an education system, and can be used to inform the stakeholders – decision-makers, teachers, students, parents and the general public. Most importantly, indicators also provide a basis for creating new visions and expectations. (Bottani & Tuijnman, 1994, p. 26)

According to the authors, indicators are not purely reflective or illustrative instruments but apparatuses that impact the salience of issues worthy of public attention and political intervention. They are instruments of change with an underlying aspirational dimension of where systems are and where we want them to be.

2.12.1.2 A Hybrid Nature

The developed model's original working basis was structured around two axes: one conceptual and the other pragmatic (Bottani, 1998, p. 62). This duality, or this technical/strategic dialogue if we prefer, sustained the depth of the work after the first publication of indicators, revealing a strategic scope inherent to the exercise.

Characteristically, the design of indicators by the INES Project moved away from a merely academic exercise, with the utilitarian dimension of the indicators being presented consistently in the early days of INES (see Alexander, 1994; Bottani & Tuijnman, 1994; Wyatt, 1994). Despite being firmly based on technical and scientific efforts, the utilitarian dimension of indicators was a condition for their survival and success. As Wyatt asserted, "indicator systems must also produce information useful for policymakers if they are to survive as publicly supported endeavours" (1994, p. 106).

INES indicators were constituted as inherently operative instruments of intervention, which gave them a double intentional circumstance of being elements of representation of reality and intervention on the represented reality. As Bottani noted, the design of the indicators was guided by a set of five indicators, the scope of which largely supports this understanding (Bottani, 1998). Two pertained primarily to technical considerations, namely comparability and statistical credibility, whereas the remaining three underscored the indicators' utilitarian and strategic orientation: their usefulness for public policy, their communicative function, and accountability to policymakers. It is precisely this hybridisation, crystallised in the five criteria, that Bottani (1998) identifies as central to the success of the work accomplished.

This hybridisation and valorisation of the pragmatic dimension was latent in the very measure of success achieved, which was not restricted only to an achievement of a scientific or procedural nature but also to its public, mediatic, and political impact.

The conceptual dimension of indicator construction constituted the other side of this hybridisation. The task was not to assemble an exhaustive inventory, but to undertake a purposive selection of measures capable of serving the objectives at stake. This necessarily entailed choices about inclusion, emphasis, and omission. Bottani insists that the sheer ease with which metrics can be generated offers no warrant for proliferation: an indiscriminate expansion of measures is analytically sterile, since informational abundance does not, in itself, produce better knowledge (Bottani, 1998). He therefore notes that the exercise quickly departed from an encyclopaedic ambition and became oriented towards usefulness for analysis and for

the accompanying design of public policy. This orientation also helps to explain the deliberate simplicity of the proposed model, which, he adds, soon moved away from a causal model. In this sense, the search for an equilibrium between conceptual coherence and pragmatic utility shaped the choice of indicators, endowing them with a hybrid character in which these two logics were treated as ultimately complementary (Bottani, 1998).

2.12.1.3 Challenges and Factors of Success

Reflection on the challenges inherent to the exercise is a recurring theme throughout the volume. In particular, general concerns are raised regarding methodological dimensions such as the nature of the data collected, the quality of the methods employed, and the validity of the inferences drawn.

These concerns are framed primarily by the overarching challenge of comparability. The contributions highlight the complexity of establishing a system of indicators grounded in the collection and compilation of data across national systems that differ significantly in structure, exhibit regional specificities, and display asymmetries in data collection practices (Bottani & Tuijnman, 1994). As Bottani and Tuijnman reflected, the complexities encountered in the design of the comparability exercise referred not only to the difficulties inherent in collecting and standardising data but also to the identified lack of accumulated knowledge for this purpose. The problem was both theoretical and practical (Bottani & Tuijnman, 1994).

The assumed knowledge gap extends beyond the internal specificities of national education systems to encompass cultural and linguistic particularities, which Bryk and Hermanson treat as conditions that must be explicitly accounted for in the design of comparability exercises (1994, p. 48). While this preoccupation with the formal and technical dimensions of indicator construction is widely shared, the contributions nevertheless diverge substantially in their emphases and objects of concern. Taken together, they point to a set of recurring tendencies through which apparently technical questions of measurement become closely entangled with operational and policy-oriented imperatives.

These tensions are particularly well illustrated by Tim Wyatt's article *Education Indicators: A Review of the Literature* (1994), which offers a snapshot of the prevailing trends in indicator studies at the time. In it, many of the challenges repeatedly raised throughout the volume are condensed and systematised. While the author observed that "*indicators seem set to remain a hot topic in educational literature*" (1994, p. 115), he also made clear that critical contributions

addressing their problems and limitations were already widely disseminated and prolific (Wyatt, 1994, p. 112). As the author recognised, issues related to the use of indicators in education were considered largely transversal. Therefore, the question was not strictly or specifically dependent on the educational field but rather on the inherent characteristics of the indicators themselves. Among the identified problems, the author summarises weaknesses in indicator design based on the work of Oakes (1986) and Ruby and Wyatt (1988). A review of the systematisation undertaken by the author shows that the concerns raised focus on six fundamental dimensions: data selection, data collection, data analysis, comparability, the costs and benefits of such exercises, and their repercussions on the object of study, including political pressures.

This set of concerns goes beyond the formal and methodological aspects of the indicator construction process. The topics of reflection outlined by Wyatt contribute not only to an *a priori* consideration of indicator design but also to a broader reflection on the direct and indirect impacts of indicators on the realities they aim to represent. The issue, therefore, was not purely technical but also speculative: the challenges in constructing indicators were also viewed through the lens of their potential effects on the observed reality.

This perspective is further illustrated by the systematisation presented by Rolf K. Blank in the article "*Developing and Implementing Education Indicators*" (1994), where he addresses many of the recurring issues in a forward-looking exercise centred on the conditions and strategies necessary for the success of the INES project. In Blank's article (1994) it is reflected that methodological concern is accompanied by a solid operational component, particularly regarding the engagement of political decision-makers. Thus, while we find reflections on the processes of data collection, comparability, and analysis, we also encounter considerations on the need to secure the commitment of political actors, highlighting the hybrid nature of indicators.

2.12.1.4 Misuse, Risks and Weaknesses

Concerns about misuse and about the risks entailed by weak indicator formulation recur across the volume, signalling a design process that is attentive to its own vulnerabilities and to the potential consequences of measurement practices. Among the risks most consistently emphasised are the decontextualisation of data and the temptation to establish correlations, or even causal claims, that the available evidence cannot sustain. Bryk and Hermanson (1994, p.

41) underscore that insufficient contextualisation invites biased readings of indicators and, by extension, misguided judgements about systems and outcomes. In a comparability exercise of this kind, it is therefore not sufficient to reduce national cases to a lowest common denominator. The comparative frame must instead make the relevant differences explicit, so that the comparison remains intelligible and is insulated from caricatural or reductive interpretations.

This concern is reinforced by warnings about the institutional and political conditions under which indicator systems are produced. Broadfoot (1994, p. 258) notes that an expanding international demand for "effective" indicators can encourage premature shortcuts, generating shallow or invalid data and promoting correlations that substitute for the still necessary work of developing more appropriate approaches. In other words, the methodological fragility of indicators is not only an internal design problem. It is also shaped by external pressures that structure what is measured, how quickly it is produced, and how readily it is used.

Eraut (1994, p. 280) situates these risks within a broader account of judgement itself, arguing that the relationship between information and judgement is inherently complex because the selection and weighting of evidence are filtered through the predispositions of the evaluator, sometimes consciously and sometimes through less visible cognitive and perceptual frameworks. He further cautions that distortions can be amplified by communication practices, since the omission of taken for granted contextual knowledge may produce a misleading picture, while misjudging the audience's interests and standpoint can undermine credibility. Taken together, these arguments clarify how bias can enter both through the production of data and through the interpretive and communicative circuits in which indicators circulate.

Darling Hammond (1994) provides the most systematic articulation of the stakes of these dynamics by distinguishing risks that arise when indicator data are asked to carry inferential burdens they cannot support, and risks generated by the behavioural effects of indicators once they are published and used. On one hand, drawing unwarranted inferences from limited data can have real effects on educational systems, shaping the fate of programmes and hypotheses in practice. On the other, because indicators are not merely descriptive artefacts but also intervene in the field they purport to measure, their publication can alter behaviour in ways that compromise validity, especially when indicator results are embedded in incentive structures involving rewards or sanctions (Darling Hammond, 1994).

Risks of decontextualisation, hasty correlations, external pressures, and unintended behavioural responses converged in a shared understanding: indicators, if not carefully designed and interpreted, can compromise the very systems they are meant to assess and improve.

2.12.1.5 Uses and Functions of Indicators

Several chapters in *Making Education Count: Developing and Using International Indicators* (OECD, 1994) address indicators primarily through their utilitarian or instrumental character, specifying what indicators are expected to do once produced and circulated. The most explicit formulations are offered by Darling Hammond and Wyatt. Darling Hammond (1994, p. 360) treats indicators as policy instruments that can be mobilised to advance equity objectives, sustain accountability arrangements, structure policy priorities and options, and evaluate progress towards stated goals. In a broadly comparable register, Wyatt (1994, p. 110) identifies four core modes of use, portraying indicators as mechanisms for meeting accountability demands, legitimising past action, informing decision making, and focusing effort through the setting of targets.

Beyond these more systematic formulations, other contributions provide dispersed but revealing reflections that, taken together, sharpen the contours of the volume's practical understanding of indicator use. One cluster concerns indicators' diagnostic and communicative roles: Nuttall likens them to a car dashboard, emphasising their capacity to connect scrutiny to action by rendering performance legible and actionable (1994, p. 79). A second cluster foregrounds decision support and policy formation, with multiple authors positioning indicators as inputs into judgement and the design of policy responses (Nuttall, 1994, p. 81; Bryk & Hermanson, 1994, p. 45; Cohen & Spillane, 1994, p. 323; Ruby, 1994, p. 352). A third cluster highlights their aspirational and reform oriented functions, framing indicators as devices that can orient change, mobilise attention, and support intervention in and through the public sphere (Bottani & Tuijnman, 1994, p. 29; Bryk & Hermanson, 1994, p. 46; Rumberger, 1994, p. 282).

While we do not intend to systematise all the contributions on this subject presented at the conference, we aim to summarise the most relevant utilitarian dimensions highlighted by various authors throughout the analysed volume. To this end, we propose a comprehensive typology of the identified functions of indicators. Due to their nature, the categories often overlap, serving primarily as auxiliary abstractions.

Table 2.1

Utilitarian Functions of Indicators

Function	Description
Diagnostic and monitoring instrument	Accountability, monitoring and scrutiny of systems, as well as assessment of performance and progress;
Decision support and policy formulation instrument	Technical support for decision-making, priority setting, and alternative exploration;
Aspirational and reforming instrument	Oriented towards change, used to promote reforms and signal long-term improvement goals;
Instrument of intervention in public debate	Used to inform public discussion, stimulate civic engagement and influence opinion formation;
Instrument of international comparison	Enables cross-national benchmarking, fosters practice convergence, and supports mutual learning.
Instrument of political legitimation	Serves to justify political decisions, legitimise reforms or align domestic policy with international standards;

2.13 What changed with the creation of the INES Project?

Although the foundations for the comparability of education systems can be traced back to periods prior to the emergence of the INES Project, it was only in the early 1990s that the OECD decisively embarked on a systematic investment in the comparative analysis of educational systems (Addey, 2018). This marked a shift from the analysis of national education systems to the development of comparative approaches as the guiding orientation of its work in this sectoral area. As Lemos (2014) reinforces, the INES Project added this very dimension of comparability, overcoming resistance from both technical experts and academics. It created a new context in which comparability between educational institutions, educational processes, and education systems was assumed, producing indicators whose validity allows them to be useful both at the national level and for international analysis.

It is argued that it is precisely this "comparative turn" that accounts for the OECD's emergence as a relevant actor in the field of education, elevating it from a previously peripheral position

to one of prominence (Martens, 2007, p. 40). As characterised by Martens, this comparative exercise points to "comparison as a form of governance" (2007, p. 41), highlighting the implicit pressures it exerts towards convergence among countries. It is, in his view, the development of this very tool that provides the OECD with the foundation for its growing influence, grounded in expertise and knowledge production.

Martens also notes that the INES Project represents a milestone, particularly regarding the enhancement of the quality of statistics generated, along with their regularity and relevance. Furthermore, modifications are evident in the emphasis of statistical reporting, which has transitioned from a focus on system inputs to a greater emphasis on outputs - an element further emphasised by the growing prominence of the PISA programme (2007, pp. 46-47).

These changes reflect a deeper reconceptualisation of education systems, shifting from models of analysis rooted in the cultural specificities of each country or region, towards a more global and integrated vision. This shift in vision would also lead to profound changes within the OECD's own staff, whether through voluntary departures prompted by a lack of alignment with the new strategic orientation, or through reinforced recruitment driven by the expansion and increasing complexity of the organisation's activities (Martens, 2007).

Although the INES Project was instrumental, this shift likely stemmed from a confluence of dynamics that contributed to the framing of education as a globalising system. It reflects a deeper epistemic shift within the organisation itself, though it remains unclear whether this should be understood as a cause or a consequence of the broader transformation[35].

It is worth noting, in this regard, that the OECD's perspective on and relationship with the nation-state as an individual unit of analysis gradually evolved in other directions as well. This shift in focus occurred not only at the international level, but also through regional and thematic approaches.

The work of Henry et al. points in this direction, highlighting the emergence of new profiles of policy analysis that departed from traditional country reviews. For instance, they cite the review of California's higher education system conducted in 1987, the cities and education project published in 1992, and, from 1995 onwards, the implementation of thematic reviews. However, as the authors rightly emphasise, this shift should be interpreted with caution. Importantly, it

[35] See, in this regard: "Our view is that OECD is both the subject and the object of globalisation" (Henry et al. 2001, p. 59).

does not signal the end of country reviews, which, it is argued, may in fact have been strengthened by the emergence of new approaches. Rather, these developments represent a diversification in the forms of policy analysis undertaken by the OECD (Henry et al., 2001, pp. 42-44).

Fundamentally, this ambivalent expansion, both at the regional and transnational levels, can be understood within a framework that moves beyond the notion of administrative borders, an aspect that is, moreover, consistent with the broader understanding of the reconstitution of the nation-state[36].

Indeed, globalisation has gained prominence as a concept within the educational landscape, in a complex process exerting both top-down and bottom-up pressures on nation-states, thereby shaping policy choices and influencing decision-making processes (Henry et al., 2001, pp. 19-21).

It is in this sense that Henry et al. subsume the INES Project not as an autonomous initiative, but as an integral part of a broader and more complex process of globalisation in educational policymaking[37]. According to the authors, in its initial phase, the OECD was shaped by a Keynesian orientation in the post–Second World War period, grounded in international cooperation and interdependence, an orientation reflected in the organisation's work on investment in *human capital* as a foundation for solid and pluralistic democracies. This phase was accompanied by the development of CERI and the establishment of mechanisms aimed at improving education systems. However, this architecture would later be reconfigured in response to a structural context shaped by globalisation. It is within this framework that the authors identify what they term a "post-Keynesian education policy consensus", which relevantly reshaped both the scope of the organisation's action and its sphere of influence (Henry et al., 2001, p. 59).

As Henry et al. observe, this post-Keynesian consensus around education policy also reflects a shift in the interpretation of *human capital* theory, moving towards a microeconomic reading that emphasises the individual dimensions required for participation in a global knowledge economy. This reorientation departs from the earlier perspective precisely insofar as it moves away from the focus on the relationship between public expenditure and national

[36] Concept employed in the work of Henry et al. (2001).
[37] See also Lingard & Sellar (2016, p. 362).

competitiveness. It is within this context that indicators themselves gain centrality as instruments of global scrutiny and accountability (Henry et al., 2001, p. 99).

The impact of this transformation is often referred to as "policy as numbers" (Henry et al., 2001, p. 105), an expression that resonates with broader reflections both prior and subsequent to it (e.g., Rose, 1991; Miller, 2001; Shore & Wright, 2015; Bartl et al., 2019). This expression has in fact been frequently revisited, particularly in the context of analysing the globalised educational paradigm, by several key authors (e.g., Grek, 2009; Spina, 2017; Ball, 2017; Madsen, 2022; Steiner-Khamsi et al., 2024), serving as evidence of a wide terminological appropriation and of sustained academic interest in the role of quantitative instruments within policymaking processes.

2.14 Remarks on OECD's development of the Quantitative Dimension

The INES Project inaugurates a new phase in developing and maturing OECD's organizational structure, particularly its contribution to public educational policies. It is clear, nevertheless, that the foundations upon which this initiative was built were long established. Though the education sector is not explicitly referenced in the Convention establishing the OECD, there is a consistent and progressive understanding of its critical and instrumental role in driving economic and social development from the very beginning. While the preparatory documents for establishing the INES Project provide limited emphasis on the OECD's contributions to education and higher education since its inception, this does not imply that these contributions have been insignificant or absent.

In fact, an analysis of the development of the current structure of quantitative indicators and the INES Project cautions against short-sighted analyses. It also calls for an awareness of the risks associated with historical proximity and the potential biases it may produce. While the impact of the OECD and the INES Project on the reconfiguration of educational systems and the adoption of quantitative practices and instruments is widely acknowledged, it is important to approach this analysis within a more historically grounded framework that reflects the gradual nature of the path taken, while also situating it within a broader and more complex context of social transformation and the evolving ideas that shaped society throughout the second half of the twentieth century.

Joseph Zajda elaborates on this point in his discussion concerning the evolution of thinking and research pertaining to educational systems. He contends that the principal methodological paradigm shifts observed from 1955 to 2001 do not represent a clear rupture with previous approaches. Instead, they are more accurately characterized as a gradual refinement of the tools and skills applied to policy analysis, motivated by an increasing acknowledgment of the complexity inherent in educational and policy challenges and the necessity to adapt to shifting conditions and demands (Zajda, 2005).

Advocating a gradualist reading naturally entails difficulties in pinpointing a definitive point of origin. For this purpose, we could simply refer to the tracing of the beginnings of comparative analyses in education back to the nineteenth century, although noting a marked flourishing in the latter half of that century (Borer & Lawn, 2013; Bray, 2003, p. 211; Novoa & Yariv-Mashal, 2003, p. 423). However, it can be contended that this gradualist perspective is precisely what facilitates our understanding of the emergence of a broader phenomenon of incorporation of comparative analysis as an institutionalized practice unfolding within a wider context influenced by globalization and founded on a multilateral vision of international cooperation and interdependence. In this way, it is the broader perspective and preceding context that render legibility to the current educational paradigm, as the essay of António Nóvoa and Tali Yariv-Mashal underlines:

> The renewed interest in comparative education is a consequence of a process of political reorganization of the world-space, calling into question educational systems that for centuries have been imagined on a national basis (Crossley, 2002). In fact, developments in Comparative Education need to be placed within a larger framework of historical and societal transitions. (Nóvoa and Yariv-Mashal, 2003, p.424)

Indeed, the authors propose an understanding of what they term "comparability as a historical journey", marked by the reconfiguration of relations across time and space as a result of the globalization process[38]. Thus, the concept of space is rooted in relational dimensions and

[38] In this regard, the very same understanding can be applied to the concept of "globalization", an aspect that aligns with the difficulties and complexities involved in defining historical movements or processes when they are interpreted through a framework grounded in notions of continuity: "'Globalization' is the indeterminate and multivocal concept that has emerged as the most popular means of comprehending the alleged transformation of global order at the turn of the twenty-first century. Thus Malcolm Waters can claim that, while postmodernism was the defining concept (however opaque and elusive) of the

established networks, while the concept of time distances itself from temporal linearity. This perspective thus postulates the notion of temporal overlaps and a departure from linearity. In other words, the authors value an understanding of historical processes, and specifically the evolution of comparability in education, as continuous elements, opposed to a notion anchored in disruption and instead emphasising the different forces and influences at play. Quoting Reinhart Koselleck, the authors reflect on a historical approach not necessarily based on a "before" and "after", but fundamentally on a "during". The history of comparability in education is therefore understood in light of transitional movements. While the authors consider the 1880s as a period of knowing the other, the 1920s as understanding the other, and the 1960s as constructing the other, they argue that the 2000s are characterised by measuring the other. This notion of continuous movement is further developed when the authors recognise the existence of a shared educational language at the European level since the mid-1980s (Nóvoa and Yariv-Mashal, 2003).

Thus, in light of the aforementioned understanding, we shall perceive the INES project as situated at the intersection between the construction of the other and the measuring of the other. In other words, it reflects the turning point from the mere exportation of quantitatively based methods between countries to the development of educational competitiveness goals within a context of global interdependence, grounded in the measurement of *educational quality* and educational expenditure. That is, as part of a progressive reorientation of the concept of comparability, from a focus on the export of educational methods or educational models to the evolution of comparability as a mode of governance:

> This kind of comparative mood is far from the traditional logic that has for many years dominated the field of Comparative Education, and that resides on ideas of borrowing or lending of "successful" reforms and practices. It is also distanced from the idea of the "international argument" which claims that the reference to foreign experiences is one of the main legitimizing strategies for educational reforms at the national level. Rather, the current comparability is not only promoted as a way of knowing or legitimizing, but mainly as a way of governing. Comparative research is important regardless of its conclusions or even its recommendations. It

1980s, globalization is the 'key idea by which we understand the transition of human society into the third millennium'. The exhaustive 'great debate' over globalization illuminates and indeed perpetuates the existence of 'a global ambience of pervasive change', a foreboding sense that the world is undergoing a historic revolution. Yet, as the two quotations at the top of this article illustrate, there is no consensus concerning the historical identity of the phenomenon." (Bell, 2003, pp. 79-80).

> is important as a mode of governance, one of the most powerful being administered not only in Europe but also worldwide. (Nóvoa and Yariv-Mashal, 2003, p. 429)

In line with this broader understanding of the evolutionary process of educational indicators, it is also important to recognise the extent to which the development of OECD educational trends aligns with, and complements, those of other international organisations. The existence of trends related to educational planning and the search for the development of comparability instruments, as visible by the work not only of the OECD but also of UNESCO, the ILO, but also, as an example, of the World Bank or the United Nations[39] recommend a contextualization of the development of international organisations themselves.

Indeed, understanding the trajectory of the OECD benefits from the recognition that the development of international institutions in the post-World War II era was heavily shaped by the Cold War and by the West's, particularly the United States', concern with countering the expansion of the Soviet bloc. Similarly, the coincidence of this period with the post-colonial context led to the coexistence of development policies in the Global South with quantification policies in the Global North. The emergence of *knowledge brokerage* as an instrument of soft power enabled, in both cases, the maintenance of close engagement throughout the 1960s and 1970s with countries of significantly diverse profiles (Steiner-Khamsi et al., 2024, pp. 4-5).

Thus, although the development and orientations of different international organisations have varied considerably, it is possible to identify common trends, particularly with regard to the progressive reliance on quantitatively based elements, a dimension that has, in fact, been largely overlooked in the literature.

This neglect also extends, as noted by Steiner-Khamsi et al. (2024, p. 9), to the study of how these organisations have interacted with one another, including the ways in which they have influenced, responded to, or mimicked each other's work in the field of education.

[39] Note the creation of the International Standard Industrial Classification of all Economic Activities (1958).

3. Method

This thesis aims to analyse the evolution of the educational agendas conveyed by the OECD's *Education at a Glance* publication over the past three decades, through a longitudinal study of the organisation's longest-running periodical in the field of education. To this end, it examines the first thirty editions of the publication, covering the period between 1992 and 2023. The study relies on a quantitative content analysis[40] that examines the thematic incidence of the indicators and metadata adopted across the various editions. The focus does not lie on the methodological design of the indicators themselves, but rather on the substantive incidence of the issues they address. The study seeks to address three objectives:

Table 3.1

Objectives of the Thesis

Objective	Description
Objective 1	To analyse whether the *Education at a Glance* agenda has evolved and the elements considered by the EaG over time, both in the selection and framing of educational system performance indicators.
Objective 2	To identify how has *Education at a Glance* evolved with the emergence of PISA.
Objective 3	Critically to reflect on the selection of indicators in the analysis of educational systems and on EaG's publication more than 30 years since its creation.

This thesis focuses on the thematic salience of indicators and corresponding metadata, not with the aim of identifying their underlying causes or methodology, but rather of mapping the priorities signalled. It does not seek to establish causal relationships, but instead to analyse the thematic prominence and priorities advanced by the *Education at a Glance* publications. The indicators are here understood as constitutive elements in the social construction of problems within the evaluation of educational systems.

[40] Neuendorf (2002) frames quantitative content analysis as a systematic and objective method for examining the characteristics of messages quantitatively.

This chapter presents a detailed explanation of the chosen method and the methodological options adopted.

3.1 Research Questions

The research questions are often presented as the foundation of the study undertaken. In the social sciences, where research often engages with subjective and complex phenomena, flexible yet structured approaches are required (Waldt, 2025).

According to White (2013, p. 213), research questions are a way of taming curiosity. However, the means of achieving this goal remain far from consensual. Bryman (2007) notes that, in the social sciences, research questions serve different purposes. For some authors, they help prevent unfocused data collection and analysis. For others, especially within qualitative traditions, they are less central and often emerge during the research process itself.

This thesis seeks to strike a balance between those different perspectives, aiming to ensure both focus and direction while maintaining openness to the incorporation of unforeseen elements that may strengthen the stated objectives. Accordingly, the identification of the research questions described below does not exhaust the scope of the study, as it reflects an initial framework intended to guide the analysis, while allowing space for the emergence of additional, thematically relevant developments throughout the project. This flexibility is particularly justified by the absence of prior studies addressing this specific dimension of the publication, as well as the study's commitment to identifying meaningful trends and questions that may not have been anticipated at the outset. The present subsection outlines the rationale behind these decisions.

The research questions outlined in Table 3.2 are organized into two analytical axes. The first addresses the evolution of indicator selection and its thematic priorities, while the second considers contextual developments and the discursive implications of these choices.

The first axis encompasses *Research Questions 1*, *2* and *3*, which explore the longitudinal trajectory of *Education at a Glance* (EaG) in terms of indicator selection. These questions aim to assess whether a progressive shift in emphasis has taken place, particularly towards outcomes, inputs, or access-related measures. This line of inquiry aligns with the thesis's broader objective of mapping thematic salience and identifying potential trends in the way education systems are represented and evaluated.

In line with the directions suggested by the literature, *Research Question 1* (RQ1), which interrogates the possibility of an effect on outputs and outcomes, emerges as the central piece

around which the remaining questions of the first axis are organised. Indeed, as will be elaborated in the following sections, this question provides the primary analytical orientation and structures the interpretation of the subsequent arguments. As such, *Research Question 2* (RQ2) and *Research Question 3* (RQ3) serve as control dimensions for RQ1. They help assess the extent and direction of any observed shifts in *Education at a Glance*'s indicator selection over time. This aspect will also be revisited in the context of *Research Question 4* (RQ4) and *Research Question 5* (RQ5).

Table 3.2

Research Questions by Thematic Axis

Axis	References	Questions
Evolution and Thematic Priorities	Research Question 1	Has the selection of indicators in *Education at a Glance* shown a measurable shift towards educational outputs and outcomes over time?
	Research Question 2	Has *Education at a Glance* placed increasing emphasis on access and participation as indicators of system performance?
	Research Question 3	Has *Education at a Glance* placed increasing emphasis on inputs as indicators of system performance?
Contextual Elements and Discursive Implications	Research Question 4	To what extent has the introduction of PISA coincided with a change in the prioritization of indicators in *Education at a Glance*?
	Research Question 5	What dominant representations of how the state of education systems is assessed emerge from EaG's indicator selection over time?

RQ1, RQ2 and RQ3 draw on the latest *Organising Framework of Indicators* presented in *Education at a Glance* (OECD, 2023, pp. 11-19) publication of our corpus. This framework organises and categorises indicators into three broad domains: i) *outputs, outcomes and impact of education systems,* ii) *participation and progression within education entities* and iii) *input*

into education systems or the learning environment. It serves not only as a conceptual reference for the terminology used in the initial research questions, but also as a coding anchor throughout the analysis.

According to the framework under analysis, the indicators corresponding to RQ1 include *outputs, outcomes*, and *impact*. The category encompasses the characteristics of those leaving the education system and the effects of educational outputs (OECD, 2023, p. 12). In a similar manner, the indicators corresponding to RQ2 concern *access, participation*, and *completion* within education systems (OECD, 2023, p. 12). Finally, the indicators associated with RQ3 pertain to the necessary elements for the functioning of the education system, as well as to organisational dimensions. These include *expenditure, infrastructure, human resources*, and *governance* (OECD, 2023, pp. 12–13).

Table 3.3

Alignment of Research Questions with the OECD Indicators Framework (2023)

Research Questions	Corresponding EaG Indicator groups
Research Question 1	Output, outcomes and impact of education systems
Research Question 2	Participation and progression within education entities
Research Question 3	Input into education systems or the learning environment

The *Contextual Elements and Discursive Implications* axis incorporates external dimensions, namely contextual developments and potential interpretive consequences. It investigates whether potential turning points, such as the introduction of PISA, have coincided with or accompanied changes in the selection or framing of indicators within EaG series. It also introduces a more critical perspective by examining the broader discursive effects of these choices, particularly the conceptualisations of *educational quality* that emerge from the indicator landscape presented in *Education at a Glance*.

RQ4 addresses the potential coincidence of PISA with a putative change in the selection of indicators in *Education at a Glance*, thereby situating the publication within the broader context of PISA's rise as an influential policy instrument. By its turn, RQ5 builds on the four preceding research questions. It focuses on the dominant representations embedded in the indicators presented in *Education at a Glance* over time. This question does not aim to assess impacts or

establish causal relationships. It provides the foundation for a discursive analysis of how education systems are framed in EaG, which will be further developed in the discussion chapter. The articulation of these research questions provides the analytical scaffolding for the subsequent coding and content analysis procedures, detailed in the following subchapter.

3.2 Data

The corpus of this study comprises the first thirty editions of *Education at a Glance*, spanning the period from 1992 to 2023. The publication is released annually, except for the years 1994 and 1999, when no editions were issued. Including all available editions over this period facilitates a longitudinal analysis of the evolution of indicator usage within the publication's framework. The selection aimed to ensure continuity and comparability across different time points.

Each edition was analysed solely based on the main volumes of *Education at a Glance*, excluding references to supplementary or ancillary publications associated with the project. Only the English-language versions of the reports were analysed.

The selection of the first thirty editions is driven by the aim of achieving analytical coherence, historical depth, and comparability over time. By focusing on the first thirty editions, the study ensures a longitudinal perspective in indicator selection. This option helps avoid selection bias, ensuring transparency in the scope and limits of the study. While subsequent editions beyond 2023 exist, the decision to limit the analysis at this point is grounded in the need to establish a clear cut-off point that facilitates replicability and provides a stable reference for future research wishing to extend or update the analysis.

The focus of the analysis is specifically on the prominence of indicators. Indicators, as the core units of measurement and comparison in *Education at a Glance*, were selected as the primary units of analysis. Indicators were categorized according to the analytical categories detailed in the coding subsection, enabling systematic comparisons across editions.

Across the thirty editions included in the corpus, the total number of pages amounts to 13,293. On average, each edition comprises approximately 443 pages. The length of the editions varies substantially, ranging from a minimum of 148 pages (in 1992) to a maximum of 568 pages (in 2014).

In addition to the variation in length, the number of indicators published per edition also fluctuates across the corpus. The earliest editions included a relatively high number of

indicators (e.g., 49 in 1995 and 43 in 1996), while more recent editions tend to feature fewer, such as 21 in 2023 and 23 in 2022. The total number of indicators identified across all editions is 913, with an average of approximately 30.4 indicators per edition. The number of indicators ranges from a minimum of 21 to a maximum of 49.

This corpus provides the empirical foundation for the coding and analytical procedures outlined in the following section, which operationalise the thematic classification of indicators across all thirty editions.

Table 3.4

Pages and Indicators in Education at a Glance (1992–2023)

Year	Pages	Indicators	Year	Pages	Indicators
1992	148	36	2009	473	25
1993	279	38	2010	472	26
1995	371	49	2011	497	29
1996	396	43	2012	468	31
1997	439	41	2013	438	25
1998	433	36	2014	568	30
2000	381	31[41]	2015	566	31
2001	407	31	2016	508	28
2002	383	32	2017	454	28
2003	453	34	2018	460	27
2004	460	29	2019	495	27
2005	436	28	2020	475	25
2006	451	27	2021	472	27
2007	454	26	2022	460	23
2008	526	28	2023	470	21

[41] It should be noted, however, that *Education at a Glance 2000* (OECD, 2000, p. 6) states: "In order to keep the publication manageable, the number of indicators has been limited to 30." However, as indicated in the corresponding Table of Contents (OECD, 2000, pp. 3–4), a total of 31 indicators is listed.

3.3 Coding

To analyse the thematic evolution of *Education at a Glance* indicators, this study adopts a quantitative content analysis approach. The coding categories were developed through an iterative process that combined inductive review of the material with alignment with the OECD's conceptual frameworks.

The coding categories are organised into two distinct but complementary layers: i) the thematic incidence of indicators, directly aligned with the study's research questions (RQ1-RQ3), and ii) a set of metadata tags that serve to further characterise the scope and structure of each indicator. This dual structure enables systematic comparisons across editions and facilitates the identification of longitudinal shifts in thematic prominence.

The coding process involved the codification of each of the 913 indicators across a set of 37 predefined thematic tags. This structure resulted in a total of 33,781 coding cells (913 indicators × 37 tags). Each cell represents a potential analytical intersection between an indicator and a specific thematic tag, allowing for a granular and multidimensional mapping of the content covered by the *Education at a Glance* series.

Table 3.5

Thematic Coding Framework: Categories, Sub-categories and Coding Units

Category	Sub-Category	Coding Units
Thematic Incidence (3)	Output, Outcomes and Impact of Education Systems	
	Participation and Progression within Education Entities	
	Input into Education Systems or the Learning Environment	
Metadata Results and Impacts (5)	Educational Results (2)	Attainment
		Performance
	Social Impacts (1)	Social Impacts (non-economic)
	Economic Impacts (2)	Employment
		Earnings
Metadata Context (9)	Individual (4)	Reference Age (min)
		Reference Age (max)

Table 3.5

Thematic Coding Framework: Categories, Sub-categories and Coding Units

Category	Sub-Category	Coding Units
		Gender
		Special Needs and Giftedness
	Household (2)	Cultural Background
		Socioeconomic Background
	Reach and Transition (2)	Entry, Retention and Transition
		Graduation and Completion
	Public Opinion (1)	Perceptions and Attitudes
Metadata Resources and Processes (10)	School Infrastructure (2)	Facilities
		Equipment
	Human Resources (2)	Numbers and Ratios
		Salaries and Working Conditions
	Financials (3)	Budget Allocation
		Tuition Fees
		Subsidies to Households and Loans
	Organisational (3)	Class Size
		Instruction Time
		Pedagogy and Evaluation
Metadata Scope of Analysis (10)	Publication (1)	Year of EaG Publication
	Educational Level (3)	ISCED 0-1
		ISCED 2-4
		ISCED 5-8
	Individual Actors (4)	Teachers and Highly Qualified Staff
		Staff
		Students
		Members of Population

Table 3.5

Thematic Coding Framework: Categories, Sub-categories and Coding Units

Category	Sub-Category	Coding Units
	Knowledge Domains and Skills (2)	STEM Others

3.3.1 *Thematic Incidence*

The category has as its primary function the study of the thematic incidence of the indicators; in this case, coding relied on categorising each indicator according to the greatest thematic incidence or the framing given by the indicators, in line with the indicator groups set out in the indicators framework of the most recent *Education at a Glance* publication considered on our corpus (see OECD, 2023, pp. 11-19). Accordingly, the references and designations assigned by the OECD are adopted in full, as presented below:

Table 3.6

Education at a Glance Indicator Groups (OECD, 2023)

Indicator Groups	Definition
Output, outcomes and impact of education systems	*"Output indicators analyse the characteristics of those exiting the system, such as their educational attainment. Outcome indicators examine the direct effects of the output of education systems, such as the employment and earning benefits of pursuing higher education. Impact indicators analyse the long-term indirect effects of the outcomes, such as the knowledge and skills acquired, contributions to economic growth and societal well-being, and social cohesion and equity."* (OECD, 2023, p. 12)
Participation and progression within education entities	*"These indicators assess the likelihood of students accessing, enrolling in and completing different levels of education, as well as the various pathways followed between types of programmes and across education levels."* (OECD, 2023, p. 12)

Input into education systems or the learning environment	*"These indicators provide information on the policy levers that shape the participation, progression, outputs and outcomes at each level. Such policy levers relate to the resources invested in education, including financial, human (such as teachers and other school staff) or physical resources (such as buildings and infrastructure). They also relate to policy choices regarding the instructional setting of classrooms, pedagogical content and delivery of the curriculum. Finally, they analyse the organisation of schools and education systems, including governance, autonomy and specific policies to regulate the participation of students in certain programmes."* (OECD, 2023, p. 12)

3.3.2 *Metadata*

In this study, the metadata coding units allow a more nuanced and more refined reading of the typification and framing of indicators, helping to contribute to a clearer understanding of how different thematic representations and articulations develop across successive publications.

The metadata coding units comprise four analytical categories, organised into 15 subcategories, for a total of 34 coding units.

Categories nomenclature is informed by Bottani's article, *OECD International Education Indicators* (1996). The aggregation of coding units into i) *Metadata Results and Impacts*, ii) *Context*, and iii) *Resource and Processes* uses the denomination of the three main categories identified by Bottani (1996, p. 280) in the first three editions of *Education at a Glance*. Although there is both overlap and contrast with the thematic categories employed in both OECD frameworks[42], this denomination choice is intended. This option aims to prevent the reuse of identical labels across different contexts in our study to ensure clarity. In this manner, we refrain from utilising the designations that are present within the *thematic incidence* function, and that derive from OECD 2023's framework. It should be noted that, while the designations are derived from Bottani (1996), we do not adhere to the author's mapping.

[42] The period under analysis was characterized by the employment of four successive analytical frameworks in the publication: 1992-1995, 1996-2001, 2002-2017, and 2018-2023.

The proposed coding units are read in light of the OECD's overarching understanding. This understanding and their organization into specific sub-categories is detailed in the following subchapters.

3.3.2.1 Results and Impacts

Results and Impacts indicators encompass i) *educational results*, ii) *social impacts*, and iii) *economic impacts*. The sub-category matches the expression of different outputs and outcomes of educational systems.

The *Educational Results* subcategory introduces both *attainment* and *performance. Attainment* is understood as "a commonly used proxy for the stock of *human capital*, that is, the skills and knowledge available in the population" (1996, p. 102). This measure represents an indirect and "crude" (OECD, 2002, p.137) approximation of the national stock of human capital as a proxy for the skill level of the workforce (eg. OECD, 1996, p. 31; OECD, 2015, p. 30). In turn, our coding unit *Performance* encompasses both *literacy* and *assessment*, conceptualized as complementary modalities for human capital measurement (e.g., OECD, 1998, p. 7; OECD, 2005, p. 149). Their inclusion addresses the inherent limitations of *Attainment* in capturing non-formal education, acquired experience, and vocational training, while providing direct empirical evidence of skills (e.g., OECD, 2000, p. 27; OECD, 2002, p. 17)

Social Impacts subcategory addresses non-economic impacts of education, interpreted as positive externalities of investment in human capital (OECD, 2002, p. 129; OECD, 2003, p. 163).

Lastly, *Economic Impacts* considers *labour market* focused coding units: *Employment* and *Earnings*. *Employment* coding unit follows the OECD definition of *labour force participation* (2018, p. 104), which encompasses *employment*, *unemployment*, and *inactivity*. The second refers to *earnings* understood as both the individual return and incentive to invest in education (OECD, 1996, p. 231). Although not the only relevant labour market statistics, e*mployment* and *earnings* are central in *Education at a Glance*. Notwithstanding the impact of market characteristics and fiscal policies, the comparative value of these indicators helps elucidate the intrinsic importance that societies and economies attribute to educational progression (OECD, 1996, p. 231).

3.3.2.2 Context

Context considers 4 subcategories: i) *Individual*, ii) *Household*, iii) *Reach and Transition* and iv) *Public Opinion*. This category addresses metadata that under the EaG 2023 framework would fall under *Participation and Progression within Education Entities* (see Table 3.6). It integrates the contextual factors of educational actors that influence policy (see OECD, 2023, p. 12).

The category is informed by the OECD Working Paper *Promoting inclusive education for diverse societies* (Cerna *et al*., 2021), which advances an intersectional framework encompassing i) gender, ii) migration, iii) ethnic groups, national minorities and indigenous peoples, iv) special educational needs, v) giftedness, vi) gender identity and sexual orientation and its interconnection with socio-economic status and geographical location. Its application was adapted where necessary to ensure analytical feasibility within the study.

The *Individual* subcategory delineates participant individual characteristics. It integrates key demographic characteristics of educational system actors, including *Reference Age* thresholds (minimum and maximum) and *Gender*[43]. It also includes *Special Needs and Giftedness,* that characterises both "the broad array of needs of students affected by learning disabilities, physical impairments and/or who suffer from mental disorders" and "students who have been classified as having significantly higher than expected intellectual abilities given their age" that may face academic underachievement and peer isolation (Cerna *et al*., 2021, pp. 18-20).

Household subcategory presents both *Cultural Background* and *Socioeconomic Background,* accounting for environmental determinants of educational trajectories. *Cultural Background* coding unit aggregates non-majority cultural and national identities, incorporating migration backgrounds, ethnic groups, national minorities, and indigenous peoples as defined by the OECD (see Cerna *et al*., 2021). *Socioeconomic Background* accounts for both multidimensional composite indices and isolated variables, including family wealth and parental educational attainment, to reflect the household's economic capital (see OECD, 2023, p. 35). It should be noted that within the OECD's discursive framework, while these coding units are grounded in a concept of equity and inclusion (see OECD, 2023, p. 145), they are concurrently interpreted through an economic lens (see OECD, 2023, p. 11). In this regard, *socioeconomic equity* is also perceived to gauge the extent to which nations capitalize on their full potential to generate future human capital (e.g., OECD, 2007, p. 118; OECD, 2008, p. 138). This understanding extends

[43] This designation adheres to the specific terminology adopted by the OECD for the categorization of "sex".

beyond the efficient use of domestic resources to include the capacity to attract talent. Immigration-related indicators, captured under the *Cultural Background* coding unit, are also perceived to reflect a nation's capacity to attract talent (e.g., OECD, 2006, p. 229; OECD, 2019, p. 39).

The sub-category *Reach and Transition* comprises two indicators: *Entry, Retention and Transition*, and G*raduation and Completion*. These indicators "assess the likelihood of students accessing, enrolling in, and completing different levels of education" (OECD, 2018a, p. 17). Within E*ntry, Retention and Transition*, are considered enrolments, new entrants, and specific references to transitions within the education system and from education to work (see OECD, 2018a).

In what concerns to *Graduation and Completion* we aggregate data under the OECD umbrella designation of "graduation analysis". *Graduation* is "a measure of the production of educational institutions and of the system in general", whereas *completion* is "a measure of how efficiently students flow through a level of education" (OECD, 2018a, pp. 99-101).

Finally, the last sub-category, *Public Opinion*, addresses *Perceptions and Attitudes*. The inclusion of this coding unit draws *on* Bottani's article (1996). While there is no dedicated treatment of the category in the *OECD Handbook for Internationally Comparative Education Statistics* (2018a), the sub-category has been included as a source of insight for the qualitative assessment of educational systems.

3.3.2.3 Resources and Processes

Resources and Processes category displays 4 subcategories: i) *School Infrastructure*, ii) *Human Resources*, iii) *Financials* and iv) *Organisational*. This category aligns with the EaG 2023 framework, corresponding to *Input into Education Systems or the Learning Environment* (see Table 3.6). Under this category, we consider the policy levers understood in the definition provided for the category, encompassing *physical*, *human* and *financial resources* invested in education. *Policy* and *organisational* choices are also considered (see OECD, 2023, p.12).

School infrastructure subcategory aggregates *capital expenditure* metadata. According to the OECD (2018a, p. 73) *capital expenditure* refers to "expenditure on assets that last longer than one year" which "includes spending on construction, renovation and major repair of buildings, and expenditure on new or replacement equipment." For this reason, under *School Infrastructure* we consider both *Facilities* and *Equipment* as coding units.

Human Resources considers all educational institutions' staff, excluding personnel from contracted services, retired and other specific participants of school and work programmes (OECD, 2018a, pp. 41-42). It considers both *Human Resources Numbers and Ratios*, framed as the baseline for the educational system workforce (see OECD, 2023, p. 332) and *Salaries and Working Conditions*, understood as components of educational system professional attractiveness. *Salaries and Working Conditions* may include salaries, teaching time and other related metadata (see OECD, 2018a, pp. 141-144).

Financials sub-category considers i) *Budget Allocation*, ii) *Tuition Fees* and iii) *Subsidies to Household and Loans*. *Budget Allocation* is an umbrella coding unit that includes all references to system's public or private expenditure. *Tuition Fees* consider private spending on core educational goods and services[44] impacting both family financial effort and institutional resource capacity (OECD, 2018a, p. 122). *Subsidies to Household and Loans* accounts both for direct expenditure to educational institutions, namely on ancillary services, such as meals, transport to schools, or housing and transfers and payments for education to the non-educational sector, including grants, scholarships and loans (see OECD, 2018a, p. 121).

Organisational subcategory includes three coding units capturing policy and organisational choices: i) *Class Size*, ii) *Instruction Time* and iii) *Pedagogy and Evaluation*. *Class Size* reflects the typical instructional grouping in classrooms, grounded in the predicate that lower student-to-group ratios foster the learning process. As noted, both *class size* and *student-teacher ratio* are "often used as a proxy for quality" (OECD, 2018a, pp. 139-140). *Instruction Time* coding unit groups both *teaching time* and students' *instruction time* (see OECD, 2018a, p. 48), which can be disaggregated by intersection with the coding units of *Actors* subcategory. While the first reflects the workload of education professionals, considering the working hours teachers devote to teaching (OECD, 2018a, p. 143), the latter represents the amount of time students are expected to spend in classes (OECD, 2018a, pp. 51-52).

Pedagogy and Evaluation is not referenced in *OECD Handbook for Internationally Comparative Education Statistics* (2018a). Its inclusion serves as a supplementary category to capture pedagogical processes and assessment practices that shape the learning environment, addressing topics not captured in previous categories relating to *Input into Education Systems or the Learning Environment* (see Table 3.6).

[44] *Tuition fees* typically constitute private expenditure within the system; however, fees from international students are regarded exclusively as revenue, given that the source of expenditure is external.

3.3.2.4 Scope of Analysis

Scope of Analysis considers coding units that help to characterize the focus of metadata falling under the other categories. It includes: i) *Year of Publication,* ii) *Educational Level,* iii) *Type of Education,* iv) *Individual Actors,* and v) *Knowledge Domains and Skills*.

Year of publication refers to the correspondence between the indicator under analysis and the edition in which it appears.

E*ducational Level* is anchored in the *International Standard Classification of Education* (ISCED), as "the foundation for internationally comparative education statistics" (OECD, 2018a, p. 77). Three coding units were developed: i) *ISCED 0-1*, ii) *ISCED 2-4*, and iii) *ISCED 5-8*. Accordingly, to contain the proliferation of coding units, we adopt a simplified model: up to completion of primary education, the span between primary and tertiary education, and tertiary education. ISCED grouping choices cover the levels described in Table 3.7 and acknowledge that ISCED underwent three revisions over time. In this scheme, only ISCED level 9 from the 1976 revision is not included.

Individual Actors subcategory includes: i) *Teachers and Highly Qualified Staff,* ii) *Staff*, iii) *Students,* and iv) *Members of the Population*. In the referred sub-category only individual actors are considered; references to institutions and systems are excluded. *Teachers and Highly Qualified Staff* includes classroom teachers and school heads, as they are frequently aggregated as a proxy for highly skilled staff in schools (OECD, 2018a, pp. 141-142). *Staff* covers all workers in education systems not included in the previous coding unit. *Students* refers to individuals engaged in formal educational programmes (see OECD, 2018a, p. 34). Finally, M*embers of the Population* refers to individuals disinvested from their capacity of participants in the education system either as students or staff.

Finally, *Knowledge Domains and Skills* aligns with UNESCO's *ISCED Fields of Education and Training 2013.* Given its breadth, with more than eleven broad categories and about eighty detailed categories (UNESCO UIS, 2014, p. 5), a minimalist approach was opted with two coding units: i) *STEM* and ii) *Others. STEM* is defined as science, technology, engineering and mathematics (OECD, 2023, p. 19)[45] and is associated with better employment outcomes (OECD, 2025, p. 83). This unit is adopted in a broad sense, also considering references to specific skills such as numeracy and competence in the use of ICT or employment areas.

[45] It is also defined, more broadly, as "the aggregation of the broad fields of natural sciences, mathematics and statistics; information and communication technologies; and engineering, manufacturing and construction" (OECD, 2025, p. 15).

3.4 Quantitative Content Analysis

This study adopts a fully manual coding strategy. Indicators were extracted from each edition of *Education at a Glance* and integrated into a structured database comprising 37 coding units, each coded with a numerical attribution.

Thematic Incidence category captures only the indicator's thematic framing. Drawing on the latest OECD (2023) framework under analysis, the coding units in this category are not mutually exclusive, allowing for overlapping taxonomies or null categorizations when frameworks diverge from current thematic alignments. A binary scheme (0 absent, 1 present) was adopted.

Table 3.7

ISCED 1976, 1997, and 2011 and Coding Groupings[46]

ISCED 1976		ISCED 1997		ISCED 2011	
0	Education preceding the first level	0	Pre-primary education	01	Early childhood educational development
				02	Pre-primary education
1	Education at the first level	1	Primary education or first stage of basic education	1	Primary Education
2	Education at the second level, first stage	2	Lower secondary or second stage of basic education	2	Lower secondary education
3	Education at the second level, second stage	3	Upper secondary education	3	Upper secondary education
		4	Post-secondary non-tertiary education	4	Post-secondary non-tertiary education
5	Education at the third level, first stage, of the type that leads to an award not equivalent to a first university degree	5	First stage of tertiary education (not leading directly to an advanced research qualification);	5	Short-cycle tertiary education
6	Education at the third level, first stage, of the type that			6	Bachelor's or equivalent level

[46] Based and extended from Huyer and Westholm (2007, p. 34), OECD, European Union, and UNESCO Institute for Statistics (2015, p. 17) and OECD (2018, p. 80).

	leads to a first university degree or equivalent		5A) largely theoretically-based/research preparatory programmes; 5B)practical/ technical/ occupationally specific programmes		
7	Education at the third level, second stage of the type that leads to a post-graduate university degree or equivalent			7	Master's or equivalent level
9	Education not definable by level	6	Second stage of tertiary education (leading to an advanced research qualification)	8	Doctoral or equivalent level

The four *Metadata* categories coding units draw on information explicitly present in titles, indicator descriptions, tables, and figures of the main publication. Information contained in technical notes, annexes, or subsidiary publications is not considered. In cases where the same indicator presents information across multiple tables and figures, all mentions are treated as part of the same overarching indicator. A three-point scale (0 absent, 1 present, 2 present and focus[47]) was adopted, with the exceptions of *Reference Age* (minimum and maximum) and *Year of the EaG Publication.*

As this study draws on the complete set of indicators published in multiple editions of *Education at a Glance*, no probabilistic sampling was employed, and no statistical inference is intended. The number of coded indicators (n = 913) provides a high level of empirical density and descriptive stability. Methodological challenges and study limitations are critically addressed in the section dedicated to methodological considerations.

[47] Where the coding unit is framed as a central analytical element of the indicator.

4. Results

4.1 Thematic distribution of EaG Indicators (1992-2023)

The present results comprise a synthesis of the thematic coding of indicator focus across the first thirty editions of *Education at a Glance*. As specified, all indicators (n = 913) were coded and assigned to three categories: i) *Output, Outcomes and Impact of Education Systems*; ii) *Participation and Progression within Education Entities*; and iii) *Input into Education Systems or the Learning Environment*. For concision, these categories are hereafter referred to as *Outcomes and Outputs*, *Participation and Progression*, and *Inputs*, respectively.

Thematic coding followed a binary scheme, with 0 indicating *absence* and 1 indicating *presence*. The results are summarised in Table 4.1, which reports the variation in frequency (*n*) alongside its proportion (*p*) relative to the total number of indicators in each edition[48]. As shown, indicators of *Inputs* predominate consistently. Across the first thirty editions of *Education at a Glance* (EaG), only seven editions failed to exceed a proportion of 0.40 of indicators oriented toward *Input* metrics. In other words, 23 of the 30 editions (77%) had a proportion over 0.40 of their indicators devoted to input-based analysis. By contrast, only four editions (13%) had any other single category, whether *Outcomes and Outputs* or *Participation and Progression*, above 0.40 of total indicators.

Figure 4.1 helps interpret the longitudinal evolution of the three categories, using separate line charts that trace their evolution (*p*) across the first thirty editions, thereby showing how indicators have varied over time. To further enhance visual granularity, the data include a color-coding system that identifies the annual maximum, enabling cross-categorical comparison of thematic dominance across editions.

[48] The adoption of a coding model anchored in the framework in force at the time of the most recent publication analysed, *Education at a Glance 2023*, introduced residual classification misalignments, as some indicators could not be cleanly integrated into the contemporary schema. Of the total dataset, 52 indicators exhibited atypical classifications ($p = 0.06$), reflecting conceptual shifts. Of these, 12 were assigned to overlapping coding units ($p = 0.01$). Additionally, 40 indicators could not be clearly assigned to any of the three categories ($p = 0.04$). Accordingly, in some years, the three category proportions deviate marginally from summing to 1, since a small subset of indicators is either coded into overlapping units (double-counting) or remains unassigned to any category.

Table 4.1

Distribution of Prevalence (p) of Thematic Coding Units per Education at a Glance Edition (1992–2023), with Highlighted Maxima per Edition

	Outcomes and Outputs		Participation and Progress		Inputs	
Edition	*n*	*p* [1)]	*n*	*p*	*n*	*p*
1992	7	0.19	10	0.28	15	0.42
1993	10	0.26	11	0.29	14	0.39
1995	10	0.20	10	0.20	21	0.43
1996	18	0.42	7	0.16	16	0.37
1997	15	0.37	9	0.22	15	0.37
1998	16	0.44	8	0.22	13	0.36
2000	6	0.19	8	0.26	14	0.45
2001	11	0.36	5	0.16	14	0.45
2002	15	0.46	6	0.18	11	0.33
2003	13	0.38	3	0.09	13	0.38
2004	13	0.45	5	0.17	12	0.41
2005	10	0.36	6	0.21	12	0.43
2006	9	0.33	6	0.22	12	0.44
2007	6	0.23	7	0.27	12	0.46
2008	6	0.21	8	0.29	13	0.46
2009	7	0.28	4	0.16	11	0.44
2010	7	0.27	6	0.23	13	0.50
2011	10	0.35	7	0.24	11	0.38
2012	9	0.29	9	0.29	15	0.48
2013	6	0.24	6	0.24	13	0.52
2014	7	0.23	7	0.23	16	0.53
2015	9	0.29	7	0.23	16	0.52
2016	7	0.25	8	0.29	14	0.50
2017	7	0.25	8	0.29	14	0.50
2018	6	0.22	7	0.26	14	0.52
2019	7	0.26	6	0.22	14	0.52
2020	6	0.24	6	0.24	13	0.52
2021	6	0.22	6	0.22	15	0.56
2022	5	0.22	6	0.26	12	0.52
2023	5	0.24	6	0.29	10	0.48

[1)] As many occurrences (*n*) have low frequency, proportions are presented as relative value to allow for comparison.

Anchoring our reading on Table 1.1, which displays the publication structure across the years, we can preliminarily identify four phases: 1992-1995, 1996-2001, 2002-2017, and 2018-2023. Between 1992 and 1995, the indicators exhibit a configuration of relative stability. *Outcomes and Outputs* fluctuate between 0.19 and 0.26, while the *Inputs* range between 0.39 and 0.43. *Participation and Progress* remain within the 0.20 range.

The 1996 edition inaugurates a period of pronounced instability. A surge is observed in *Outcomes and Outputs*, which climbs from 0.20 to a local peak of 0.44 in 1998, contrasting with a contraction in *Participation and Progress*, which achieves a period minimum of 0.16 in 1996 and 2001.

The period 2002-2017 is defined by a trend of convergence and strengthening of the *Inputs* category, as 2002 represents a pivotal break. The period opens with the *Outcomes and Outputs* indicator attaining its highest proportion ($p = 0.46$) in 2002, followed by a gradual decline that stabilizes at around 0.25. Concurrently, *Inputs* shows an upward trajectory, progressing from 0.33 in 2002 to a plateau of 0.50 by 2017, while *Participation and Progression* remain the least represented coding unit. This inflection point initiates a fundamental shift in system behaviour: as outcomes recede from their maximum, Inputs embark on a rigorous upward trajectory, progressing from 0.33 in 2002 to a consolidated plateau of 0.50 by 2017. Throughout this process, *Participation and Progress* consistently remain the least represented coding unit, further highlighting the transition toward an input-oriented institutional framework.

The fourth phase of the series, between 2018 and 2023, reveals the consolidation of the system within a low-variance plateau. *Inputs* fluctuate between 0.48 and 0.56. Both *Outcomes and Outputs* and *Participation and Progress* display residual variations, suggesting that the system has consolidated.

It should be noted that this reading does not constitute a periodisation tout court, as a more robust and comprehensive proposal is developed in the Discussion chapter, which integrates additional elements, particularly the publication's structure (see Table 1.1).

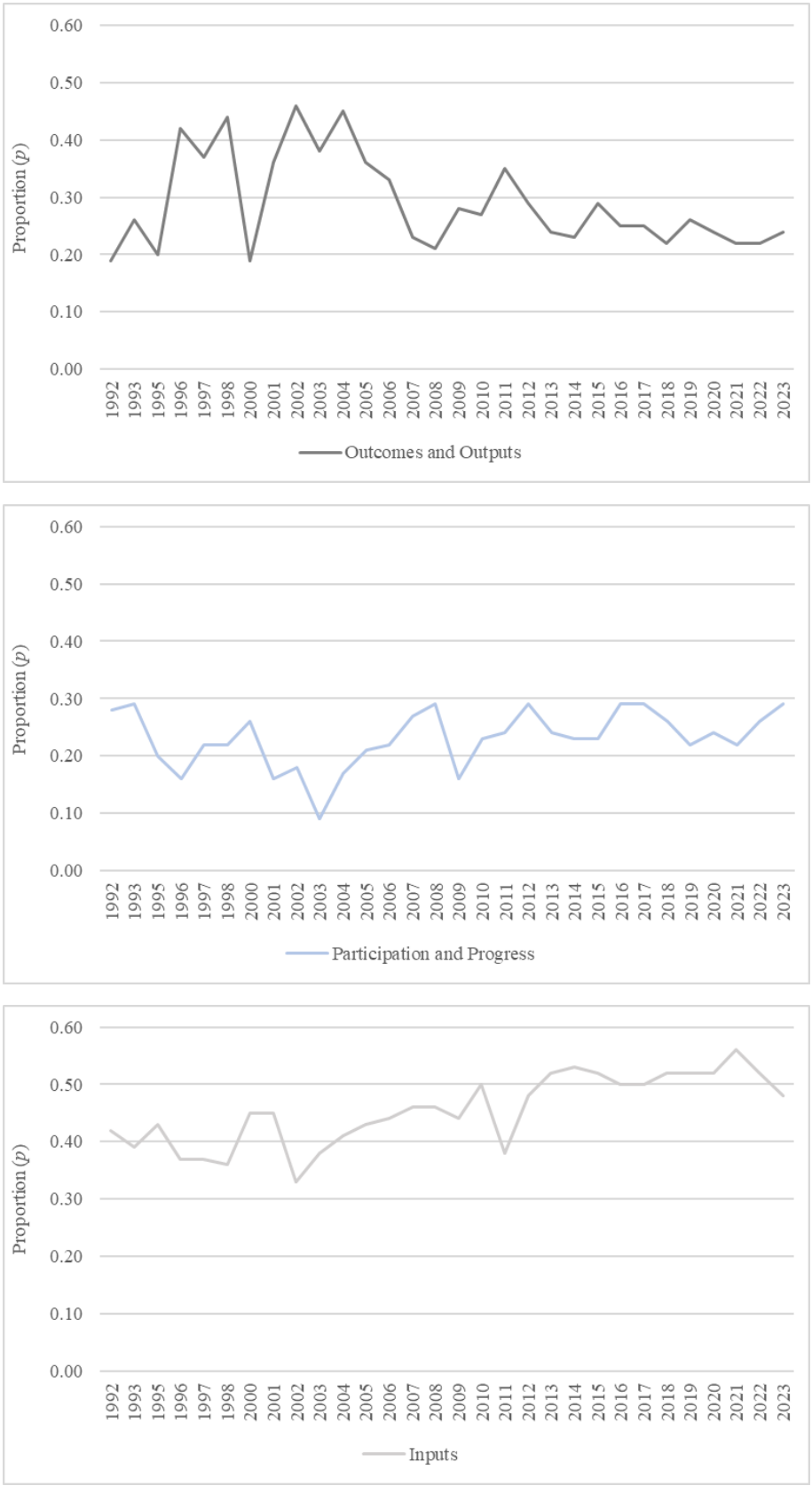


Figure 4.1

Proportion (p) of Indicators by Thematic Category per Education at a Glance Edition (1992–2023)

4.2 An Analytical Reading based on the Metadata Across EaG Indicators

The coding undertaken included a set of metadata coding units relating to the construction of each indicator, as previously described in an earlier chapter. This coding does not address the methodological procedures used to design the indicator. Instead, it is intended to render the indicator more intelligible by providing a detailed reading of the themes covered in its construction, as well as of its *Scope of Analysis*.

Table 4.2

Frequency of Indicator Metadata Occurrences by Category and Sub-category (1992-2023)

Category	**Sub-Category**	*n*	Total
Results and Impacts	Educational Results	389	661
	Social Impacts	22	
	Economic Impacts	250	
Context	Individual	1406	1970 *572
	except Age and Gender*[49]	8	
	Household*	156	
	Reach and Transition*	344	
	Public Opinion*	64	
Resources and Processes	School Infrastructure	90	1141
	Human Resources	206	
	Financials	626	
	Organisational	219	
Scope of Analysis	Publication	913	2839
	Educational Level	868	
	Individual Actors	807	
	Knowledge Domains and Skills	251	

[49] *Individual (except Age and Gender)* accounts for only 8 occurrences, corresponding to the other 1410 occurrences to three metadata fields coded at the individual level (*Minimum Age*, *Maximum Age*, and *Gender*).

The metadata analysed in this subsection comprises 34 coding units. These units are classified into four categories. The three broader conceptual categories are i) *Results and Impacts*, ii) *Context* and *iii) Resources and Processes*, as better explained in the methodology section. *Scope of Analysis* considers 10 coding units that within the framework of this study, serve to characterize the focus of metadata falling under the other categories.

4.2.1 *Policy Issues*

Table 4.3 presents the annual distribution of metadata entries (non-zero cells) concerned with policy issues. For each edition, the number of occurrences (*n*) was aggregated in accordance with the predefined sub-category. The values reported in each row correspond to the year specific frequency (*n*) within the dataset, thereby providing an initial longitudinal lens on shifting institutional priorities. It should be noted that demographic descriptors, such as *Age of Reference (Minimum and Maximum)* and *Gender*, as well as metadata classified under the *Scope of Analysis* category, were excluded to preserve the table's focus on policy issues.

For the period, *Results and Impacts* accounts for 661 counts, *Context* for 572, and *Resources and Processes* for 1141. *Resources and Processes* is clearly the dominant category (*n*) captured by our codification across the period.

Within *Results and Impacts*, most of the volume (*n*) derives from *Educational Results* and *Economic Impacts*, while *Social Impacts* is a less prevalent sub-category. *Context*, excluding *Reference Age* and *Gender*, shows the smallest totals (*n*) of the categories, mainly relying on coding units under the sub-category of *Reach and Transition*. *Resources and Processes*, in turn, is the strongest of the three categories in this dataset, with *Financials* leading as its most prevalent (*n*) sub-category.

Table 4.4 summarises, for each policy issue coding unit, the mean, minimum, and maximum of the proportion (*p*) of presence (coded 1 or 2) and focus (coded 2) across the period under analysis. As observed, the coding units display substantial heterogeneity. While some remain residual (e.g., *Social Outcomes*, *Disabilities and Giftedness*, *Facilities*, *Equipment*, *Class Size*), others are markedly prevalent (e.g., *Attainment*, *Employment*, *Budget Allocation*).

As summarized in Table 4.4 and further explored in Tables 4.5 and 4.6 and Figures 4.2 to 4.22, the longitudinal evolution of the *Education at a Glance* coding units between 1992 and 2023 reveals uneven behaviors between the coding units.

A primary triad of coding units functions as the framework's core, with a stable profile across the period and the highest presence and focus shares: *Budget Allocation* (p = 0.36), *Entry, Retention, and Transition* (p = 0.28), and *Attainment* (p = 0.25). *Employment* serves as a fourth pillar, with both the fourth-highest presence (p = 0.21) and focus share (p = 0.10) indicating a balanced profile, with it treated as a focal dimension in nearly half of its occurrences. The volatile trajectory of *Performance* stands in stark contrast to the steady behavior of core coding units. *Performance* exhibits a longitudinal evolution characterized by distinct high-activity phases, peaking at a presence share of p = 0.39, before a sharp decline to residual levels, reaching a minimum of p = 0.00 in 2023.

A second group concerns inputs and costs of education, showing some of the highest presences but a profile revealing a less dominant focal role across the period. While *Subsidies and Loans* (p = 0.19) and *Tuition Fees* (p = 0.18) exhibit similar presence results as *Employment*, they display a less pronounced focal profile (p = 0.03 and p = 0.02, respectively), suggesting they primarily serve as auxiliary variables to describe the public-private funding mix. Despite being granular elements characterising expenditure (public or private), and therefore also catalogued as *Budget Allocation*, these display values higher than those of most other categories.

A third group may be read as concerning the monitoring of the educational system's workforce, with both categories displaying different evolutionary paths. *Human Resources Salaries, Working Conditions, and Profession Attraction* has a presence share of p = 0.14, with more than half of the times appearing as a focal dimension (0.08). *Human Resources Numbers and Ratios* displays a presence of p = 0.09 and a focus share of p = 0.04. While *Human Resources Salaries and Working Conditions* followed a pronounced upward trajectory toward becoming a primary analytical focus, *Human Resources Numbers and Ratios* exhibited a more linear behavior. The former shifted from marginality to a consolidated coding unit, whereas the latter evolved into a constant auxiliary supporting metadata. This behavior signals an increasing attention on the attractiveness of professions within educational systems.

A fourth group may be identified among equity-oriented coding units, in which *Cultural Background* represents the most dynamic emergent theme, surging from total absence in the early 1990s to a peak presence of p = 0.44 in 2018. Both *Cultural Background* and *Socioeconomic Background* maintain auxiliary profiles, with focus shares of p = 0.04 and p = 0.02, respectively. Finally, *Disabilities and Giftedness* remains a marginal niche, with a presence of p = 0.01.

A fifth group, concerning *Organisational* subcategory is characterized by a stable but secondary presence, with *Instruction Time* maintaining the most consistent presence of $p = 0.11$. *Pedagogy and Evaluation* and *Class Size* display a presence of $p = 0.09$ and $p = 0.05$ (respectively).

The last group comprises highly specialized dimensions that, while less frequent, are characterized by an extreme analytical focus. *Earnings* ($p = 0.07$) and *Social Impacts* ($p = 0.03$) exhibit focal shares of $p = 0.06$ and $p = 0.03$, respectively, indicating that when these topics are introduced, they constitute almost the entire primary objective of the indicator.

The coding units analysed in the present subchapter are individually examined in the section below.

Attainment

Attainment (Figure 4.2) exhibits a mean presence of $p = 0.25$. Its minimum value is observed in 2001 ($p = 0.13$), while its maximum occurs in 2019 ($p = 0.41$). The indicator shows overall growth despite cyclical fluctuations across the period. Since 2008, approximately one in four indicators has used *Attainment* metadata. On average, $p = 0.18$ of all indicators per year assign a focus on *Attainment*. Almost three-quarters (0.72) of indicators that address *Attainment* treat it as a central dimension, as evidenced by the observed frequency of 163 indicators coded as 2 out of a total of 228 coded as 1 or 2.

Performance

Performance (Figure 4.3) exhibits a mean presence of $p = 0.17$, characterized by a cyclical trajectory with peak activity in 2015 (0.39) and a total decline to 0.0 by 2023. The longitudinal analysis reveals three distinct high-intensity phases (1996 – 1997, 2002 – 2008, and 2014 – 2016), suggesting that the theme evolves through periodic waves. Performance exhibits a mean focus of $p = 0.07$, peaking at $p = 0.21$ in 1996 but remaining largely absent as a primary dimension since 2010. The fact that only 0.40 of its occurrences are treated as a central dimension (65 out of 161) suggests that, within *Education at a Glance*, *Performance* metadata serves primarily as a supporting element to characterize other dimensions.

Employment

Employment (Figure 4.4) exhibits a mean presence of $p = 0.21$. The theme reached its peak in 1998 ($p = 0.31$) and demonstrates longitudinal stability; its presence never falls below the 0.10 threshold, exceeding $p = 0.20$ in 18 of the 30 analysed editions. While the indicator exhibits several local peaks, it follows an upward trajectory, frequently accounting for one-fifth or more of the total indicator pool. *Employment* holds a mean focus share of $p = 0.10$, reaching a maximum of $p = 0.19$ in 1998. Out of the 188 indicators where *Employment* is present $p = 0.48$ (91 occurrences) treat it as a focal dimension.

Earnings

Earnings (Figure 4.5) exhibits a mean presence of $p = 0.07$, with lower relevance until 2008 (below $p = 0.06$) and a peak of $p = 0.16$ in 2015. While it shows a moderate upward trend across the period, its weight has slightly declined in recent editions compared to the 2008 – 2015 phase. A defining trait of this coding unit is its high functional centrality: it is treated as a focal dimension in $p = 0.82$ of its occurrences (51 out of 62 indicators), as shown by the recurrent overlaps portrayed in Figure 4.5.

Social Impacts

Social Impacts (Figure 4.6) exhibits a mean presence of $p = 0.03$, appearing only five times before 2008 but becoming a constant, residual presence thereafter, reaching a longitudinal peak of $p = 0.07$ in 2011. The coding unit holds a mean focus share of $p = 0.03$. Despite its rarity, the metadata exhibits near-total functional centrality: it serves as a focal dimension in $p = 0.96$ of its occurrences. This indicates that when *Social Impacts* is included, it is almost exclusively treated as a primary focus.

Disabilities and Giftedness

Disabilities and Giftedness (Figure 4.7) exhibits a mean presence of $p = 0.01$, identifying it as a niche theme within *Education at a Glance*. Reaching a peak of $p = 0.07$ in 2021, this metadata was utilised in only six of the analysed editions, representing a marginal and non-constant coding unit. *Disabilities and Giftedness* remains peripheral, rarely assuming a primary role even when present.

Cultural Background

Cultural Background (Figure 4.8) exhibits a mean presence of $p = 0.12$, with an upward trend that peaks at $p = 0.44$ in 2018. The trajectory is defined by successive waves of higher salience, notably between 2009 – 2012, 2016 – 2019, and 2021 – 2022, exhibiting longitudinal volatility. The theme holds a mean focus share of $p = 0.04$. While its presence has grown, its distribution is uneven: out of 103 indicators in which *Cultural Background* is identified, only 36 occurrences ($p = 0.35$) treat it as a focal dimension. This indicates that the coding unit is more frequently utilized as auxiliary metadata.

Socioeconomic Background

Socioeconomic Background (Figure 4.9) exhibits a mean presence of $p = 0.06$, characterized by an absence in the first four editions and a peak of $p = 0.18$ in 2008. The theme first appeared in 1997 and has remained a fluctuating presence, exceeding the 0.10 threshold in 10 of the analysed editions. The theme holds a mean focus share of $p = 0.02$. It was entirely absent as a primary focus in half of the 30 editions, reaching a maximum focus of $p = 0.07$ in 2011. The distribution indicates a supporting role: out of the 53 indicators where *Socioeconomic Background* is identified, 18 occurrences ($p = 0.34$) treat it as a focal dimension. This confirms that the metadata is more frequently invoked as a secondary descriptive factor.

Entry, Retention and Transition

Entry, Retention, and Transition (Figure 4.10) exhibits a mean presence of $p = 0.28$, identifying it as one of the most central dimensions in the contemporary indicator framework. Present in the inaugural edition at $p = 0.25$, the theme reached a longitudinal peak of 0.52 in 2023. Despite intermittent setbacks in the mid-1990s, the category has followed a sustained long-term upward trajectory, exceeding the $p = 0.30$ threshold in 11 editions and falling below $p = 0.20$ only eight times across the 1992-2023 period. The theme holds a mean focus share of $p = 0.19$, the second highest in the series. A defining trait of this metadata is its strong functional centrality: out of 241 indicators where it is identified, 166 occurrences ($p = 0.69$) treat it as a focal dimension. This distribution confirms that this unit is predominantly regarded as a central structural axis.

Graduation and Completion

Graduation and Completion (Figure 4.11) exhibits a mean presence of $p = 0.11$. The theme reached its maximum presence of $p = 0.22$ in the inaugural 1992 edition and its minimum of 0.06 in 1998. While the indicator shows some fluctuations, it remains a stable coding unit within the series. The theme has a mean focus share of $p = 0.09$, the fifth highest. Out of the 103 indicators where *Graduation and Completion* is present, 79 occurrences ($p = 0.77$) treat it as a focal dimension.

Perceptions and Attitudes

Perceptions and Attitudes (Figure 4.12) exhibits a mean presence of $p = 0.07$, characterized by an upward trend from $p = 0.00$ in 1992 to a longitudinal peak of $p = 0.20$ in 2020. After being absent from five of the first ten editions, the metadata became more consistent in the latter half of the period, though its salience continues to fluctuate between years. This trajectory suggests that stakeholder opinions and attitudes have gained importance over time, evolving from a sporadic to a more regular presence. The theme holds a mean focus share of $p = 0.02$. This dimension was entirely absent as a primary focus in 19 of the 30 analysed editions. The functional distribution indicates an auxiliary role: out of the 64 indicators where Perceptions and Attitudes is identified, only 23 occurrences ($p = 0.36$) treat it as a focal dimension.

Facilities

Facilities (Figure 4.13) exhibits a mean presence of $p = 0.05$. The category is characterized by longitudinal stability. It is present in every analysed edition, suggesting that physical school infrastructure is recognized but remains a secondary thematic dimension. The theme was never used as a central analytical focus (coded as 2) in any of the analysed editions.

Equipment

Equipment (Figure 4.14) exhibits a mean presence of $p = 0.06$. Teaching and learning conditions are consistently recognized but remain a minor theme. The theme holds a mean focus share of approximately $p = 0.01$, confirming its status as peripheral metadata.

Human Resources Numbers and Ratios

Human Resources Numbers and Ratios (Figure 4.15) exhibits a mean presence of $p = 0.09$, characterized by an upward trend. While it appeared sporadically in early editions, it consolidated as a stable component from the late 2000s onwards, with 13 of its 15 double-digit appearances occurring in the second half of the review period. The theme holds a mean focus of $p = 0.04$, maintaining a relatively steady profile across editions. The distribution reveals a balanced use of metadata: of the 83 indicators where the coding unit is present, 38 occurrences ($p = 0.46$) treat it as a focal dimension.

Human Resources Salaries, Working Conditions and Profession Attraction

Human Resources Salaries, Working Conditions, and Profession Attraction (Figure 4.16) exhibits a mean presence of $p = 0.14$, following an upward trend. The theme's relevance is concentrated in the latter half of the series, where it exceeds $p = 0.15$ in 14 of the last 15 editions. This trajectory reflects a sustained increase in indicators focusing on teacher pay, workload, and professional attractiveness. The theme holds a mean focus of $p = 0.08$. Its distribution shows $p = 0.59$ of its occurrences (72 out of 123 indicators) treated as a focal dimension.

Budget Allocation

Budget Allocation (Figure 4.17) exhibits the highest mean presence among all analysed dimensions at $p = 0.36$, displaying an upward trend. Its centrality is further demonstrated by the fact that it exceeds 0.35 in 17 editions, with several values rising above $p = 0.40$ during the second half of the review period. The coding unit also has the highest mean focus at $p = 0.20$. The functional distribution shows a balanced profile: of the 316 indicators in which the coding unit is identified, 178 occurrences ($p = 0.56$) consider it a focal dimension.

Tuition Fees

Tuition Fees (Figure 4.18) exhibits a mean presence of $p = 0.18$, characterised by an upward trend across the review period. The coding unit consolidated from 1998 onwards, with 16 subsequent editions reporting values of $p = 0.20$ or higher. This trajectory suggests that, particularly from the 2000s, there has been a growing interest in the balance between public and private financing. The theme holds a mean focus share of $p = 0.02$.

Subsidies to Households and Loans (direct and indirect)

Subsidies to Households and Loans (Figure 4.19) maintains a mean presence of $p = 0.19$. The coding unit followed an upward trajectory from 1996, consistently exceeding $p = 0.15$ from 2001 until a sharp decline to $p = 0.05$ in 2023. This abrupt shift suggests that while support for students may remain embedded in other data, it ceased to be explicitly foregrounded in the final edition of the series. The theme holds a low mean focus share of $p = 0.03$. Out of 160 indicators where the metadata is present, only 26 occurrences ($p = 0.16$) treat it as a focal dimension.

Class Size

Class Size (Figure 4.20) exhibits a mean presence of $p = 0.05$. The theme follows an upward trajectory, peaking at $p = 0.12$ in 2011. The theme holds a mean focus share of p = 0.02. The distribution reveals a balanced profile: out of 41 indicators where *Class Size* is identified, 21 occurrences ($p = 0.51$) treat it as a focal dimension.

Instruction Time

Instruction Time (Figure 4.21) exhibits a mean presence of $p = 0.11$. The theme follows an upward trajectory. Its status as a steady area of interest is reflected in the fact that it reaches or exceeds the $p = 0.10$ threshold in 24 separate editions, falling below $p = 0.05$ in only three instances across the period. The theme holds a mean focus share of $p = 0.06$. Of the 93 indicators in which *Instruction Time* is identified, 54 occurrences ($p = 0.58$) treat it as a focal dimension.

Pedagogy and Evaluation

Pedagogy and Evaluation (Figure 4.22) exhibits a mean presence of $p = 0.09$. The metadata follows a fluctuating upward trend, reaching a peak of $p = 0.23$ in 2013. While the category consistently records moderate values, it experienced six distinct peaks above the $p = 0.15$ threshold, particularly between the late 2000s and mid-2010s. This pattern reflects an increasing, albeit uneven, interest in teaching and assessment methods from EaG, despite a decline in the most recent editions. The theme holds a mean focus share of $p = 0.02$.

Table 4.3

Longitudinal Distribution of Policy Issues by Category and Sub-category in Education at a Glance (1992–2023)

	92	93	95	96	97	98	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Total
Results and Impacts	13	17	22	30	32	28	17	20	23	25	21	22	18	20	24	18	21	31	28	16	26	35	24	21	19	23	19	19	15	14	661
Educational Results	8	11	12	22	21	15	9	9	14	17	15	14	11	13	15	10	10	18	14	8	17	22	17	11	11	12	10	10	7	6	228
Social Impacts	0	0	2	0	0	0	0	0	1	1	0	1	1	0	0	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	22
Economic Impacts	5	6	8	8	11	13	8	11	8	7	6	7	6	7	9	7	10	11	13	7	8	12	6	9	7	10	8	8	7	7	250
Context*	17	12	19	8	14	15	18	16	18	15	13	13	16	19	23	18	18	26	27	13	26	20	26	23	30	21	22	28	22	16	572
Individual*	0	0	0	0	0	1	1	2	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	8
Household	0	1	0	0	3	4	3	2	5	2	2	4	5	6	7	6	5	12	9	3	9	5	10	8	16	7	4	11	5	2	156
Reach Transition	17	11	12	8	10	9	12	12	10	9	9	8	11	9	14	8	11	11	15	10	13	11	13	13	13	12	13	13	14	13	344
Public Opinion	0	0	7	0	1	1	2	0	3	4	2	1	0	4	1	4	2	3	3	0	4	4	3	2	1	2	5	2	2	1	64
Resources and Processes	16	17	36	26	33	37	32	33	38	36	35	38	35	35	49	44	47	48	53	40	50	49	46	40	46	39	39	42	33	29	1141
School Infrastructure	3	3	2	2	2	5	5	4	6	3	3	2	3	2	4	2	2	4	4	2	2	3	3	2	4	2	2	4	3	2	90
Human Resources	4	4	9	7	8	7	6	5	4	7	5	6	4	4	8	8	7	8	9	7	10	8	9	7	8	7	6	9	7	8	206
Financials	9	10	13	9	15	18	15	18	22	21	21	21	21	23	26	24	27	27	28	23	26	26	26	24	27	24	23	24	21	14	626
Organisational	0	0	12	8	8	7	6	6	6	5	6	9	7	6	11	10	11	9	12	8	12	12	8	7	7	6	8	5	2	5	219

*Except *Reference Age (Minimum and Maximum)* and *Gender*

Table 4.4

Summary of Policy Issues Presence and Focus: descriptive statistics per number of Indicators in Education at a Glance (1992–2023)

	Presence			Focus		
Indicator	Mean *p*	Min *p*	Max *p*	Mean *p*	Min *p*	Max *p*
Attainment	0.25	0.13	0.41	0.18	0.10	0.26
Performance	0.17	0.0	0.39	0.07	0.00	0.21
Employment	0.21	0.11	0.31	0.10	0.06	0.19
Earnings	0.07	0.02	0.16	0.06	0.02	0.12
Social Impacts	0.03	0.00	0.07	0.03	0.00	0.07
Disabilities and Giftedness	0.01	0.00	0.07	0.0	0.00	0.03
Cultural Background	0.12	0.00	0.44	0.04	0.00	0.10
Socioeconomic Background	0.06	0.00	0.18	0.02	0.00	0.07
Entry, Reten. and Transition	0.28	0.12	0.52	0.19	0.12	0.25
Graduation and Completion	0.11	0.06	0.22	0.09	0.06	0.14
Perceptions and Attitudes	0.07	0.00	0.20	0.02	0.00	0.14
Facilities	0.05	0.02	0.07	0.00	0.00	0.00
Equipment	0.06	0.02	0.12	0.01	0.00	0.07
HR Numbers and Ratios	0.09	0.03	0.19	0.04	0.03	0.07
HR Salaries, W. Conditions	0.14	0.03	0.24	0.08	0.00	0.17
Budget Allocation	0.36	0.16	0.50	0.20	0.12	0.26
Tuition Fees	0.18	0.00	0.27	0.02	0.00	0.04
Subsidies and Loans	0.19	0.00	0.31	0.03	0.00	0.07
Class Size	0.05	0.00	0.12	0.02	0.00	0.05
Instruction Time	0.11	0.00	0.16	0.06	0.00	0.08
Pedagogy and Evaluation	0.09	0.00	0.23	0.02	0.00	0.12

Notes. Min = Minimum; Max = Maximum; *p* = Proportion.

Table 4.5

Policy Issues Metadata Presence (p) Across Education at a Glance (1992-2023) (continued)

	92	93	95	96	97	98	00	01	02	03	04	05	06	07	08
Attainment	0.14	0.18	0.20	0.23	0.27	0.25	0.16	0.13	0.21	0.24	0.24	0.21	0.19	0.19	0.25
Performance	0.08	0.11	0.04	0.28	0.24	0.17	0.13	0.16	0.21	0.26	0.28	0.29	0.22	0.31	0.29
Employment	0.11	0.13	0.14	0.16	0.22	0.31	0.23	0.29	0.21	0.18	0.17	0.21	0.19	0.23	0.21
Earnings	0.03	0.03	0.02	0.02	0.05	0.06	0.03	0.06	0.03	0.03	0.03	0.04	0.04	0.04	0.11
Social Impacts	0	0	0.04	0	0	0	0	0	0.03	0.03	0	0.04	0.04	0	0
Disabilities and Giftedness	0	0	0	0	0	0.03	0.03	0.06	0	0	0	0	0	0	0.04
Cultural Background	0	0.03	0	0	0.05	0.03	0.06	0.03	0.09	0.03	0.07	0.04	0.07	0.15	0.07
Socioeconomic Background	0	0	0	0	0.02	0.08	0.03	0.03	0.06	0.03	0	0.11	0.11	0.08	0.18
Entry, Retention and Transition	0.25	0.18	0.14	0.12	0.15	0.19	0.32	0.26	0.18	0.15	0.17	0.21	0.26	0.27	0.32
Graduation and Completion	0.22	0.11	0.1	0.07	0.10	0.06	0.06	0.13	0.12	0.12	0.14	0.07	0.15	0.08	0.18
Perceptions and Attitudes	0	0	0.14	0	0.02	0.03	0.06	0	0.09	0.12	0.07	0.04	0	0.15	0.04
Facilities	0.06	0.05	0.02	0.02	0.02	0.06	0.06	0.03	0.06	0.03	0.03	0.04	0.04	0.04	0.07
Equipment	0.03	0.03	0.02	0.02	0.02	0.08	0.10	0.1	0.12	0.06	0.07	0.04	0.07	0.04	0.07
HR Numbers and Ratios	0.08	0.08	0.08	0.05	0.12	0.08	0.03	0.06	0.03	0.06	0.07	0.11	0.04	0.04	0.14
HR Salaries and Working Conditions	0.03	0.03	0.1	0.12	0.07	0.11	0.16	0.10	0.09	0.15	0.10	0.11	0.11	0.12	0.14
Budget Allocation	0.25	0.24	0.22	0.16	0.20	0.31	0.26	0.32	0.27	0.26	0.34	0.32	0.33	0.38	0.46
Tuition Fees	0	0.03	0.04	0	0.07	0.14	0.13	0.10	0.18	0.18	0.21	0.21	0.19	0.23	0.21
Subsidies and Loans	0	0	0	0.05	0.10	0.06	0.10	0.16	0.21	0.18	0.17	0.21	0.26	0.27	0.25
Class Size	0	0	0	0	0.10	0	0	0	0.03	0.03	0.03	0.07	0.04	0.04	0.07
Instruction Time	0	0	0.06	0.09	0.07	0.11	0.10	0.13	0.06	0.06	0.10	0.14	0.11	0.12	0.14
Pedagogy and Evaluation	0	0	0.18	0.09	0.02	0.08	0.10	0.06	0.09	0.06	0.07	0.11	0.11	0.08	0.18

Table 4.5

Policy Issues Metadata Presence (p) Across Education at a Glance (1992-2023) (continuation)

	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Attainment	0.24	0.35	0.31	0.32	0.28	0.27	0.32	0.29	0.25	0.30	0.41	0.36	0.30	0.26	0.29
Performance	0.16	0.04	0.31	0.13	0.04	0.30	0.39	0.32	0.14	0.11	0.04	0.04	0.07	0.04	0
Employment	0.20	0.27	0.24	0.29	0.16	0.17	0.23	0.14	0.21	0.19	0.26	0.24	0.19	0.22	0.29
Earnings	0.08	0.12	0.14	0.13	0.12	0.10	0.16	0.07	0.11	0.07	0.11	0.08	0.11	0.09	0.05
Social Impacts	0.04	0.04	0.07	0.03	0.04	0.03	0.03	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.05
Disabilities and Giftedness	0	0	0	0	0	0	0	0	0	0	0	0	0.07	0.04	0
Cultural Background	0.20	0.19	0.31	0.16	0.12	0.13	0.13	0.25	0.18	0.44	0.19	0.12	0.30	0.17	0.10
Socioeconomic Background	0.04	0	0.10	0.13	0	0.17	0.03	0.11	0.11	0.15	0.07	0.04	0.11	0.04	0
Entry, Retention and Transition	0.20	0.23	0.28	0.39	0.28	0.37	0.29	0.29	0.36	0.37	0.33	0.40	0.37	0.48	0.52
Graduation and Completion	0.12	0.19	0.10	0.10	0.12	0.07	0.06	0.18	0.11	0.11	0.11	0.12	0.11	0.13	0.10
Perceptions and Attitudes	0.16	0.08	0.10	0.10	0	0.13	0.13	0.11	0.07	0.04	0.07	0.20	0.07	0.09	0.05
Facilities	0.04	0.04	0.07	0.06	0.04	0.03	0.03	0.04	0.04	0.07	0.04	0.04	0.07	0.04	0.05
Equipment	0.04	0.04	0.07	0.06	0.04	0.03	0.06	0.07	0.04	0.07	0.04	0.04	0.07	0.09	0.05
HR Numbers and Ratios	0.08	0.12	0.10	0.13	0.12	0.13	0.10	0.11	0.11	0.15	0.11	0.08	0.11	0.09	0.19
HR Salaries and Working Conditions	0.24	0.15	0.17	0.16	0.16	0.20	0.16	0.21	0.14	0.15	0.15	0.16	0.22	0.22	0.19
Budget Allocation	0.44	0.50	0.45	0.45	0.44	0.43	0.35	0.39	0.39	0.48	0.41	0.48	0.44	0.43	0.38
Tuition Fees	0.24	0.23	0.24	0.19	0.24	0.27	0.23	0.25	0.21	0.22	0.19	0.20	0.19	0.26	0.24
Subsidies and Loans	0.28	0.31	0.24	0.26	0.24	0.17	0.26	0.29	0.25	0.30	0.30	0.24	0.26	0.22	0.05
Class Size	0.08	0.12	0.07	0.06	0.08	0.10	0.06	0.07	0.07	0.07	0.07	0.04	0.07	0	0.05
Instruction Time	0.16	0.15	0.14	0.13	0.12	0.10	0.10	0.14	0.14	0.15	0.11	0.16	0.11	0.04	0.14
Pedagogy and Evaluation	0.16	0.15	0.10	0.19	0.12	0.20	0.23	0.07	0.04	0.04	0.04	0.12	0	0.04	0.05

Table 4.6

Policy Issues Metadata Focus (p) Across Education at a Glance (1992-2023) (continued)

	92	93	95	96	97	98	00	01	02	03	04	05	06	07	08
Attainment	0.14	0.18	0.18	0.23	0.24	0.19	0.10	0.10	0.15	0.18	0.24	0.18	0.15	0.15	0.18
Performance	0.08	0.11	0.02	0.21	0.12	0.14	0.03	0.13	0.15	0.18	0.14	0.11	0.15	0.08	0.04
Employment	0.06	0.11	0.08	0.12	0.17	0.19	0.13	0.13	0.12	0.12	0.10	0.11	0.07	0.08	0.07
Earnings	0.03	0.03	0.02	0.02	0.05	0.06	0.03	0.06	0.03	0.03	0.03	0.04	0.04	0.04	0.07
Social Impacts	0	0	0.04	0	0	0	0	0	0.03	0	0	0.04	0.04	0	0
Disabilities and Giftedness	0	0	0	0	0	0.03	0.03	0.03	0	0	0	0	0	0	0
Cultural Background	0	0.03	0	0	0.05	0.03	0.06	0.03	0.06	0.03	0.03	0.04	0.04	0.08	0.04
Socioeconomic Background	0	0	0	0	0.02	0.06	0.03	0.03	0.03	0	0	0	0.04	0.04	0.04
Entry, Retention and Transition	0.17	0.18	0.14	0.12	0.15	0.17	0.23	0.23	0.18	0.15	0.14	0.18	0.19	0.19	0.25
Graduation and Completion	0.11	0.08	0.06	0.07	0.10	0.06	0.06	0.06	0.09	0.09	0.10	0.07	0.07	0.08	0.14
Perceptions and Attitudes	0	0	0.14	0	0.02	0	0	0	0.09	0.06	0.03	0	0	0.08	0.04
Facilities	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Equipment	0	0	0	0	0	0.03	0.03	0.06	0.06	0.03	0	0	0.04	0	0
HR Numbers and Ratios	0.06	0.05	0.06	0.05	0.07	0.03	0.03	0.03	0.03	0.06	0.03	0.04	0.04	0.04	0.04
HR Salaries and Working Conditions	0	0	0.06	0.07	0.05	0.06	0.10	0.06	0.06	0.09	0.07	0.07	0.07	0.08	0.07
Budget Allocation	0.22	0.21	0.18	0.14	0.12	0.17	0.16	0.16	0.15	0.15	0.17	0.18	0.19	0.23	0.21
Tuition Fees	0	0	0	0	0	0	0	0	0	0	0	0	0.04	0.04	0.04
Subsidies and Loans	0	0	0	0	0.02	0	0.06	0.06	0.03	0.03	0.03	0.04	0.04	0.04	0.04
Class Size	0	0	0	0	0.05	0	0	0	0	0.03	0.03	0.04	0.04	0.04	0.04
Instruction Time	0	0	0.04	0.07	0.02	0.06	0.06	0.06	0.06	0.06	0.07	0.07	0.07	0.08	0.07
Pedagogy and Evaluation	0	0	0.12	0.05	0.02	0	0	0.03	0.03	0	0.03	0	0	0.04	0.04

Table 4.6

Policy Issues Metadata Focus (p) Across Education at a Glance (1992-2023) (continuation)

	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Attainment	0.20	0.19	0.21	0.19	0.20	0.17	0.26	0.21	0.18	0.15	0.15	0.16	0.15	0.13	0.14
Performance	0.08	0	0.07	0.03	0	0.03	0.06	0	0	0	0	0	0	0	0
Employment	0.08	0.08	0.10	0.10	0.08	0.07	0.13	0.07	0.07	0.07	0.07	0.08	0.07	0.09	0.10
Earnings	0.08	0.12	0.10	0.10	0.08	0.07	0.10	0.07	0.07	0.07	0.07	0.08	0.07	0.04	0.05
Social Impacts	0.04	0.04	0.07	0.03	0.04	0.03	0.03	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.05
Disabilities and Giftedness	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cultural Background	0.04	0.04	0.10	0.06	0.04	0.03	0.03	0.07	0.04	0.07	0.04	0.04	0.04	0.04	0.05
Socioeconomic Background	0	0	0.07	0.03	0	0.07	0.03	0.04	0.04	0.04	0	0	0	0	0
Entry, Retention and Transition	0.16	0.19	0.17	0.23	0.16	0.20	0.16	0.18	0.21	0.22	0.22	0.20	0.19	0.17	0.24
Graduation and Completion	0.08	0.12	0.10	0.06	0.12	0.07	0.06	0.11	0.11	0.11	0.11	0.08	0.07	0.09	0.10
Perceptions and Attitudes	0.12	0	0.03	0.03	0	0	0.03	0	0	0	0	0	0	0	0
Facilities	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Equipment	0	0	0	0	0	0	0.03	0	0	0	0	0	0	0	0
HR Numbers and Ratios	0.04	0.04	0.03	0.03	0.04	0.03	0.03	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.05
HR Salaries and Working Conditions	0.12	0.08	0.07	0.06	0.08	0.13	0.10	0.11	0.07	0.11	0.11	0.08	0.15	0.17	0.14
Budget Allocation	0.24	0.23	0.21	0.23	0.24	0.20	0.19	0.21	0.21	0.22	0.22	0.20	0.26	0.22	0.24
Tuition Fees	0.04	0.04	0.03	0.03	0.04	0.03	0.03	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0
Subsidies and Loans	0.04	0.04	0.03	0.03	0.04	0.03	0.03	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0
Class Size	0.04	0.04	0.03	0.03	0.04	0.03	0.03	0.04	0.04	0.04	0.04	0.04	0.04	0	0
Instruction Time	0.08	0.08	0.07	0.06	0.08	0.07	0.06	0.07	0.07	0.07	0.07	0.08	0.07	0.04	0.05
Pedagogy and Evaluation	0	0.08	0	0	0	0	0.03	0	0	0	0	0	0	0	0.05

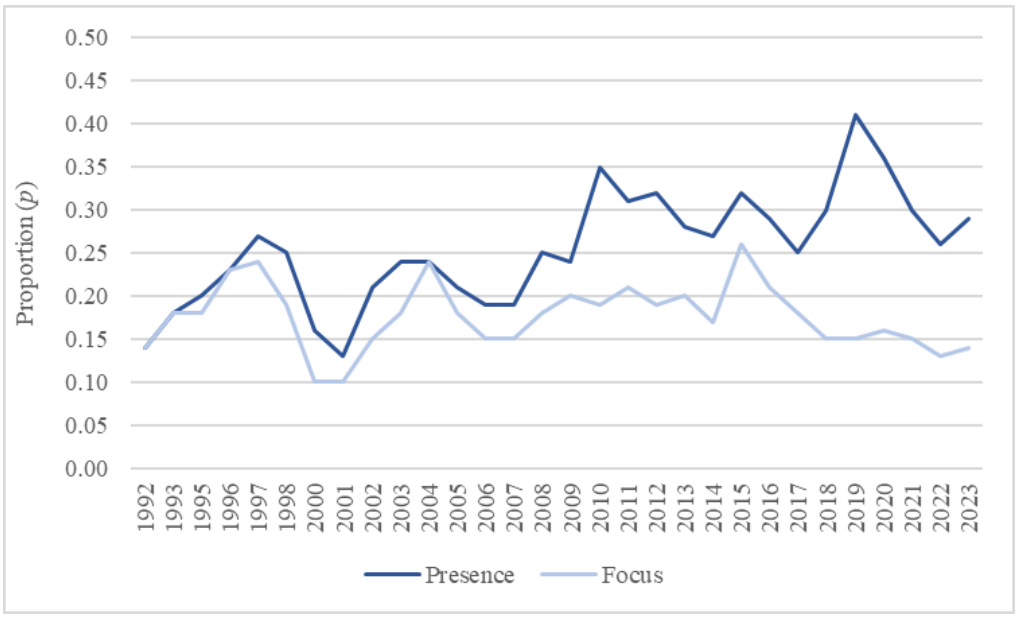


Figure 4.2

Attainment: Prevalence per Total Indicators in Education at a Glance (1992–2023)

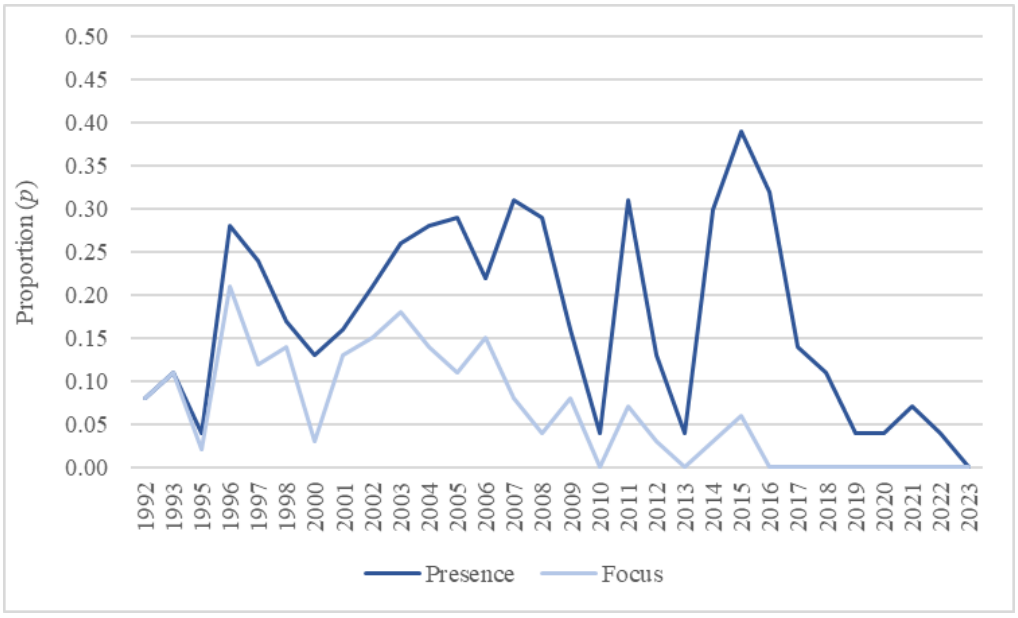


Figure 4.3

Performance: Prevalence per Total Indicators in Education at a Glance (1992–2023)

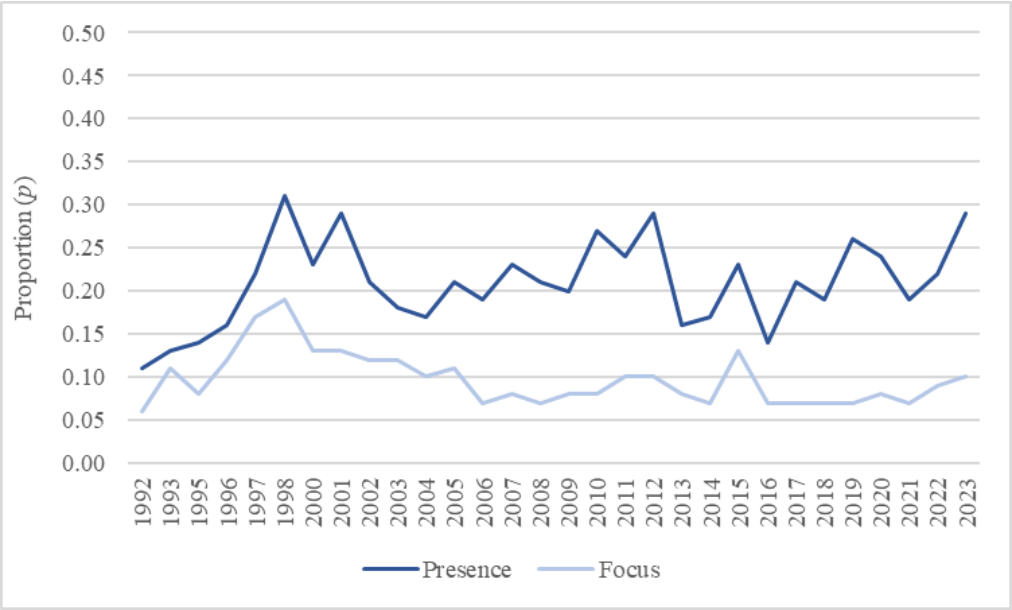


Figure 4.4

Employment: Prevalence per Total Indicators in Education at a Glance (1992–2023)

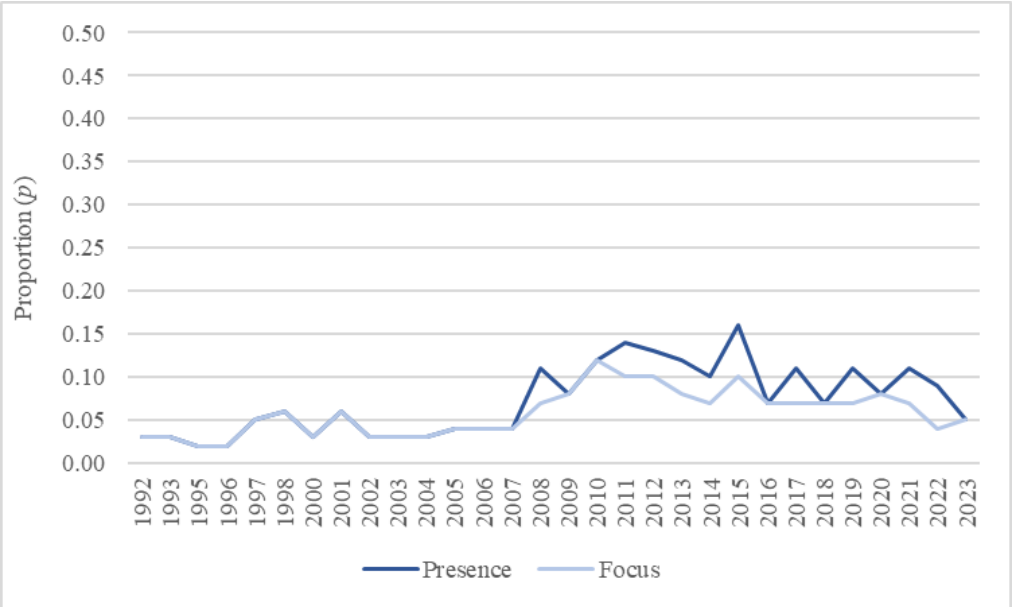


Figure 4.5

Earnings: Prevalence per Total Indicators in Education at a Glance (1992–2023)

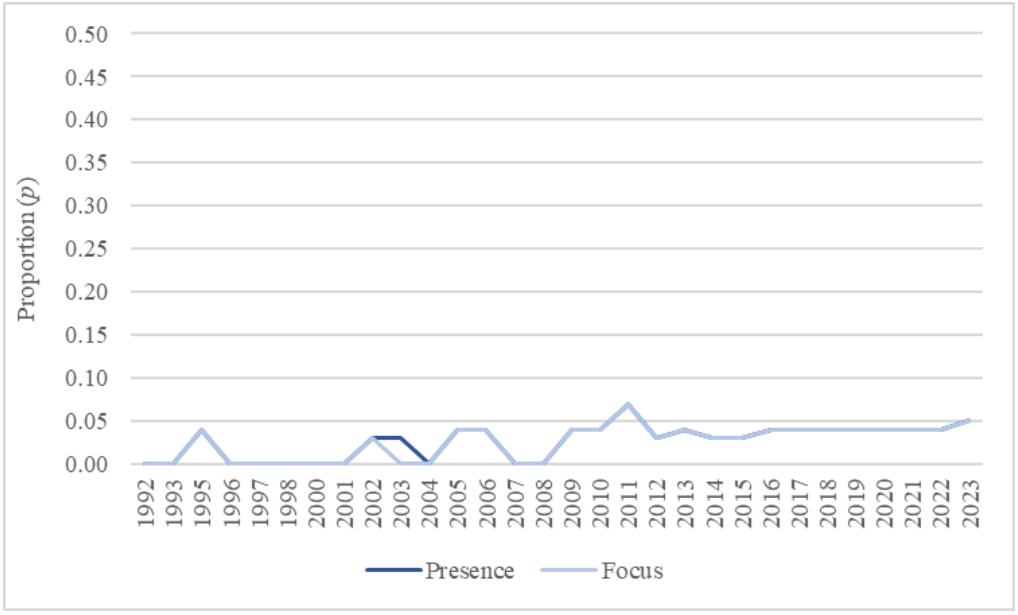


Figure 4.6

Social Impacts: Prevalence per Total Indicators in Education at a Glance (1992–2023)

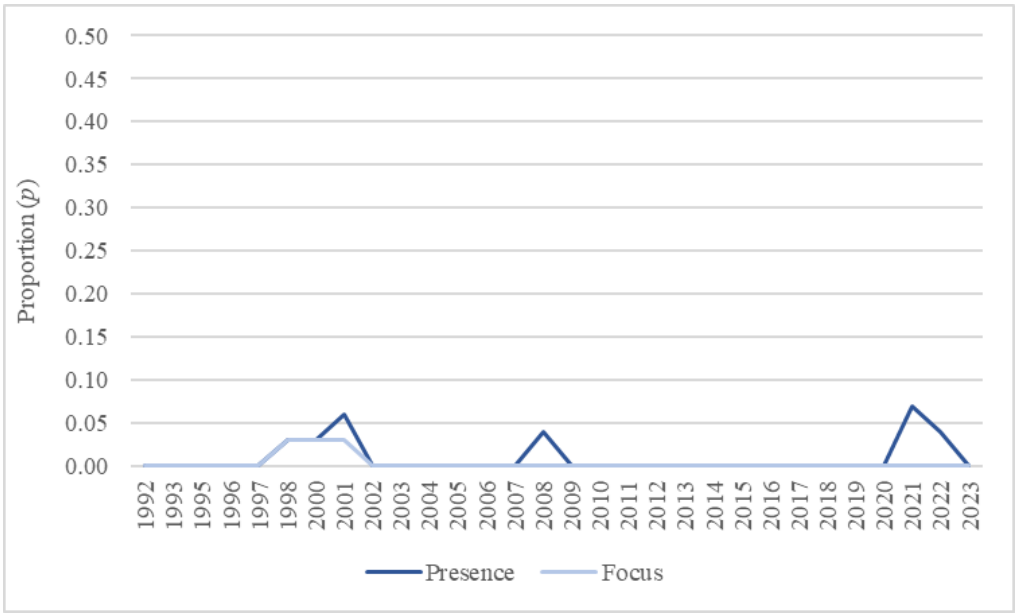


Figure 4.7

Disabilities and Giftedness: Prevalence per Total Indicators in Education at a Glance (1992–2023)

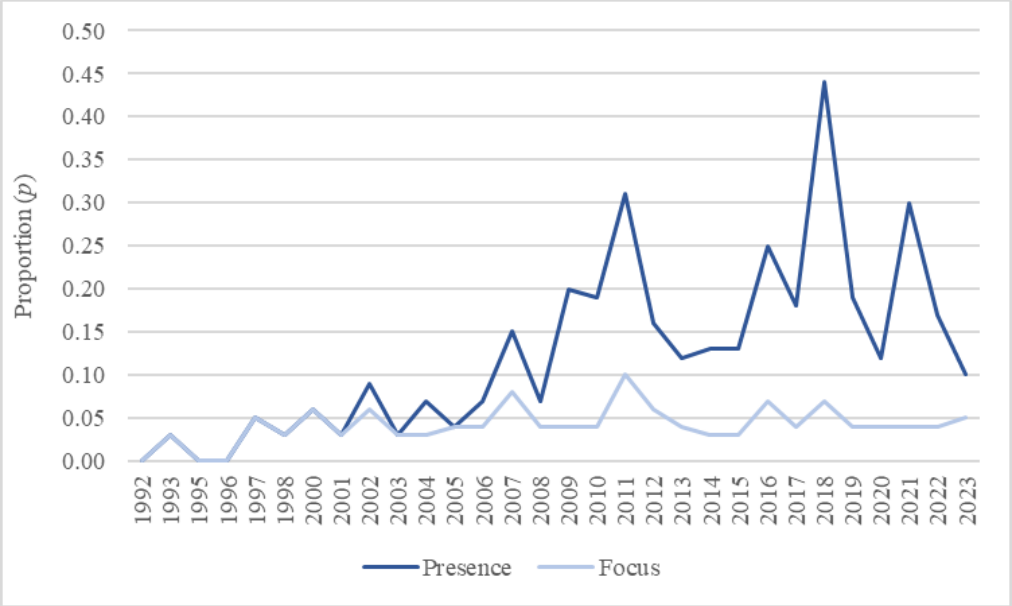


Figure 4.8

Cultural Background: Prevalence per Total Indicators in Education at a Glance (1992–2023)

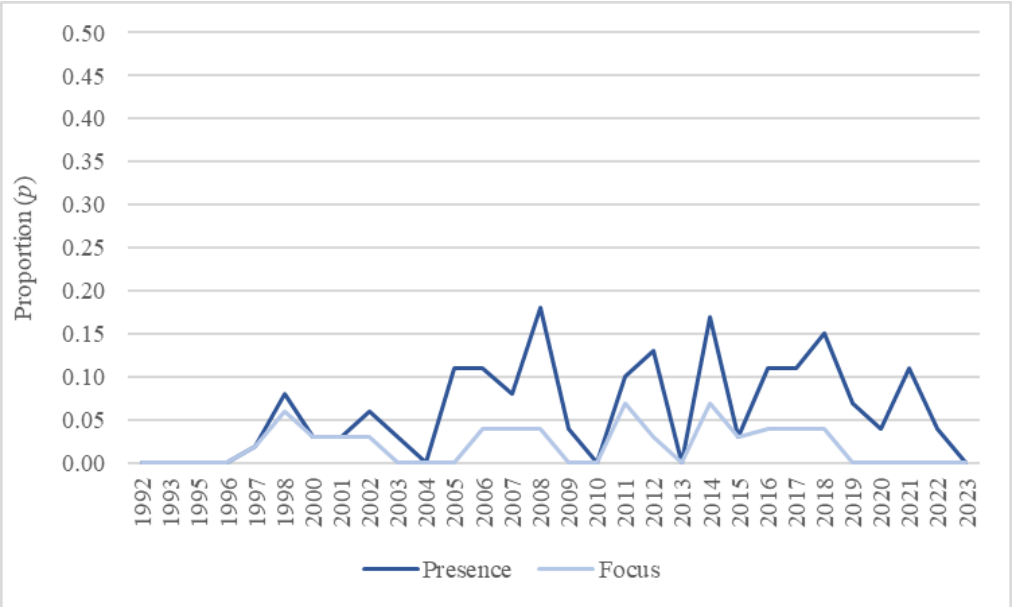


Figure 4.9

Socioeconomic Background: Prevalence per Total Indicators in Education at a Glance (1992–2023)

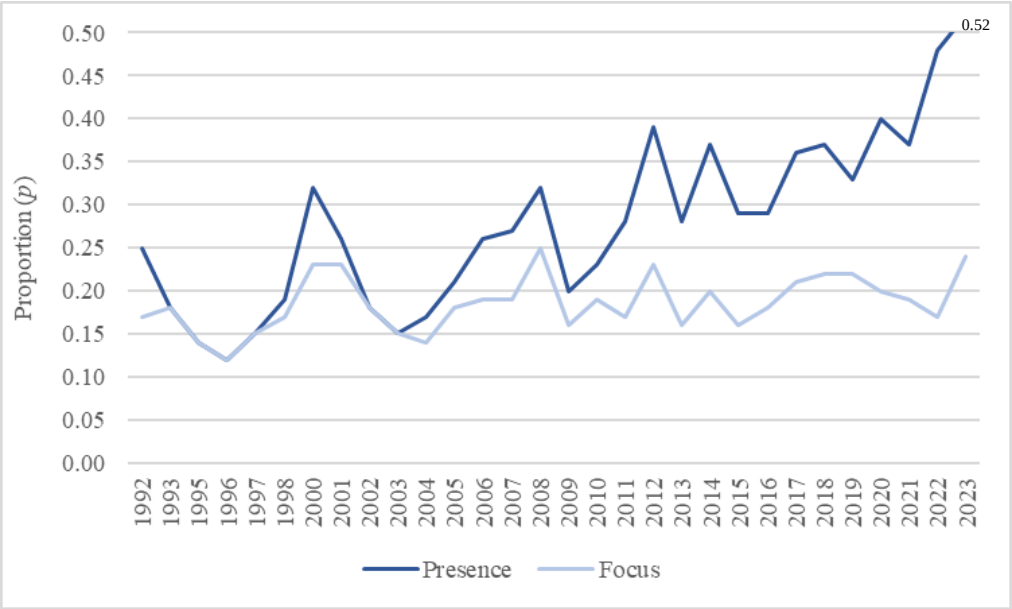


Figure 4.10

Entry, Retention and Transition: Prevalence per Total Indicators in Education at a Glance (1992–2023)

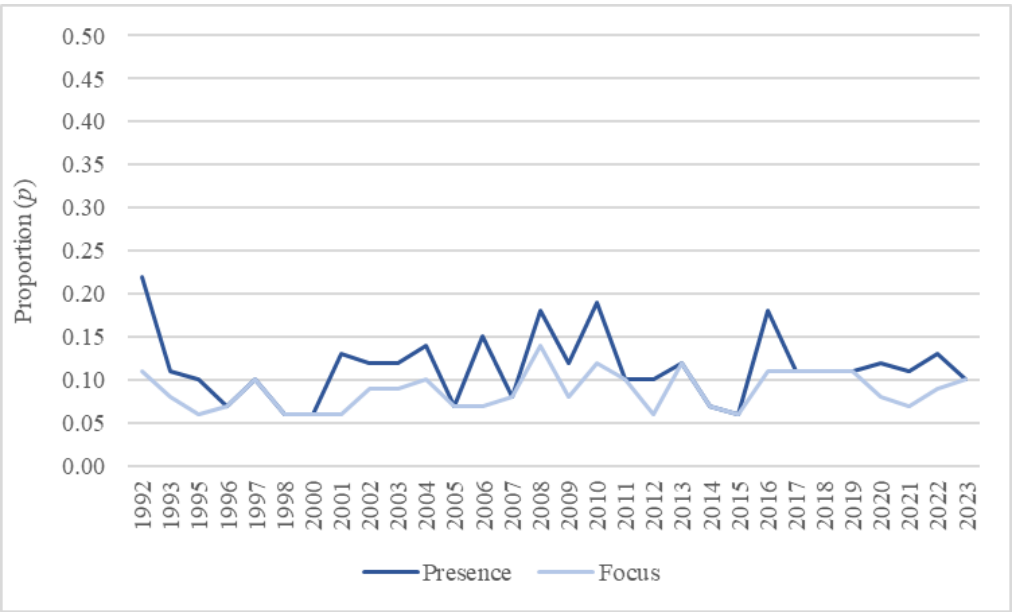


Figure 4.11

Graduation and Completion: Prevalence per Total Indicators in Education at a Glance (1992–2023)

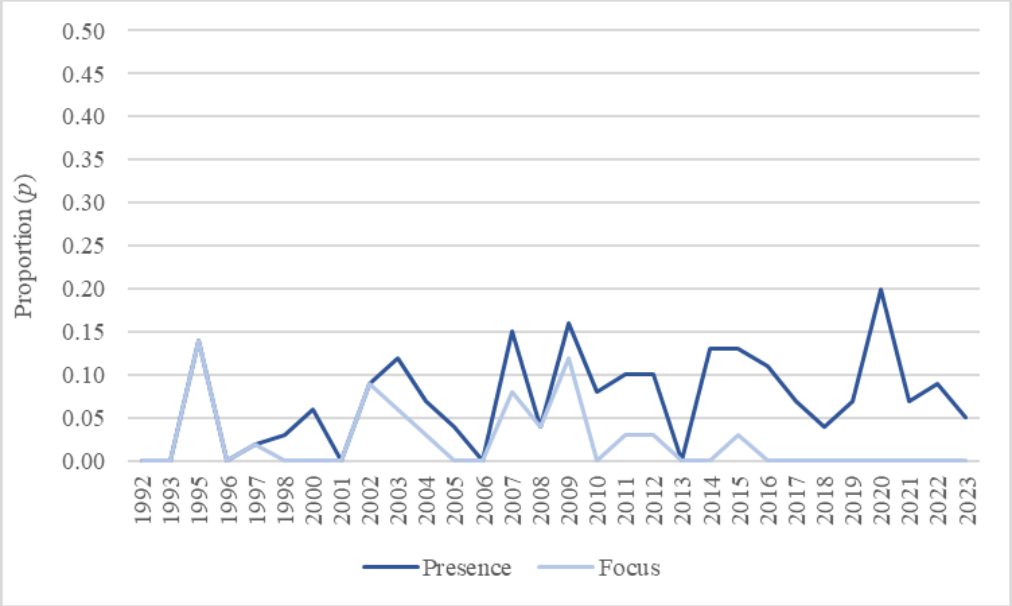


Figure 4.12

Perceptions and Attitudes: Prevalence per Total Indicators in Education at a Glance (1992–2023)

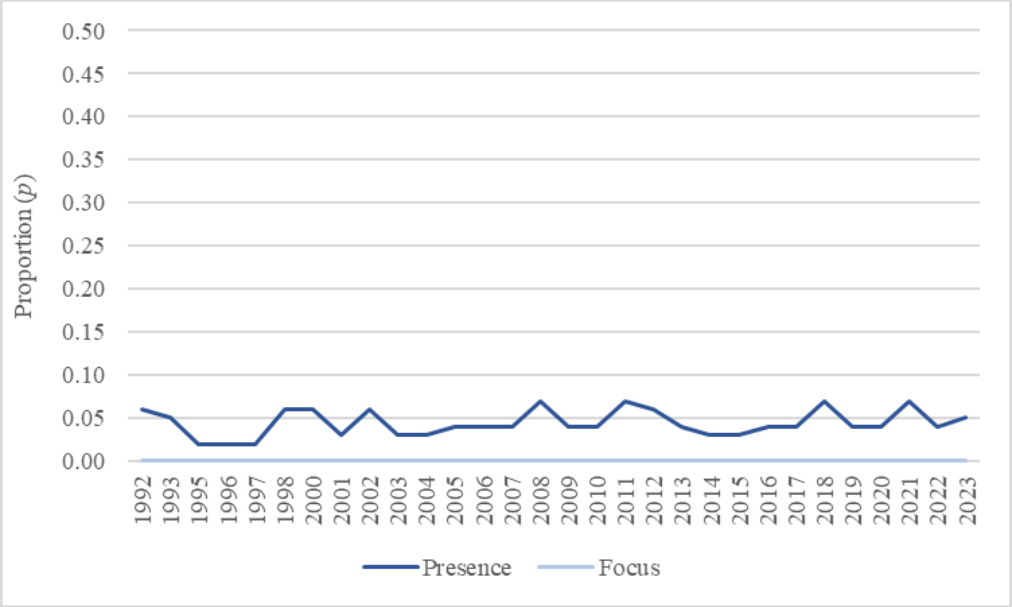


Figure 4.13

Facilities: Prevalence per Total Indicators in Education at a Glance (1992–2023)

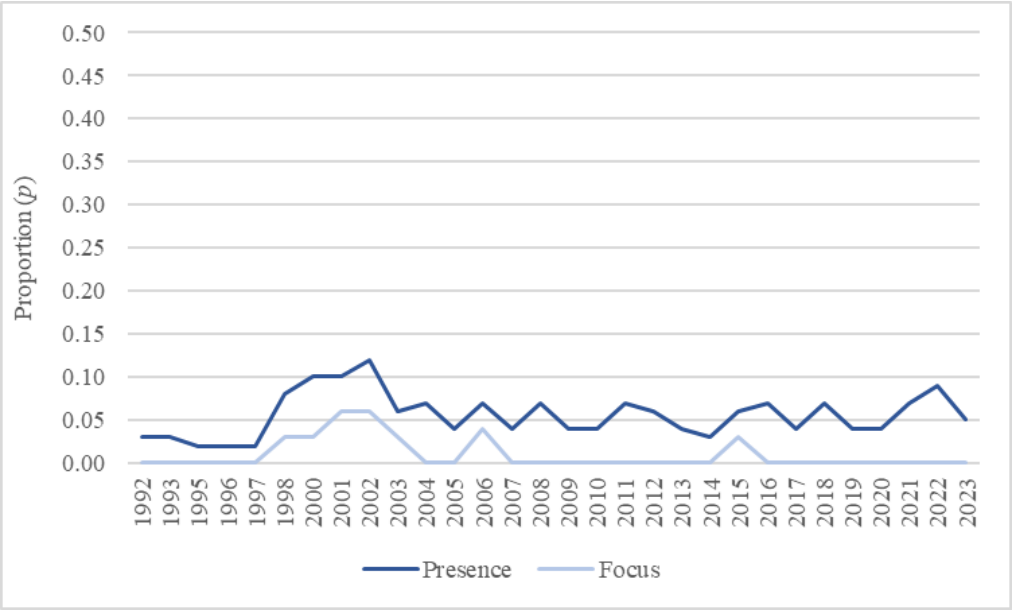


Figure 4.14

Equipment: Prevalence per Total Indicators in Education at a Glance (1992–2023)

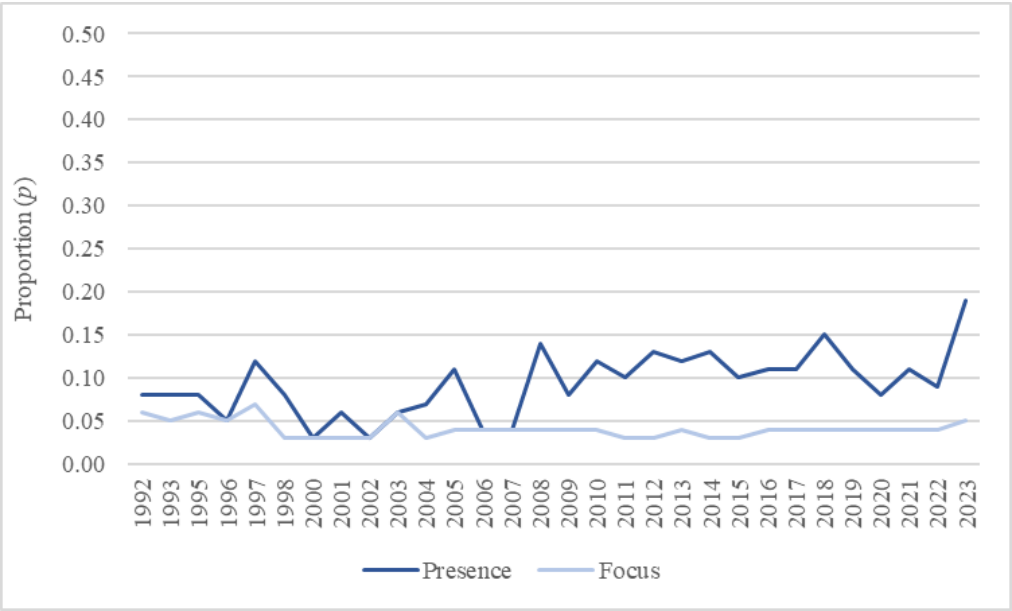


Figure 4.15

Human Resources Numbers and Ratios: Prevalence per Total Indicators in Education at a Glance (1992–2023)

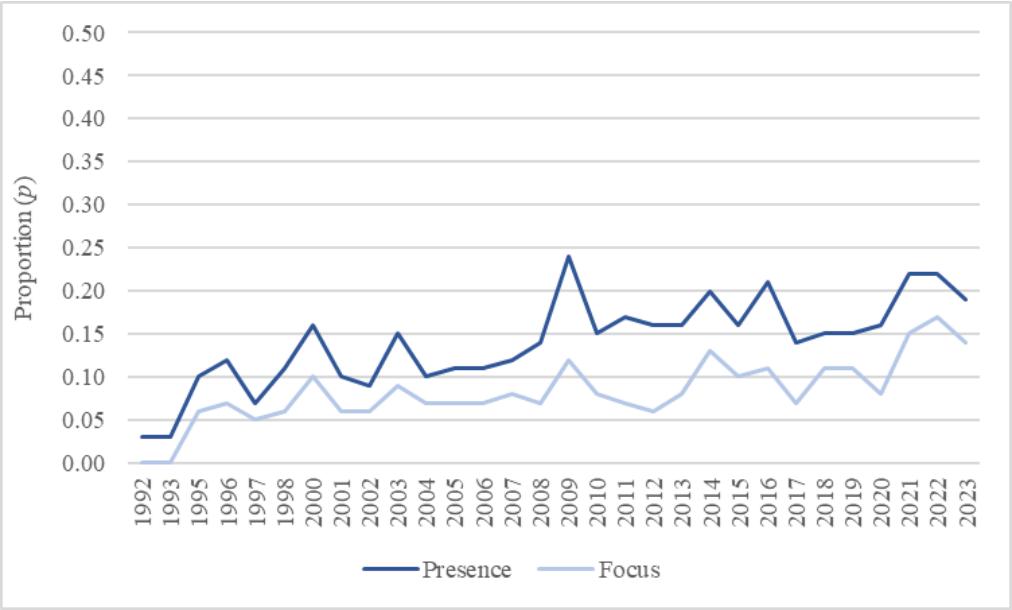


Figure 4.16

Human Resources Salaries, Working Conditions and Profession Attraction: Prevalence per Total Indicators in Education at a Glance (1992–2023)

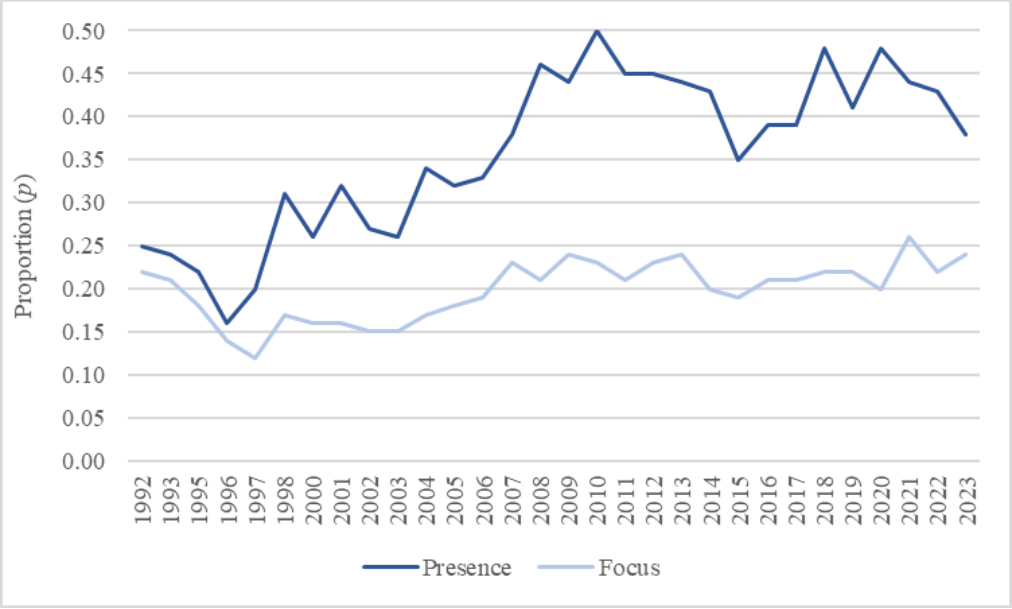


Figure 4.17

Budget: Prevalence per Total Indicators in Education at a Glance (1992–2023)

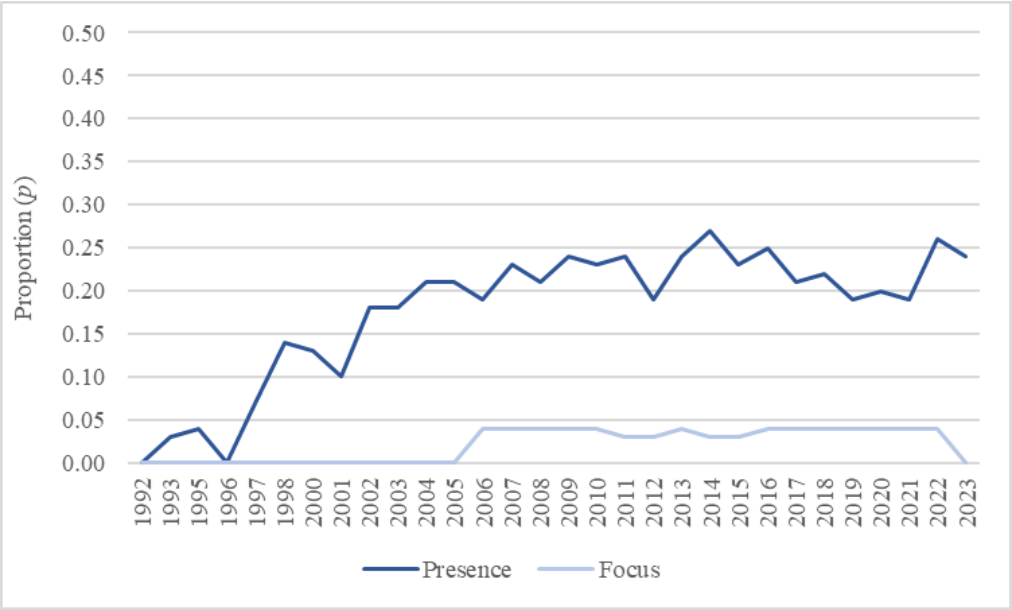


Figure 4.18

Tuition Fees: Prevalence per Total Indicators in Education at a Glance (1992–2023)

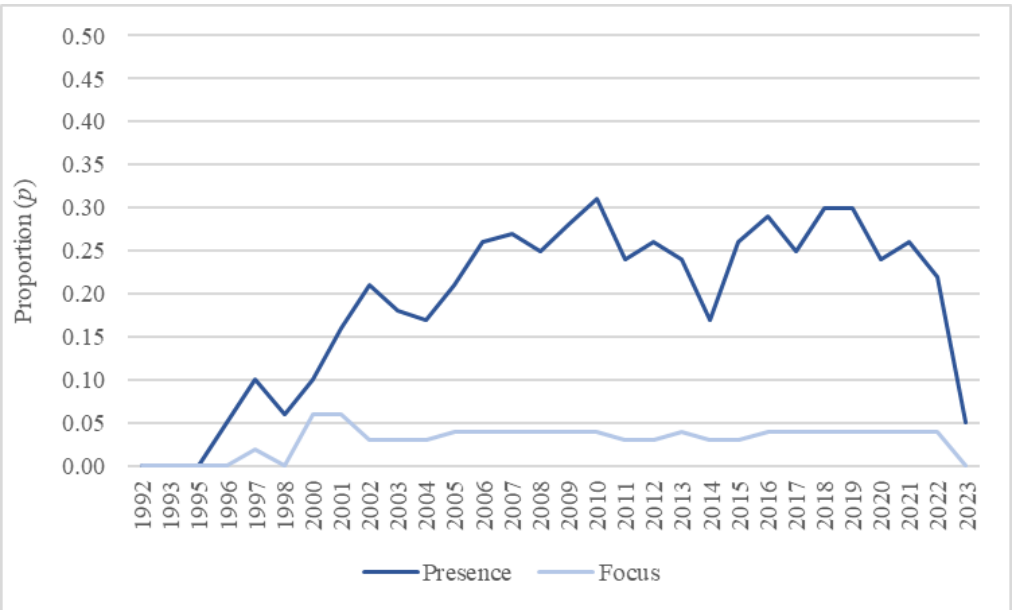


Figure 4.19

Subsidies to Household and Loans: Prevalence per Total Indicators in Education at a Glance (1992–2023)

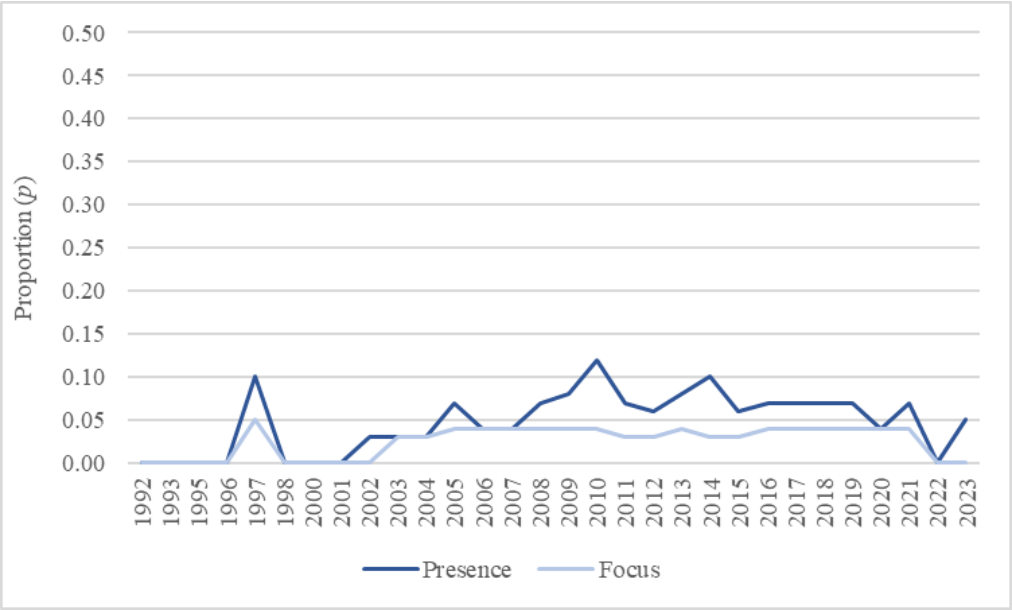


Figure 4.20

Class Size: Prevalence per Total Indicators in Education at a Glance (1992–2023)

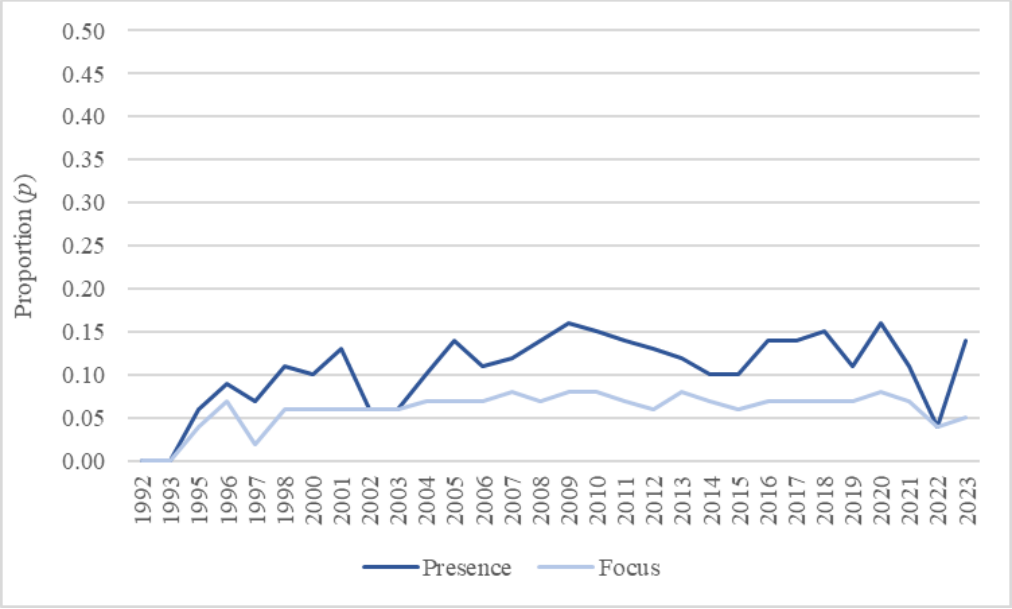


Figure 4.21

Instruction Time: Prevalence per Total Indicators in Education at a Glance (1992–2023)

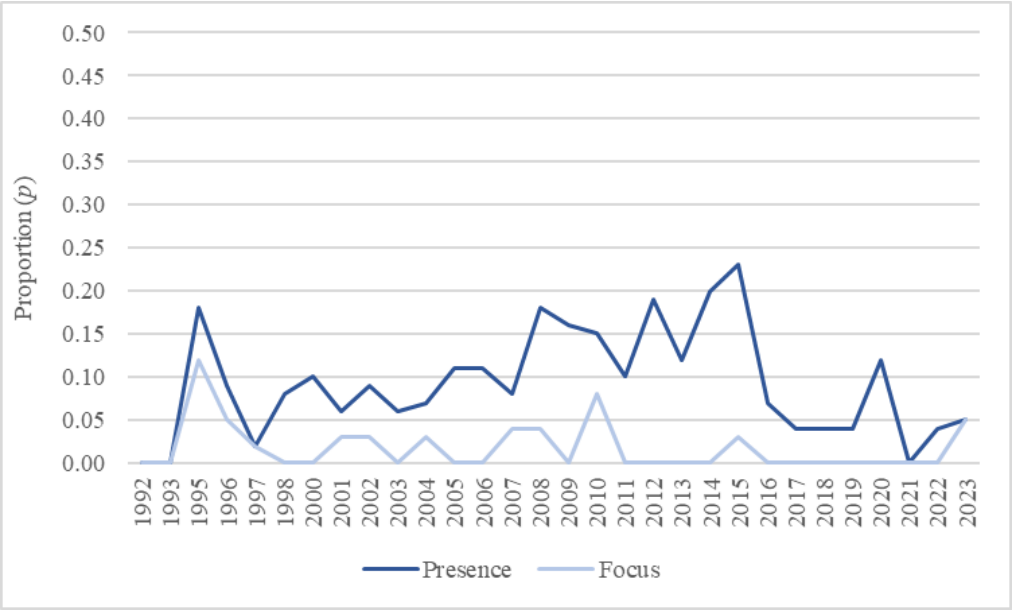


Figure 4.22

Pedagogy and Evaluation: Prevalence per Total Indicators in Education at a Glance (1992–2023)

4.2.2 *Scope of Analysis*

Scope of Analysis considers 10 coding units that characterize the focus of policy issues metadata. It focuses on five main areas: the level of education, fields of study and education domains, the actors in the education system, their reference ages, and gender[50].

Educational Level

The coding system draws on the ISCED levels (see Table 4.7), aggregated into three broad groups: primary education (ISCED 0 to 1), secondary and post-secondary non-tertiary education (ISCED 2 to 4), and tertiary education (ISCED 5 to 8).

The pervasive use of ISCED within the indicator system is evidenced by its coverage: of 913 indicators analysed, only 4.9% (n = 45) do not incorporate educational level coding.

The annual distribution of ISCED levels is detailed in Table 4.7. The values represent the proportion (p) of the total indicator set for each year in which an ISCED group is present (non-

[50] It should be noted that *Age of Reference (Minimum and Maximum)* and *Gender*, while framed under the category *Context* are analysed together with *Scope of Analysis* due to their functional role as demographic descriptors.

zero) versus when it serves as the central subject of measurement (coded as 2). As illustrated in Figure 4.23, the presence of ISCED levels has evolved toward a convergence across the three groups. This stands in stark contrast to the initial phase of the series, which was characterised by the dominance of ISCED 2-4 (p = 0.69) and a marked relative under-representation of ISCED 0-1 (p = 0.47). However, this apparent convergence masks a differentiated utilization profile: as shown in Figure 4.24, ISCED 0-1 remains under-represented as a primary focus throughout the entire series. These results suggest that the convergence stems from its inclusion as a background element rather than an increase in specific measurement incidence. Conversely, the data reveals a clear trend toward focus-level convergence between ISCED 2-4 and ISCED 5-8.

One fundamental question is whether the pervasive use of ISCED, with every group consistently maintaining a presence above p = 0.50, can be attributed to the publication's predominantly macro perspective, which inherently tends to encompass all three ISCED groupings. Indeed, a substantial number of metrics are cross-sectional by design: 423 indicators, representing 48.7% of the 868 indicators with explicit ISCED coding, include all three levels simultaneously. In contrast, only 256 indicators (29.4%) focus exclusively on a single ISCED grouping.

The high proportion of indicators that cover all three ISCED levels suggests that *Education at a Glance* prioritizes a holistic, system-wide perspective. This choice implies that level-specific nuances, such as those intrinsic to early childhood or upper secondary education, may be less emphasized in the publication's design and reporting. Consequently, this raises a question regarding the distribution of analytical granularity across the ISCED groupings.

Beyond broad, system-level interpretations, it is essential to determine which specific grouping is subjected to more fine-grained analysis throughout the EaG editions. Table 4.7 reveals a stark imbalance in level-specific attention. Among the 256 indicators referencing a single ISCED grouping focus, scrutiny is heavily concentrated in ISCED 5-8 (p = 0.47) and ISCED 2-4 (p = 0.43), while ISCED 0-1 remains marginal (p = 0.10). These results demonstrate that while EaG maintains an apparent equilibrium at the macro-systemic level, it consistently directs more granular analysis toward secondary and particularly tertiary education, while early childhood and initial schooling receive comparatively limited targeted attention.

Table 4.7

ISCED Prevalence (p) per Total Indicators in Education at a Glance (1992–2023)

Edition	ISCED 0-1		ISCED 2-4		ISCED 5-8	
	Presence *p*	Focus *p*	Presence *p*	Focus *p*	Presence *p*	Focus *p*
1992	0.47	0.47	0.69	0.69	0.58	0.58
1993	0.50	0.50	0.74	0.74	0.58	0.58
1995	0.61	0.61	0.73	0.73	0.51	0.51
1996	0.60	0.53	0.63	0.63	0.49	0.49
1997	0.61	0.51	0.78	0.73	0.61	0.61
1998	0.67	0.42	0.78	0.75	0.56	0.56
2000	0.61	0.52	0.74	0.74	0.52	0.48
2001	0.61	0.48	0.77	0.77	0.52	0.52
2002	0.56	0.34	0.88	0.88	0.56	0.53
2003	0.68	0.47	0.82	0.82	0.53	0.47
2004	0.76	0.52	0.86	0.83	0.59	0.55
2005	0.64	0.50	0.89	0.89	0.64	0.61
2006	0.63	0.48	0.85	0.85	0.63	0.59
2007	0.62	0.46	0.88	0.77	0.69	0.62
2008	0.57	0.46	0.86	0.82	0.68	0.68
2009	0.64	0.48	0.88	0.88	0.68	0.68
2010	0.77	0.58	0.85	0.81	0.77	0.73
2011	0.66	0.52	0.86	0.86	0.69	0.69
2012	0.65	0.55	0.81	0.77	0.74	0.71
2013	0.72	0.64	0.76	0.76	0.76	0.76
2014	0.73	0.60	0.83	0.80	0.77	0.73
2015	0.77	0.48	0.84	0.81	0.77	0.68
2016	0.64	0.46	0.75	0.71	0.79	0.71
2017	0.68	0.50	0.68	0.64	0.68	0.64
2018	0.63	0.52	0.74	0.70	0.67	0.67
2019	0.74	0.48	0.81	0.67	0.81	0.78
2020	0.68	0.52	0.76	0.72	0.80	0.72
2021	0.74	0.56	0.74	0.74	0.63	0.59
2022	0.74	0.48	0.78	0.74	0.83	0.74
2023	0.76	0.48	0.86	0.76	0.81	0.81

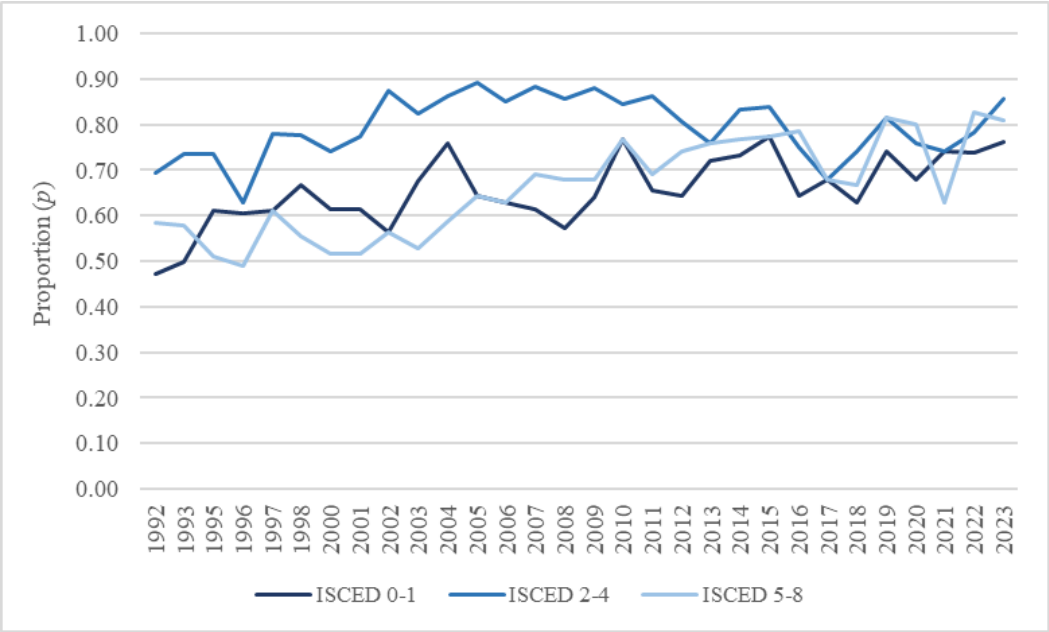


Figure 4.23

ISCED Presence per Total Indicators in Education at a Glance (1992–2023)

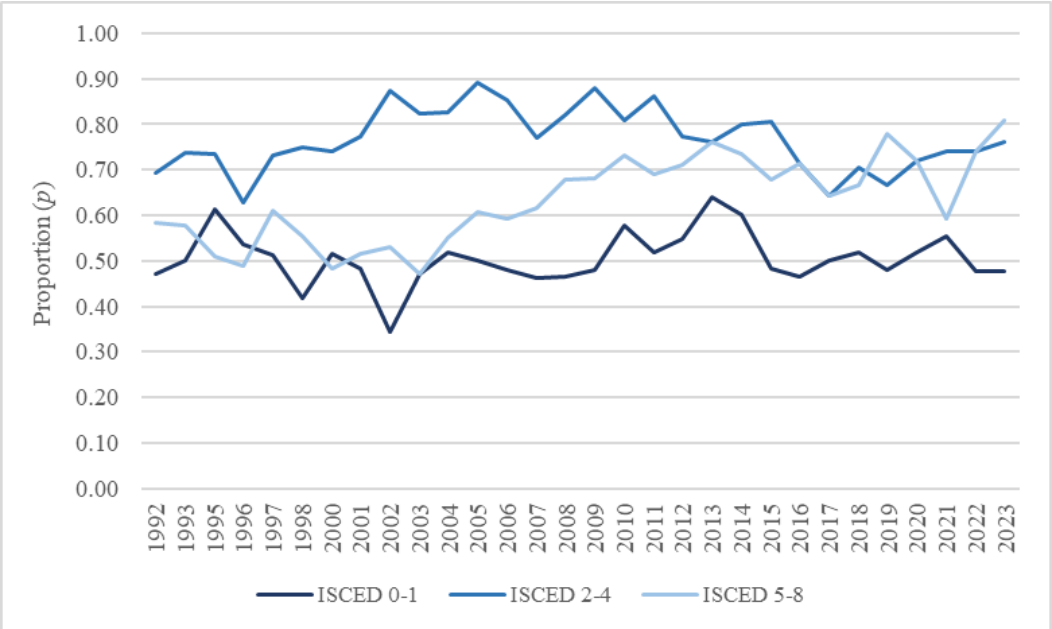


Figure 4.24

ISCED Focus per Total Indicators in Education at a Glance (1992–2023)

Fields of Study and Education Domains

Of the indicators analysed across thirty editions of *Education at a Glance*, 27.5% (n = 251) contain explicit references to fields of study. Within this subset, 49.8% (n = 125) incorporate Science, Technology, Engineering and Mathematics (STEM) and non-STEM domains simultaneously: 81.3% (n = 204) of these indicators include STEM references, while non-STEM fields appear in 68.5% (n = 172) of the subset.

Table 4.8, which examines the annual proportion (p) of indicators referencing *Fields of Study and Education Domains*, shows that while STEM was present from the early years of the series, other fields were initially almost absent. The trend toward convergence observed throughout the series is reflected in the balance recorded for the entire period, in which the average annual proportion (p) of indicators mentioning STEM is p = 0.23, compared to p = 0.20 for non-STEM fields.

However, the analysis of indicator presence versus focus reveals a divergence from the overall presence levels. Of the indicators mentioning a field of study (n = 251), only 33.5% (n = 84) designate it as the primary focus (coded as 2), underscoring its supporting role. Furthermore, the probability of focus incidence is higher for STEM (24.7% of the subset, n = 62) than for non-STEM fields (13.5%, n = 34).

Figures 4.25 and 4.26 highlight a paradox: although *Fields of Study and Education Domains* have gained weight as analytical elements, their role as a focal element has collapsed. Contrary to the growth (p) in their overall utilisation (Figure 4.25), this dimension virtually disappeared as a primary focus after 2005 for non-STEM and 2009 for STEM (Figure 4.26). This suggests a shift toward utilising fields of study as background context rather than the direct object of measurement.

Finally, the focus on *Other Areas* (Figure 4.26) from 1996 onward tended to replicate STEM patterns, albeit with a time lag and lower intensity. This suggests that the OECD framework was primarily driven by scientific and technological priorities, with other disciplines integrated only as late, secondary reflections. These areas consolidated into purely contextual elements from the mid-2000s onward.

Table 4.8

Fields of Study Prevalence (p) Across Education at a Glance (1992-2023)

	STEM		Other Areas	
Edition	Presence *p*	Focus *p*	Presence *P*	Focus *p*
1992	0.14	0.14	0.00	0.00
1993	0.11	0.11	0.05	0.05
1995	0.10	0.08	0.14	0.10
1996	0.16	0.14	0.14	0.12
1997	0.32	0.32	0.12	0.05
1998	0.17	0.11	0.08	0.03
2000	0.23	0.10	0.07	0.00
2001	0.23	0.10	0.10	0.03
2002	0.16	0.06	0.22	0.16
2003	0.18	0.09	0.29	0.24
2004	0.21	0.10	0.24	0.14
2005	0.25	0.11	0.04	0.00
2006	0.26	0.15	0.11	0.00
2007	0.39	0.08	0.15	0.00
2008	0.36	0.07	0.21	0.00
2009	0.16	0.00	0.16	0.00
2010	0.08	0.00	0.08	0.00
2011	0.07	0.03	0.28	0.03
2012	0.16	0.00	0.23	0.00
2013	0.20	0.00	0.20	0.00
2014	0.20	0.00	0.30	0.00
2015	0.48	0.00	0.32	0.00
2016	0.32	0.00	0.36	0.00
2017	0.32	0.00	0.43	0.00
2018	0.26	0.00	0.19	0.00
2019	0.33	0.00	0.33	0.00
2020	0.28	0.00	0.28	0.00
2021	0.19	0.00	0.19	0.00
2022	0.39	0.00	0.35	0.00
2023	0.24	0.00	0.24	0.00

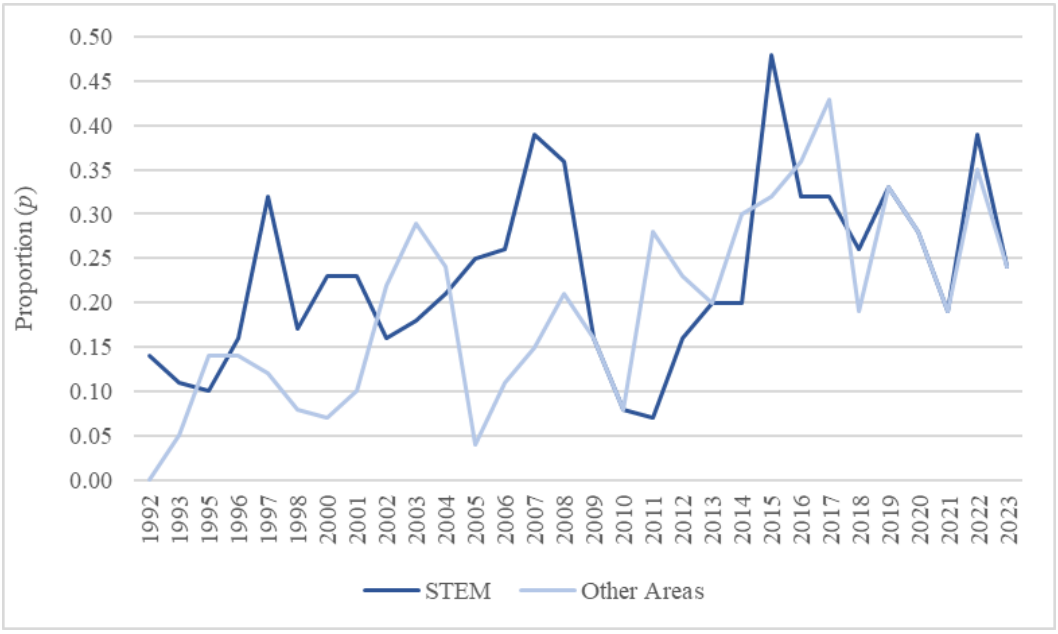


Figure 4.25

Fields of Study and Education Domains Presence per Total Indicators in Education at a Glance (1992–2023)

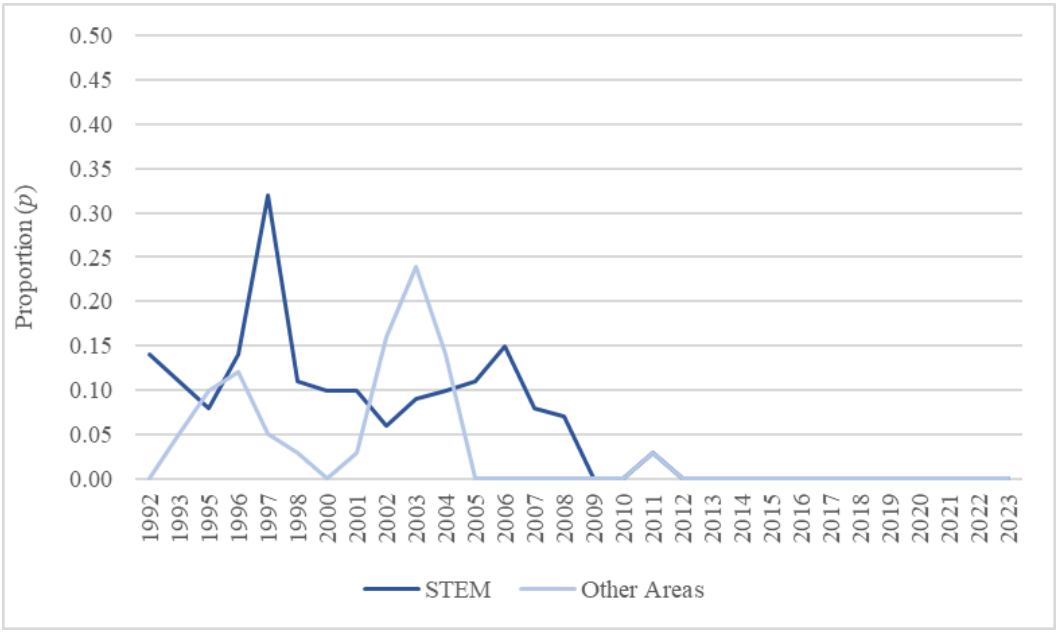


Figure 4.26

Fields of Study and Education Domains Focus per Total Indicators in Education at a Glance (1992–2023)

Actors

Out of the 913 indicators analysed, 106 (11.6%) lack any explicit coding for any of the four actor categories within the framework. From a focal perspective, only 226 indicators (24.8%) do not designate a specific group as a primary focus (coded as 2). This indicates that in approximately three-quarters of the dataset, at least one actor obtains focal incidence.

Table 4.9, which examines the annual proportion (*p*) of indicators referencing educational actors, shows that *Students* are the most frequently present. They constitute the central reference group in the indicator set, with an average presence value of $p = 0.58$ across editions. In second place, *Member of the Population* displays an average presence of $p = 0.33$. This category refers to individuals who are not analysed as students, staff, teachers, or in any other capacity related to educational systems. It thus points to actors external to the education system, or at least not being studied in an educational capacity. *Teachers and Highly Qualified Staff* represent the third most frequent coding unit, with an average presence of $p = 0.23$. Over time, however, there is a gradual increase in their presence within each year's indicator set, suggesting a growing interest in teachers and highly qualified educational staff. Finally, *Staff*, accounting for the less qualified educational workforce, is the least represented of the four. Its presence averages $p = 0.06$ across editions.

When we look only at indicators where the actors are coded as 2 (present and focus), the picture (Figure 4.28) *Students* remain the most prominent focus actor, with an average focus across all indicators of $p = 0.44$. *Member of the Population* appears at lower levels than *Students*, with an average focus of $p = 0.24$. This indicates a consistent but clearly secondary role compared to *Students*. For *Teachers and Highly Qualified Staff*, the focus values (p) are lower than for *Students* and *Member of the Population*, with an average of $p = 0.15$. However, there is a gradual increase over time, indicating not only growth in the presence of this educational actor in *EaG* indicators, but also an increase in the extent to which they become the focus of those indicators. *Staff* is again the least represented actor, with an average focus of $p = 0.01$.

Overall, both Figures 4.27 and 4.28 are consistent in showing that: *Students* is the most preeminent actor both in presence and primary focus; *Member of the Population* plays a consistent but secondary role; *Teachers and Highly Qualified Staff* gains visibility over time; and *Staff* remains the coding unit with the lowest representation and focus incidence across the series.

Table 4.9

Educational Actors Prevalence (p) Across Education at a Glance (1992-2023)

Edition	Teachers and H. Qualified Staff		Staff		Students		Member of the Population	
	Presence *p*	Focus *p*	Presence *p*	Focus *p*	Presence *p*	Focus *p*	Presence *p*	Focus *p*
1992	0.11	0.06	0.08	0.03	0.44	0.36	0.28	0.19
1993	0.11	0.05	0.08	0.03	0.50	0.42	0.24	0.21
1995	0.20	0.18	0.04	0.02	0.47	0.35	0.39	0.33
1996	0.19	0.16	0.05	0.02	0.54	0.42	0.35	0.33
1997	0.22	0.20	0.07	0.02	0.66	0.49	0.27	0.24
1998	0.19	0.11	0.06	0.00	0.50	0.36	0.50	0.36
2000	0.19	0.13	0.03	0.00	0.61	0.48	0.26	0.23
2001	0.23	0.16	0.07	0.03	0.55	0.45	0.42	0.26
2002	0.16	0.09	0.03	0.00	0.69	0.56	0.28	0.25
2003	0.24	0.21	0.06	0.00	0.62	0.50	0.24	0.21
2004	0.14	0.10	0.07	0.00	0.59	0.52	0.28	0.24
2005	0.21	0.11	0.07	0.00	0.61	0.50	0.21	0.18
2006	0.19	0.11	0.07	0.00	0.63	0.56	0.22	0.15
2007	0.15	0.12	0.04	0.00	0.65	0.50	0.35	0.15
2008	0.25	0.11	0.07	0.00	0.64	0.46	0.36	0.21
2009	0.28	0.20	0.08	0.00	0.52	0.40	0.28	0.24
2010	0.23	0.12	0.08	0.00	0.58	0.46	0.39	0.31
2011	0.24	0.10	0.04	0.00	0.62	0.48	0.38	0.28
2012	0.23	0.13	0.07	0.00	0.58	0.45	0.36	0.23
2013	0.28	0.16	0.04	0.00	0.56	0.40	0.28	0.24
2014	0.33	0.20	0.03	0.00	0.60	0.40	0.37	0.20
2015	0.32	0.16	0.03	0.00	0.61	0.39	0.32	0.26
2016	0.32	0.18	0.04	0.00	0.61	0.46	0.29	0.18
2017	0.25	0.14	0.04	0.00	0.61	0.46	0.39	0.21
2018	0.26	0.19	0.04	0.00	0.56	0.44	0.33	0.22
2019	0.26	0.19	0.07	0.00	0.56	0.44	0.41	0.22
2020	0.28	0.16	0.08	0.00	0.56	0.36	0.32	0.24
2021	0.33	0.22	0.07	0.00	0.56	0.37	0.33	0.22
2022	0.30	0.22	0.13	0.00	0.57	0.39	0.35	0.22
2023	0.33	0.14	0.10	0.00	0.67	0.48	0.33	0.24

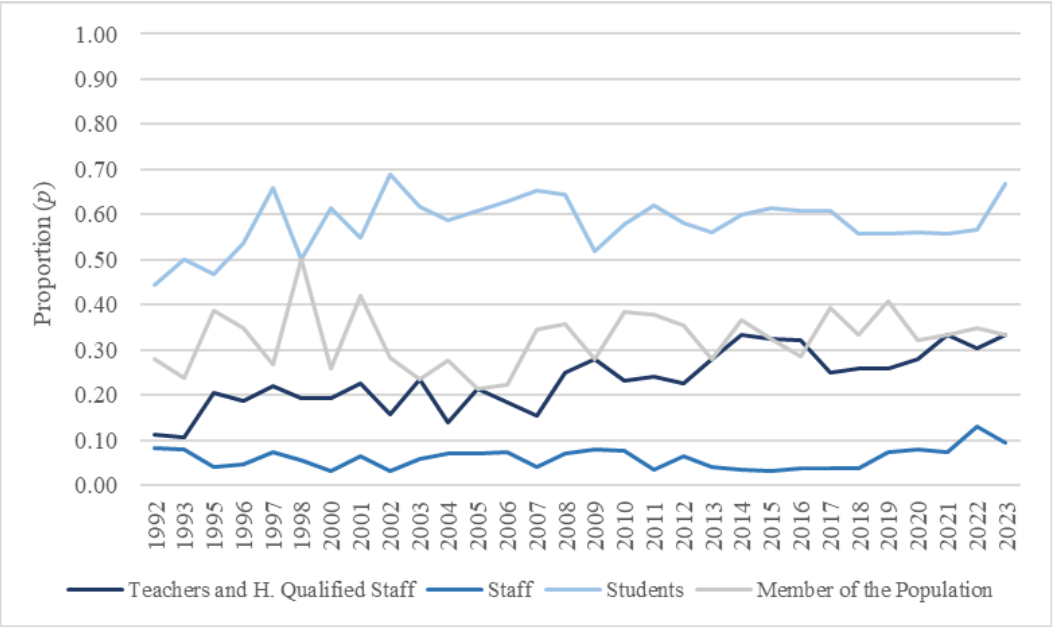


Figure 4.27

Educational Actors Presence (p) per Total Indicators in Education at a Glance (1992–2023)

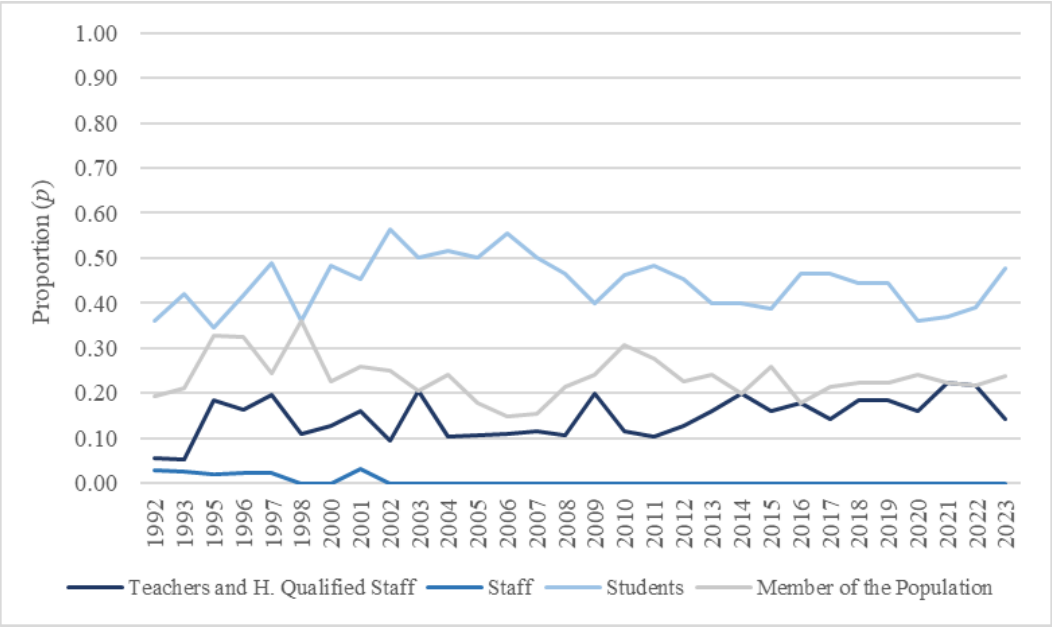


Figure 4.28

Educational Actors Focus (p) per Total Indicators in Education at a Glance (1992–2023)

Ages of Reference

Across the 913 indicators, 504 (*n*) report both *minimum* and *maximum Ages of Reference*. The evolution of both coding units is summarised in Table 4.10[51]. We grouped the typical age ranges associated with ISCED stages and subsequent life course transitions: childhood and primary schooling (< 12), secondary and post-secondary education or early labour market entry (13 – 24), prime working age beyond formal education (25 – 64), and older adulthood (> 64).

The distribution across *Ages of Reference* cohorts (Figure 4.29) indicates that the preponderance of measurement is concentrated within adolescence and early adulthood. These results align with the patterns of ISCED coverage observed (Table 4.7), manifesting as a lower representation of both early childhood and primary education levels, as well as a reduced focus on age groups below 12 years. Figure 4.29 illustrates that, throughout the publications, indicators focused on *Ages of Reference* have exhibited an increasing coverage of the 25 – 64 cohort, contrasted by a reduction in the 13-24 cohort and a persistent marginality of the < 12 and > 64 cohorts. The mean values (Figure 4.30) for the *minimum Age of Reference* (17.17 years) and *maximum Age of Reference* (40.39 years) corroborate a lower incidence in childhood, suggesting a concentrated focus on the transition to the labor market or advanced education, as well as on adult professional life. Furthermore, a progressive extension toward older ages is observed, evidenced by the upward trajectory of the mean *maximum Age of Reference*.

Gender and Intersectionality

Regarding *Gender*, the coding unit is included in 42.3% of the total indicator set (*n* = 386). The evidence suggests (Table 4.10) that *Gender* has been progressively more used across editions, but this increasing visibility has not translated into gender focused indicators (Figure 4.31). Substantively, the results indicate that *Gender* has been internalized as a relevant element of the indicators' architecture even if not used as an independent object of analysis.

Intersectional co-occurrence was recorded at $p = 0.07$ for *Gender* and Cultural Background and $p = 0.03$ for *Gender* and *Socioeconomic Background*. Additional intersections yielded $p = 0.03$ for *Cultural Background* and *Socioeconomic Background* and $p = 0.01$ for *Disabilities and Giftedness* and *Socioeconomic Background*.

[51] Only indicators with non-zero values for both the minimum and maximum *Reference Ages* were considered; zeros were treated as missing reference age information.

Table 4.10

Gender and Ages of Reference Across Education at a Glance (1992–2023)

	Age Groups				Age		Gender	
Edition	(< 12) *p*	(13 – 24) *p*	(25 – 64) *p*	(> 64) *p*	Mean $_{Min}$	Mean $_{Max}$	Presence *p*	Focus *p*
1992	0.03	0.22	0.28	0.00	17.30	31.70	0.36	0.03
1993	0.03	0.24	0.32	0.00	16.50	32.60	0.29	0.05
1995	0.04	0.14	0.27	0.00	17.50	39.20	0.20	0.06
1996	0.02	0.16	0.33	0.09	16.60	38.60	0.30	0.07
1997	0.02	0.27	0.41	0.02	14.30	31.50	0.44	0.05
1998	0.03	0.14	0.42	0.06	15.60	39.00	0.44	0.03
2000	0.00	0.16	0.39	0.00	14.60	34.60	0.42	0.00
2001	0.00	0.16	0.39	0.03	17.20	41.00	0.48	0.07
2002	0.00	0.34	0.31	0.00	15.90	32.60	0.46	0.03
2003	0.03	0.26	0.26	0.00	15.40	31.40	0.41	0.06
2004	0.03	0.21	0.28	0.00	13.90	35.70	0.45	0.03
2005	0.00	0.21	0.29	0.00	16.90	35.10	0.43	0.00
2006	0.00	0.26	0.30	0.00	15.30	32.80	0.37	0.00
2007	0.00	0.23	0.27	0.00	15.10	34.10	0.31	0.00
2008	0.00	0.07	0.36	0.00	18.20	41.80	0.32	0.00
2009	0.00	0.12	0.28	0.00	16.30	39.90	0.36	0.00
2010	0.00	0.04	0.35	0.00	17.80	49.60	0.35	0.00
2011	0.00	0.17	0.41	0.00	19.00	38.20	0.52	0.00
2012	0.03	0.06	0.45	0.03	19.70	43.00	0.48	0.00
2013	0.04	0.04	0.44	0.00	18.60	43.90	0.48	0.00
2014	0.03	0.07	0.43	0.00	18.20	43.30	0.47	0.00
2015	0.00	0.10	0.45	0.03	19.00	48.80	0.52	0.03
2016	0.00	0.07	0.46	0.04	19.80	49.70	0.61	0.00
2017	0.04	0.07	0.46	0.00	18.40	44.80	0.43	0.00
2018	0.04	0.11	0.44	0.00	16.80	41.60	0.52	0.00
2019	0.04	0.04	0.44	0.00	18.40	47.70	0.48	0.00
2020	0.04	0.00	0.44	0.00	16.10	45.80	0.52	0.00
2021	0.04	0.04	0.48	0.00	20.10	44.50	0.56	0.00
2022	0.00	0.04	0.48	0.04	18.20	48.80	0.48	0.00
2023	0.00	0.05	0.57	0.05	18.50	50.30	0.52	0.00

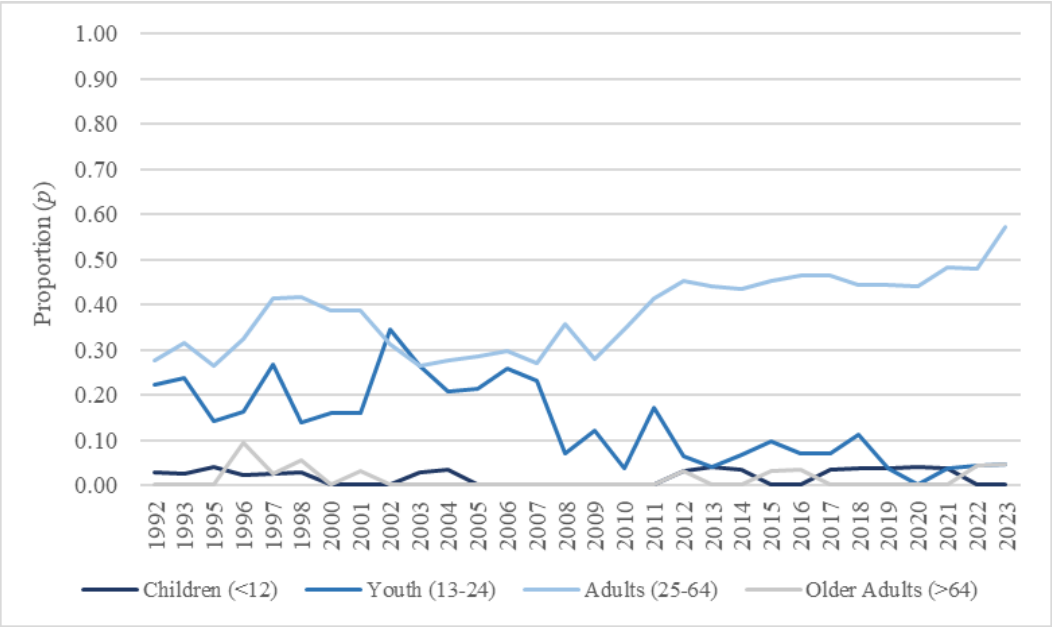


Figure 4.29

Ages of Reference per Total Indicators in Education at a Glance (1992–2023)

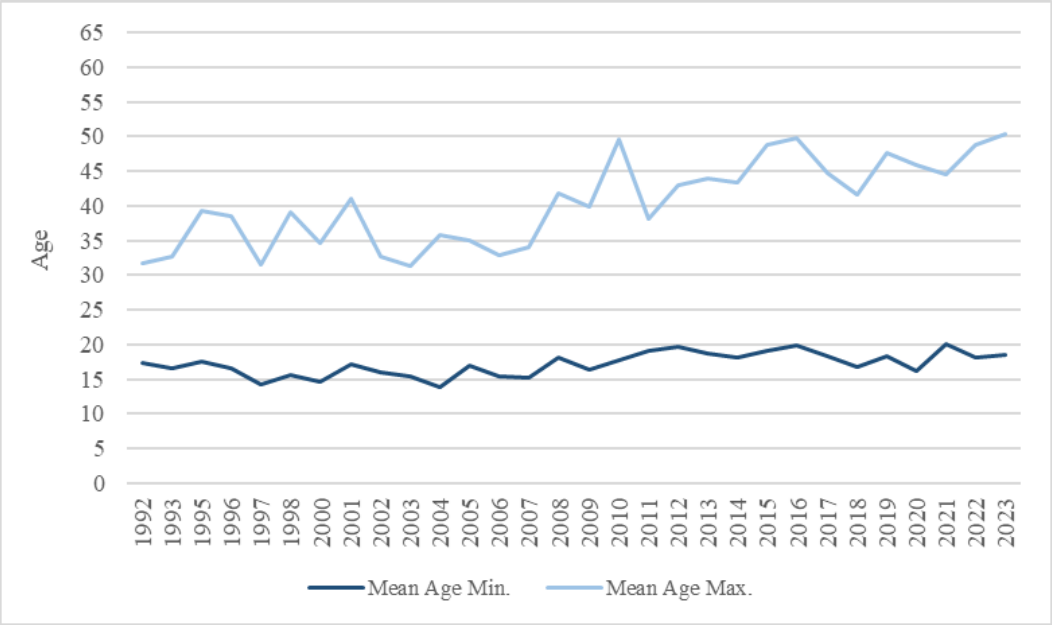


Figure 4.30

Mean Minimum and Maximum Ages of Reference in Education at a Glance (1992–2023)

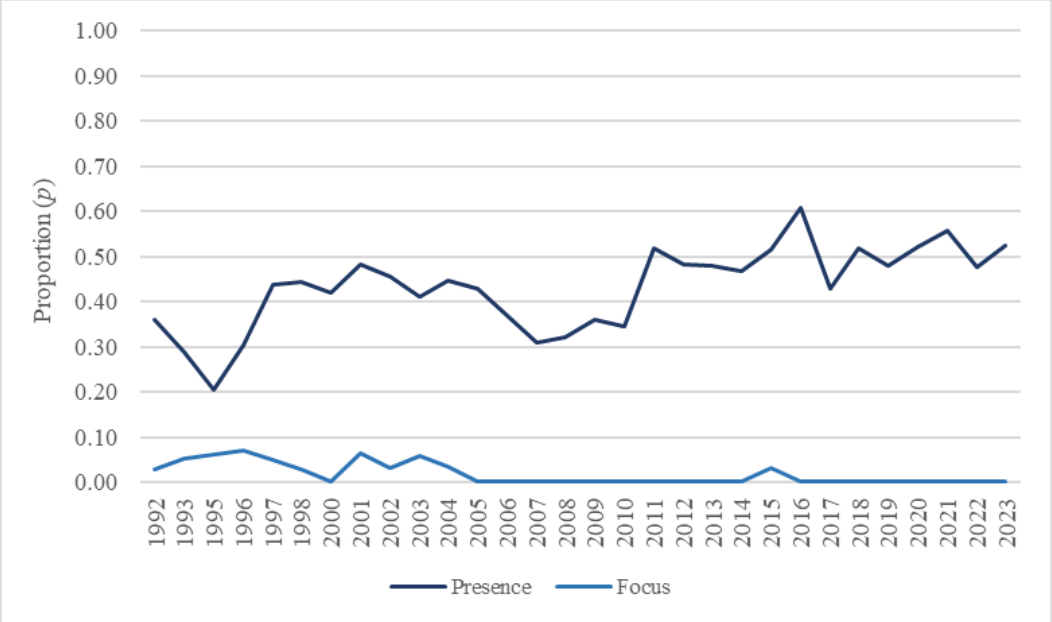


Figure 4.31

Gender: Prevalence (p) per Total Indicators in Education at a Glance (1992–2023)

4.3 Interpretative Safeguards and Limitations

4.3.1 *Subjects of Performance*

In fulfilment of Objective 2, this study analyses student assessment by situating the evolution of *Education at a Glance* within the broader emergence of PISA. In this respect, the issue is best captured by the metadata coding unit *Performance*. However, this category requires careful interpretation, as it encompasses all forms of assessment regardless of the actors involved. Consequently, an isolated interpretation of *Performance* is insufficient for the research objectives; it must be cross-referenced with educational actors to mitigate potential distortions and ensure a more accurate representation of the data.

It therefore includes not only the assessment of student learning but also, for instance, the evaluation of teachers. Given that PISA focuses explicitly on learning outcomes, it is essential to trace how this dimension evolved within *Education at a Glance*. Doing so allows for the identification of both its links to the work conducted under the INES Project and the ways in which it has been articulated with other strands of OECD educational activity over time.

Table 4.11 intersects the *Performance* with *Educational Actors* as their primary object. A crucial caveat is that a single indicator may be counted under several actors (e.g., both students

and teachers), allowing for multiple counting across categories. This approach captures indicators that genuinely focus on more than one actor simultaneously. Consequently, the sum of indicators across actors does not equal the total number of *Performance* indicators (Table 4.5 and 4.6), as each indicator may involve more than one educational actor.

Figure 4.32 showed that the trajectory of the proportion (*p*) of indicators within the *Performance* coding unit broadly mirrors the evolution of indicators intersecting *Performance* with *Students*. It should be noted, however, that there are two notable discrepancies. An initial peak in 1996 coincides with a surge in indicators oriented toward population literacy, reaching a frequency of $p = 0.12$ and marking a cleavage compared to 1995, thereby exacerbating the pronounced rise of *Performance*. Furthermore, the most substantive dissonance between the evolution of overall *Performance* indicators and actor categories other than *Students* emerges between 2014 and 2016. This period is characterized by considerable growth in *Performance* indicators linked to *Teachers and Highly Qualified Staff*, as well as *Members of the Population*.

However, Figure 4.33 reveals that the intertwinement of *Performance* focus (*p*) with *Students* coding unit becomes even more pronounced. In this specific visualization, indicators focusing on other members of the population or specifically on teachers remain residual throughout the longitudinal series, reinforcing the student as the primary subject of performance measurement.

Regarding the specific role of PISA, the emerging pattern is one of consolidation, where assessments of various educational actors are integrated into the system primarily as supporting elements. Throughout the analysed period, a consistent trend persists: *Performance* indicators predominantly relate to *Students*. This predominance becomes more apparent when attention is restricted to indicators where students are explicitly coded as the central focus of the construct.

Except for the pronounced peaks in proportion observed in 1996 and, subsequently, between 2014 and 2016, the *Performance* coding unit closely mirrors the trajectory of *Performance* intersected with *Students*. This is a fundamental element for a more nuanced interpretation of the evolution of *Education at a Glance* within the context of PISA's emergence. Furthermore, these fluctuations bring to the fore institutional developments such as the rise of the *Teaching and Learning International Survey* (TALIS) and the *Programme for the International Assessment of Adult Competencies* (PIAAC) further addressed in the Discussion.

Table 4.11

Intersection of Performance and Educational Actors Prevalence (p) Across Education at a Glance (1992-2023)

	Teachers and H. Qualified Staff		Staff		Students		Member of the Population	
Edition	Presence *p*	Focus *p*	Presence *p*	Focus *p*	Presence *p*	Focus *p*	Presence *p*	Focus *p*
1992	0.00	0.00	0.00	0.00	0.06	0.06	0.00	0.00
1993	0.00	0.00	0.00	0.00	0.11	0.11	0.00	0.00
1995	0.00	0.00	0.00	0.00	0.04	0.02	0.00	0.00
1996	0.00	0.00	0.00	0.00	0.19	0.12	0.12	0.09
1997	0.07	0.00	0.00	0.00	0.24	0.12	0.00	0.00
1998	0.00	0.00	0.00	0.00	0.14	0.11	0.06	0.03
2000	0.00	0.00	0.00	0.00	0.10	0.03	0.03	0.00
2001	0.03	0.00	0.00	0.00	0.10	0.10	0.07	0.03
2002	0.03	0.00	0.00	0.00	0.19	0.16	0.06	0.00
2003	0.00	0.00	0.00	0.00	0.27	0.18	0.03	0.00
2004	0.03	0.00	0.00	0.00	0.24	0.14	0.07	0.00
2005	0.11	0.00	0.00	0.00	0.25	0.11	0.04	0.00
2006	0.07	0.00	0.04	0.00	0.19	0.15	0.04	0.00
2007	0.04	0.00	0.00	0.00	0.27	0.04	0.12	0.00
2008	0.11	0.00	0.00	0.00	0.25	0.04	0.14	0.00
2009	0.08	0.00	0.00	0.00	0.08	0.08	0.04	0.00
2010	0.04	0.00	0.00	0.00	0.00	0.00	0.04	0.00
2011	0.14	0.00	0.00	0.00	0.28	0.07	0.10	0.00
2012	0.03	0.00	0.00	0.00	0.10	0.03	0.03	0.00
2013	0.00	0.00	0.00	0.00	0.04	0.00	0.04	0.00
2014	0.07	0.00	0.00	0.00	0.17	0.03	0.27	0.00
2015	0.19	0.00	0.00	0.00	0.19	0.03	0.19	0.07
2016	0.14	0.00	0.00	0.00	0.18	0.00	0.14	0.00
2017	0.00	0.00	0.00	0.00	0.11	0.00	0.07	0.00
2018	0.00	0.00	0.00	0.00	0.07	0.00	0.07	0.00
2019	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00
2020	0.00	0.00	0.00	0.00	0.04	0.00	0.04	0.00
2021	0.04	0.00	0.00	0.00	0.07	0.00	0.00	0.00
2022	0.00	0.00	0.00	0.00	0.04	0.00	0.04	0.00
2023	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

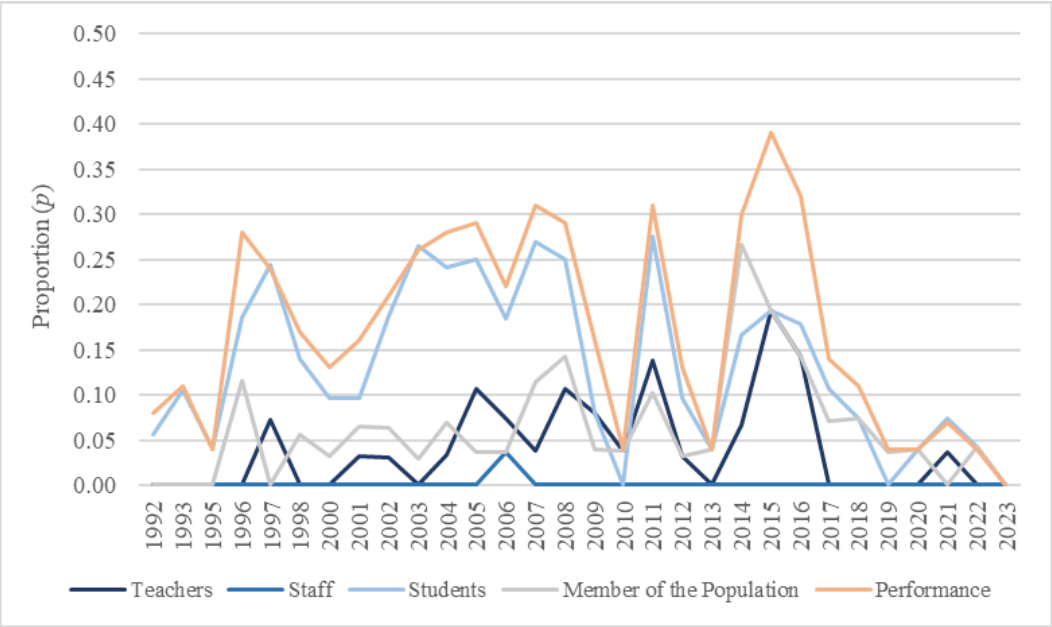


Figure 4.32

Intersection of Performance and Educational Actors Presence per Total Indicators in Education at a Glance (1992-2023)

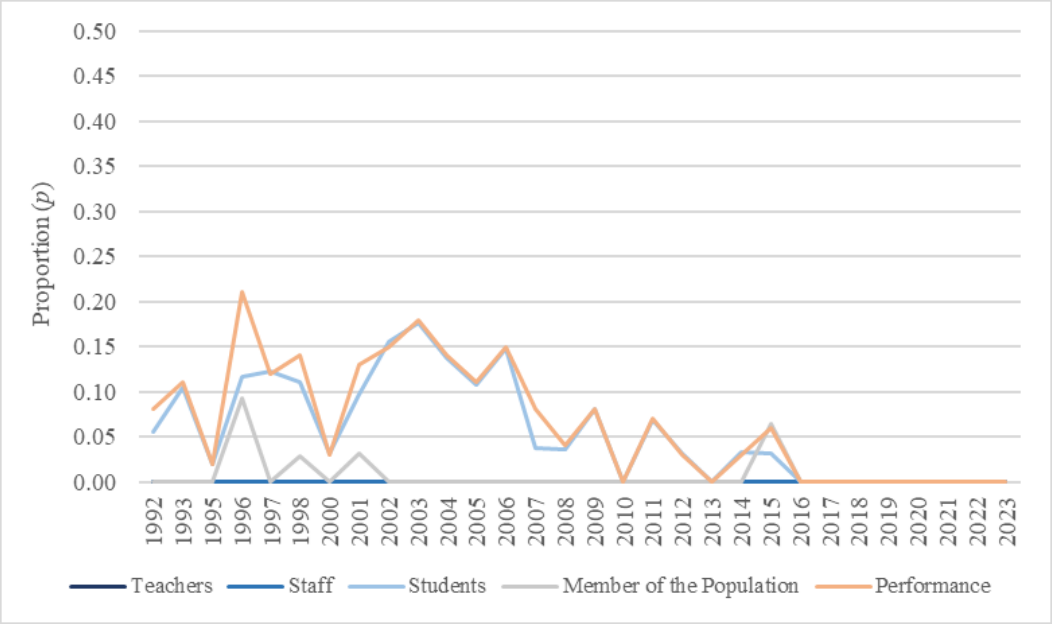


Figure 4.33

Intersection of Performance and Educational Actors Focus(p) per Total Indicators in Education at a Glance (1992-2023)

4.3.2 *Blind Spots*

The coding framework developed for this study reflects a set of analytical choices that inevitably constrain what can be *seen* within the data. Consequently, it is pertinent to consider whether the framework reflects an unintentional bias, leaving room for blind spots in certain metadata categories.

A primary limitation of this framework concerns its asymmetry across the three principal categories. While *Inputs* remain numerically predominant and increase over time, they are considerably less likely than *Outputs and Outcomes* or *Participation and Progression* to be assigned a value of 2 (primary focus) in any metadata coding unit. This distribution is markedly uneven: among *Inputs,* 404 indicators were identified, of which 49 (p = 0.12) had not been assigned any coding unit as a primary focus. By contrast, *Outputs and Outcomes* comprise 269 indicators, with only 7 (p = 0.02) lacking a primary focus. Similarly, *Participation and Progression* shows a residual number: out of 200 indicators, only 3 (p = 0.02) lacked a primary focus.

Taken together, these data indicate that the framework is significantly more effective at registering clear primary foci for output and access-related indicators than for input indicators. This asymmetry suggests that the adopted coding model was not fully able to accommodate all possible metadata incidence points, particularly within the diversity of *Input* indicators.

Annex A addresses this limitation by determining the existence of themes with significance within the aggregate that may not have been anticipated in the coding units. The table thus lists the 49 *Input* indicators lacking a metadata primary focus, seeking to assign a dominant theme to assess potential framework vulnerabilities.

As developed in Annex A, 15 indicators focus on *decision-making processes*, a further 15 on *differentiation* (that is, elements that differentiate systems or provision profiles), and another 15 on *human resources characterisation* (information on the profile of educational staff), with the remaining categories corresponding to residual or miscellaneous forms of metadata. The data support the residuality of these themes in the overall calculation, so much so that none of the themes exceed high focus values in terms of proportions per total indicators (p = 0.02), nor in terms of proportion compared to *Input* indicators (p = 0.04). Regardless, it must be acknowledged that the frequency of these categories across the series remains unexplored in the current study.

5. Discussion

Given the extensive scope of the dataset assembled, the following discussion prioritizes findings directly aligned with the core research objectives, while acknowledging that the broader evidence base provides a robust foundation for future inquiries.

This chapter is organized into four distinct sections. The first proposes a tentative periodization of the publication by integrating empirical data on the thematic incidence of indicators with its structural organization across the years. This synthesis provides a comprehensive reading of the document's evolution in light of its changing institutional frameworks. Through a longitudinal approach, this section aims to determine whether indicators, understood as materially determinative elements in models of comparability, have changed over time and, if so, in what ways.

The second section explores the emergence of PISA within the longitudinal evolution of *Education at a Glance*, examining how the publication unfolded and how the focus on student assessment progressed over time. Analysing PISA's emergence within the broader INES Project necessarily entails a cross-reading with *Education at a Glance*, which offers the most suitable longitudinal instrument for mapping whether and in what ways this shift is reflected in the report's evolution.

The third section offers an interpretative lens on the document's representations of *educational quality*, anchored in coding results from this study. It provides a critical synthesis of what *Education at a Glance* reveals about how education systems are assessed and how representations of system quality have evolved over time. The chapter concludes with a reflexive examination of the study's limitations and scope.

5.1 Longitudinal Analysis of the EaG Thematic Agenda

The following analysis proposes a periodization of *Education at a Glance*, delineating four distinct phases across the first thirty editions. The four proposed phases provide an interpretive account of shifts in the orientation of *Education at a Glance* over time, grounded in the evolution of the publication's structural organisation and in empirical results on the thematic distribution of indicators.

While EaG's chapter structure on its own offers limited insight into the thematic focus of individual indicators, it appears to register internal reconfigurations and shifts in the conceptual

frameworks guiding the OECD's design and selection of indicators, thereby signalling an evolutionary trajectory within the series. Indeed, EaG's chapter structure aligns with the successive phases of reorientation in the thematic incidence of indicators across the publication's first thirty editions, indirectly signalling tentative normative and theoretical adjustments, in part coinciding with changes in the publication framework.

The findings indicate that *Education at a Glance* exhibits distinct phases, each marked by varying orientations over time. The identification of these phases represents a key contribution of this study and helps elucidate the publication's evolution. The four developmental stages are subsequently discussed, offering a comprehensive overview of the publication's evolution.

Table 5.1

Education at a Glance Phases (1992-2023)

Period	Phase	Characteristics
1992-1995	Formative Years	*Input*-oriented phase, characterised by the development and construction of indicators and the onset of their regular, systematic production.
1996-2001	Transitional Stage	Orientation towards *outputs and outcomes*, met by high volatility both in the publication's structure and in the thematic focus of its indicators.
2002-2017	Maturity	Progressive orientation towards an *input*-based thematic focus of indicators, with a gradual move towards a balance between *outputs and outcomes*, and *participation and progression*.
2018-2023	Renewal	Consolidation of an inputs-based thematic focus of indicators and a clearly restructured organisation around *inputs, outputs and outcomes*, and *participation and progression*.

5.1.1 *Formative Years (1992 – 1995)*

The publication of the first *Education at a Glance* in 1992 marks a new phase[52] in the development of the INES Project, specifically characterized by the shift toward the regular production of indicators (OECD, 2012a). Organized around a simplified tripartite structure, the first three editions display a clear focus on *input*-oriented indicators.

In line with Walberg and Zhang (1998), this initial period between 1992 and 1995 was defined by a policy issues framework divided into *contexts*, *processes* and *results*. These features reveal an embryonic stage in indicator construction, reflecting the initial scarcity of consolidated data explicitly designed for the analysis of educational systems (Gorur, 2015, p. 583).

By late 1995, however, even prior to the publication of that year's *Education at a Glance*, several elements of the subsequent *Transitional Stage* had already begun to surface. These shifts were foreshadowed in an OECD Observer editorial by Secretary-General Jean-Claude Paye (1995), published in an issue whose cover and central theme were devoted to the measurement of *human capital*. There, it was argued that, in a context of near-universal upper secondary participation and expanding access to higher education, OECD countries were being confronted with new systemic challenges. On the one hand, labour market imbalances were emerging as highly qualified younger workers entered alongside older, less credentialed generations. On the other hand, it was becoming clear that the skills acquired by new generations were not, on their own, sufficient to meet countries' changing economic needs over time.

This strategic reorientation was deeply rooted in the September 1994 ministerial discussions held within the framework of *The OECD Jobs Study*[53]. Those deliberations subsequently shaped the agenda for the January 1996 Education Committee meeting, which formally endorsed an integrated policy approach linking education and training with employment, labour and social welfare. This was consistent with a set of issues that emerged during the Transitional Phase, most notably the search for alternatives to educational attainment as a crude and static proxy for the population's qualifications. It also opened the way to a stronger focus on adult literacy and numeracy, as well as on student assessment.

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[52] This understanding must be read in conjunction with the earlier developmental phases of the INES Project that preceded the publication. Drawing on the *Historical Summary of CERI's Main Activities* (OECD, 2012a), the INES Project is regarded as having commenced with an exploratory phase between 1988 and 1989, followed by a subsequent period of development and indicator construction, from 1990 to 1991.

[53] Published in June as *The OECD Jobs Study: Facts, Analysis, Strategies*, followed in October by its companion report, *The OECD Jobs Study: Evidence and Explanations*.

5.1.2 *Transitional Stage (1996 – 2001)*

The 1996 edition inaugurates a period of pronounced instability in both the publication structure and the thematic incidence of indicator orientation. Our results are consistent with the interpretation of Thompson et al. (2022), supporting an interpretation of the year 1996 as a moment of *policymaking assemblage*, a process where the precarious interaction of diverse heterogeneous forces, namely ministerial discourses, economic imperatives, staff actions, and publications coalesced to establish a new, albeit temporary, framework within the OECD.

The year of 1996 saw the birth of *Education at a Glance: Analysis* (OECD, 1996a), a precursor to *Education Policy Analysis* and a now-discontinued companion report to EaG[54], an option driven by the creation of a parallel publication to address the unsustainable increase in the publication's volume (Bottani, 2006). Moreover, 1996 saw the publication of *The Knowledge-based Economy* (OECD, 1996b) and *Lifelong Learning for All* (OECD, 1996c), which have been read as signalling an "acceptance within the OECD of the centrality of education to economic growth" (Thompson et al., 2022, p. 687).

Several other factors converged to account for the density of relevant developments in 1996. Notably, the fourth meeting of OECD Ministers of Education, held in Paris, which culminated in the adoption of "lifelong learning for all" as a policy framework. This move was described as a "major departure", insofar as it advanced a more comprehensive view of educational activity, spanning the life course "from the cradle to the grave" (OECD, 2001b, pp. 1-2). This reorientation was motivated not only by "internal dynamics of growth in education systems" (Paye, 1995, p. 4) but also by a reflection on the rapid transformations reshaping employment and economies as a result of the combined effects of technological advances and globalisation, and by the concomitant shift in employability profiles. In particular, it points to the displacement of lower-skilled jobs and the resulting need to adapt to new skill and knowledge requirements in labour markets where skilled work becomes increasingly important (OECD, 1996c, pp. 13-15).

While it is clear that a broad consensus on lifelong learning had already emerged by the third ministerial conference in November 1990, the explicit ambition of extending lifelong learning "for all" (see OECD, 1990; OECD, 1996c, p. 27) signalled a strengthening of this orientation and introduced a renewed level of ambition, placing it at the centre of the OECD's educational agenda. In fact, as Koucký (1997) observed, the OECD's work "was very much influenced by

[54] Which subsequently ran for eight editions between 1997 and 2006.

that meeting" [fourth meeting of OECD Ministers of Education], occurred in 1996, which he characterised as "a year of transition".

The chapter structure of *Education at a Glance* also reflects 1996 as a point of marked reconfiguration in the publication. The period between 1996 and 2001 coincides with a phase of marked instability in the publication structure, with successive changes across the five editions it comprises. This period also stands out from the others for exhibiting more fragmented structures, with between six and seven chapters per edition, suggesting a moment of conceptual turmoil and reconfiguration.

The *Transitional Stage* is marked by a renewed focus on the outputs and outcomes of education. It shows that the orientation later rendered more visible through PISA was already taking shape in the late 1990s. At the same time, the period is marked by considerable volatility, evident in the way its final two years inflect the reorientation initiated in 1996 through a return to more input-oriented publications, a movement partially reversed in the early years of the *Maturity Phase*. It was also during this stage that the first reference to PISA appeared in EaG (OECD, 2000, p. 312), followed by the publication of the first post-PISA edition of *Education at a Glance* (OECD, 2001).

5.1.3 *Maturity (2002 – 2017)*

The *Maturity* period, between 2002 and 2017, marks a realignment of the publication's structure and a gradual process of stabilisation, in contrast to the volatility that characterises the *Transitional Stage*. During this period, the document's architecture consolidated around four chapters, three of which were carried over from the preceding phase: i) *financial and human resources invested in education*, ii) *the learning environment and the organisation of schools*, and iii) *access to education, participation and progression*. The principal changes concerned the disappearance of chapters devoted exclusively to a strictly contextual dimension and the consolidation of the multiple output and outcome chapters that proliferated between 1996 and 2001 into a single chapter.

Education at a Glance 2002 marks the adoption of a new organizing framework (OECD, 2002). The new three-part analytical framework was anchored towards i) *education and learning outputs and outcomes*, ii) *policy levers and contexts shaping educational outcomes*, and iii) *antecedents or constraints that contextualise policy* (OECD, 2002, pp. 7-8).

Despite growing recognition of the quality of the data that came to characterise the early 2000s, the adoption of a new analytical framework and the launch of PISA became central to the dissatisfaction voiced by Bottani (Gorur, 2015). Bottani (2006) criticised the limited democratic character of the debate surrounding the development of the new conceptual framework. Gorur would assert (2015, p. 589), "the focus on outcome data dramatically changed EaG".

The temporal distance afforded by the present analysis nevertheless enables a reconsideration of this trajectory. Although, in its initial stage, across the first three editions, the *Maturity* phase is associated with a renewed results-based orientation, over time it consolidates into an *input*-oriented profile. Indeed, the first three editions of the *Maturity* phase appear to capture an incomplete transition towards a more settled model, suggesting that the final years of the *Transitional* phase (1996 – 2001), between 2000 and 2001, and the early years of the *Maturity* phase (2002 – 2017), between 2002 and 2004, partially overlap as successive adjustments are observed. From 2005 onwards, the output-based thematic incidence of indicators declines progressively. This movement continues until around 2010, when the framework stabilises into a pattern of relative balance between *outputs and outcomes*, on the one hand, and *participation and progression*, on the other.

As contextual background, it should be noted that the beginning of the 2000s was marked by moments of considerable relevance: 2000 saw the INES Fourth General Assembly in Tokyo, as well as the first publication of PISA; 2001 saw the OECD Ministers Meeting, held in Paris; and 2002 saw the creation of the OECD Directorate for Education. If the INES Fourth General Assembly will lead to an expansion of the work within the INES Project (OECD, 2001d, p. 38), on the other hand, we will see how the OECD Education Ministers' Meeting of 2001 will translate into a deepening of the path taken since the 1996 communiqué, while also advancing new challenges for the work of OECD on education (Gonczi, 2006, p. 109).

Furthermore, we will see the emergence of the first publication of PISA, an element observed as a historical event (Popkewitz, 2011, p. 31), as well as the design of a new institutional architecture with the formation of the OECD Directorate for Education in 2002, "recognition of education's growing political priority" (Istance, 2011, p. 89). These elements converge to support an interpretation of a new moment of *policymaking assemblage* (see Thompson et al., 2022).

In fact, 2001 was marked by the OECD Education Ministers' Meeting held in Paris in April, which issued the communiqué *Investing in Competencies for All* (OECD, 2001c). The

communiqué presents the meeting as both a review of the objective established at the previous ministerial meeting in 1996 and the articulation of new priorities. With an explicit emphasis on the acquisition of competencies, the 2001 communiqué retained a *human capital* framing, while placing increased emphasis on *human and social capital*.

As reported in the *OECD Annual Report* (OECD, 2001d), preparatory work for the meeting had already highlighted slow progress in implementing lifelong learning strategies at the systemic level. A background document for the meeting (OECD, 2001e) situates the discussion within broader "ongoing structural changes", including technological change, globalisation, and population ageing. While there was an established consensus around the aim of lifelong learning for all, the document acknowledged weak implementation and what it described as "sketchy and insufficient data for monitoring progress" (OECD, 2001e, p. 3). As Gonczi (2006, p. 108) observed, "few countries did well on the majority of measures".

The 2001 communiqué reaffirms the orientations set out in the 1996 communiqué, even as it identifies important challenges to achieving the goal of *lifelong learning for all* (Gonczi, 2006). It identifies four key challenges for future efforts: i) developing strategies to improve human and social capital and their role in sustainable economic growth and social progress; ii) defining the skills needed by individuals and the best methods to support their development; iii) exploring how education and training can boost community vitality; and iv) thinking about how teachers and schools can work differently and more efficiently (OECD, 2001c).

The year 2002 also saw the establishment of the OECD's Directorate for Education (OECD, 2012a). Prior to this institutional change, education had been housed within a shared directorate alongside Labour and Social Affairs. Its separation into a standalone directorate, one of nine within the OECD, reflects the growing salience attributed to education within the organisation's work (see Istance, 2011; Schuller, 2005; Grek, 2010).

Gardinier (2017) interprets this development as being driven largely by the OECD's widening remit following the advent of PISA. In a broader reading, Istance (2011) associates it with the increasingly globalised character of educational discourse and with the OECD's prominent role in cross-national comparison through the production and circulation of educational statistics and indicators.

As further explored, alongside evidence of a gradual stabilisation in the EaG structure and the thematic distribution of indicators, the *Maturity* phase is marked by the expansion and reconfiguration of the OECD's flagship education publications. Within this evolving portfolio,

PISA (OECD, 2001a), TALIS (OECD, 2009a), and PIAAC (OECD, 2013a) were launched, while *Education Policy Analysis* ceased publication in 2006. This development is examined in subsequent chapter.

5.1.4 *Renewal (2018 – 2023)*

The 2018 *Education at a Glance* introduces a new analytical framework (OECD, 2018), marking a slight readjustment and a subtle renewal while retaining a four-chapter structure. The chapters on *access and participation*, as well as on *outputs and outcomes*, thus remain unchanged, indicating that these categories have been structurally stabilised since 2002. The change is primarily implemented at the level of *inputs*, through a reorganisation that places teachers in a distinct unit of analysis alongside the school environment and separates financial resources from human resources. The new analytical framework is thus composed of i) *inputs into education systems or the learning environment*, ii) *participation and progression within education entities*, and iii) *outputs, outcomes and impacts of education systems* (OECD, 2018, p. 13).

The *Renewal* period is characterised by minor adjustments to the chapter structure alongside a consolidation of the publication's *input*-oriented profile, and by a broadly balanced distribution between *participation and access* indicators and those concerned with *outcomes and outputs*, a trajectory that has been observable since 2010.

The change introduced in 2018 is most clearly captured when the publication is read as having been reconfigured around explicit thematic orientations. Although this dimension is not directly visible in our quantitative results, it emerged during the document analysis and indicates a close alignment between changes in the publication's analytical framework and its structural organisation. This phase introduces a novel feature relative to earlier periods, insofar as *Education at a Glance* begins to define selected themes for each annual edition: *equity* in 2018 and 2021 (OECD, 2018; OECD, 2021), *tertiary education* in 2019 and 2022 (OECD, 2019; OECD, 2022), and *vocational education and training* in 2020 and 2023 (OECD, 2020; OECD, 2023). Two successive three-year cycles can thus be identified, repeating the sequence of i) *equity*, ii) *tertiary education*, and iii) *vocational education and training*.

5.2 Situating the Emergence of PISA in *Education at a Glance*

5.2.1 *An Obsession with Performance?*

Although the OECD progressively advanced the governamental shifting focus from inputs towards stronger attention to educational results (OECD, 1995, p. 7; OECD 1996, p.10; OECD, 1997, p. 277; OECD, 2000, p. 6; OECD, 2001, p. 8; OECD, 2002, p. 7), with earlier editions already pointing to growing governmental demand for greater emphasis on outcomes, the results assembled from EaG provide only partial echo from that orientation. At most, the findings suggest a muted and short-lived reorientation of the publication around an *output-oriented* agenda, tentatively sketched in the late 1990s and early 2000s.

Indeed, Bottani asserts that the 2000s were marked by an *obsession with performance indicators*[55] (Bottani, 2006), a pattern that our coding only partially corroborates. The apparent peak in *output*-oriented indicators in the first years of the new millennium becomes less exceptional once earlier editions are taken into account. The increased emphasis on *outputs and outcomes* in the early 2000s mainly reinforces a pattern that had already started to develop since 1996, rather than creating a completely new phase. Similarly, even in the first decade of the new millennium, only in three editions (2002 to 2004) did the publication adopt an orientation that placed *outputs and outcomes* in a leading position for assessing the current state of educational systems.

Taken together, these elements do provide ground for the revisitation of some of the reference literature. In Gorur's (2015) landmark work on *Education at a Glance*, the assumption provided on the reading of Bottani's (2006) claim that the 2000s were defined by an *obsession with performance indicators* calls for a return to the original formulation. Indeed, a central nuance in Bottani's original formulation positions this shift in the late 1990s rather than in the 2000s as a whole. The present analysis shows that this distinction is of considerable interpretive importance to the publication periodisation, with implications for how the emergence of PISA is situated within the evolution of EaG.

In fact, nothing in the data justifies treating the 2000s as a period particularly or anomalously focused on *outputs and outcomes* when compared with earlier or later editions of EaG. Actually, the shift towards a more *output*-oriented publication is already visible in the mid-1990s and was short-lived.

[55] In its original version: "*Obnubilation pour les indicateurs de résultats*" (Bottani, 2006, p. 151).

One may nonetheless ask how these findings relate to the more granular results derived from the use of metadata across the publication series. As can be observed, the evidence broadly corroborates our interpretation, albeit with the necessary nuance. Specifically, with the exception of *Performance*, which shifts from a period of growth to a subsequent sharp decline, the remaining results indicators, *Attainment*, *Employment*, *Earnings*, and *Social Outcomes*, display a high degree of stability in their share of thematic focus per edition across the period analysed. What the results do seem to suggest is that specific *Results* metadata becomes increasingly prevalent across editions, but primarily as an ancillary element in the characterisation of indicators. This reading is supported by the patterns of metadata presence observed for *Attainment, Employment* and *Earnings*.

5.2.2 *Education at a Glance Before and After PISA*

As previously noted, one of the problems identified in the INES Project from an early stage concerned the difficulty of collecting and reporting learning outcomes. This limitation led Network A in 1995 to propose a new data collection strategy, which was subsequently approved in 1997 (Morgan, 2011). Although the most visible expression of this evolution only appeared with the publication of the first PISA report in 2001, the codification results provide evidence that this formative process had, in fact, been set in motion in the mid-1990s and had already become visible in the evolving orientation of *Education at a Glance*.

Indeed, the data collected on *Performance* in relation to *Students*, making visible student-assessment metadata, points to a continuous use from the very first edition and to a clear intensification of this metadata category from the 1996 publication onwards, a pattern that coincides precisely with the beginning of the *Transitional Stage*. Taken together, these elements show that the external manifestation of the OECD's work under the INES Project was already moving in this direction several years before the first PISA publication. They likewise indicate that this ambition to develop student-assessment data was not merely declarative, but was concretely reflected in the way *Education at a Glance* itself was being reoriented. These elements are consistent with the earlier interpretation of the formation of the OECD's educational architecture developed in this study, which highlights processes of gradual and incremental change, shaped by intersecting dynamics marked by broader political and social trends, cross-national and domestic developments, as well as internal influences exerted by experts and by arenas of intra-institutional positioning and affirmation within OECD.

This reading is particularly relevant, since PISA is considered *a historical event* (Popkewitz, 2011, p. 31). As addressed, the development of international large-scale assessments appears to have influenced the creation of the OECD's Directorate for Education, in 2002, and there is broad convergence among authors regarding the central role attributed to PISA in consolidating the OECD's position within the international education landscape (Addey, 2018). This understanding reinforces the importance of reconstructing its history in an integrative way, situating it in relation to other OECD publications. In this respect, *Education at a Glance* occupies a central place, as the first major product of the INES Project and an early vehicle for consolidating the organisation's indicator work. *Education at a Glance* thus appears as a key site in which many of the orientations later associated with PISA were already being articulated.

This clarity becomes even more evident when the analysis is extended longitudinally to examine how this dimension evolved across the first thirty editions of *Education at a Glance*. Indeed, the data suggest that, when considering the hypothesis that PISA may have contributed to a reconfiguration of the publication, one is implicitly assuming a change that is both associated with the emergence of PISA itself and interpreted as having long term effects, in this case on indicators grounded in student assessment metadata.

Two elements stand out. First, viewed from the distance afforded by our longitudinal analysis, the results suggest that the dominant reading of *Education at a Glance* has not been substantially updated over time. Rather, it consolidates a generic interpretation anchored, on the one hand, in the OECD's own self-description from the early 2000s, which at times appears overly enthusiastic about its role in the development of international large-scale assessments. This bias seems to stem both from the adoption of an OECD organisational narrative that time has shown to be only weakly accurate and increasingly outdated, and from a strong reliance on the document model and structure of *Education at a Glance*, which did not transparently convey shifts in positioning and focus as they occurred, thereby obscuring the extent and direction of any substantive reorientation. This becomes particularly clear when we consider that, since 2007, the focus on student-centred performance indicators has remained far from any consolidated adoption. In most years, indicators with student-focused *Performance* metadata as a central theme account for less than $p = 0.10$ of all indicators in a given edition, and a substantial number of editions record a value of $p = 0.0$.

Second, even if requiring further development, the data also suggest the hypothesis that the production of international large-scale assessments has progressively become a source of

indirect characterisation of education systems within EaG. This reinforces their relevance beyond a depiction of systems narrowly confined to *Performance* results and suggests that such assessments have come to play an increasingly relevant role in generating and documenting information about education systems. In other words, despite the criticism that has accompanied them, international large-scale assessments appear to have assumed a growing role as a source for documenting and enriching the study of educational realities that are not strictly anchored in achievement or test performance, thereby inviting a partial reconsideration of some of the established critiques of their role. It also invites further study on their use as supporting tools in the characterization of other educational realities in different OECD educational publications.

In sum, the data indicate that the adoption of the 1997 data collection strategy, the *Strategy for Producing Student Achievement on a Regular Basis*, functioned as a *fait accompli*. This fundamental shift in focus is already evident in the 1996 edition of *Education at a Glance*, suggesting that the new emphasis on learning outcomes preceded the strategy's formal approval. Furthermore, it is noteworthy that the *Transitional Stage* (1996–2001) concluded in full alignment with the mandate established in 1997, which was explicitly scheduled to expire on December 31, 2001.

It also becomes clear that the evolution of *Education at a Glance* does not support a reading of a stable or progressively intensifying relationship with PISA. Instead, it underlines the evolutionary and dynamic character of this relationship, with shifts in the treatment of student assessment co-evolving with shifts in the publication's orientation in the context of PISA's emergence. This relationship is nuanced and marked by a formative phase that clearly precedes the first PISA report, pointing to the gradual development, in the background, of tendencies that would later culminate in that publication. At the same time, the analysis shows that this relationship is also characterised by subsequent retreats and discontinuities, particularly during the *Maturity* and *Renewal* phases, when the earlier emphasis on student assessment is relegated to a residual role.

5.2.3 *Flagship Publications and Portfolio Expansion*

There is an additional empirical observation that warrants further consideration. Reflecting on the residual presence of student assessment metadata in *Education at a Glance* and its near disappearance in more recent editions sits uneasily alongside the organisation's simultaneous expansion of its portfolio of flagship periodical publications in education. The fact that, since

the early 2000s, the OECD has progressively broadened its set of educational flagship publications, namely with PISA (OECD, 2001a), followed by TALIS (OECD, 2009a) and PIAAC (OECD, 2013a), points to the need for an integrated reading of the OECD's educational agendas.

In other words, there are signs that the transmutation and displacement of certain thematic strands may have occurred through their relocation to more specialised publications. What does seem clear, however, is that there remains an unwritten genealogy of how these different flagship studies in education have emerged. In particular, there is scope for a more systematic analysis of how the architecture opened up by the INES Project, together with the organisation's difficulties in collecting certain types of data, gave rise to a strategy of portfolio expansion grounded in thematic extension, pursued through the creation and subsequent evolution of new publications and indicators.

This appears to be the case not only for the genesis of PISA, developed in response to the dissatisfactions surrounding student-assessment data collection, as discussed above, but also for the later development of TALIS and PIAAC. TALIS is presented as a product of INES, designed to address gaps identified in data on teachers and teaching (OECD, 2009a, p. 19), while PIAAC is introduced as a complementary extension of PISA into adulthood (OECD, 2013a, p. 25). Authors such as Oliveira and Bauer (2025, p. 38) converge with this reading of the OECD's flagship publications in education as instruments through which the organisation has expanded its portfolio in increasingly specialised ways in order to sustain international comparability. Sellar and Lingard (2014) have also reflected, albeit more partially, on this dimension in the specific case of PISA, highlighting how its expansion through PIAAC and PISA for Schools has entailed an enlargement of its scope, scale and explanatory power.

Viewed from a genealogical perspective, these flagship studies do not appear as isolated projects but as successive deepening and extension of a shared indicator architecture. New instruments emerge in response to tensions and deficiencies identified in earlier work and are positioned as complements rather than replacements. In this sense, these publications constitute one another through processes of mutual reference and functional differentiation. This complementary logic is consistent with Seitzer's work, which has stressed the need for a more integrated reading of the OECD's educational agendas, rejecting any simplistic view of the organisation as being circumscribed to a single type or profile of publication (see Seitzer et al., 2021; Seitzer, 2021).

By observing the relationship between large-scale assessment publications and *Education at a Glance*, one nonetheless encounters a crossroads generated by this expansion, made visible in the way this dimension is abandoned in the most recent publications analysed. The results indeed suggest a concern with avoiding replication and redundancy across publications. Nevertheless, this choice sits alongside the broader crossroads created by the growth of the publication ecosystem itself, since it raises the question of how, under conditions of expansion, articulation between publications can remain legible. Expansion thus introduces new challenges for the design of the OECD educational publication portfolio, and very concretely for *Education at a Glance*, as it navigates between, on the one hand, a path marked by risks of redundancy across publications and, on the other, a landscape of weak or unclear articulation between realities. Considering its broader scope within the portfolio, *Education at a Glance* assumes a pivotal position. This centrality accentuates the challenges involved in preserving analytical coherence and ensuring clear articulation across an expanding array of publications, while also endeavoring to reduce the risk of redundancy.

5.2.4 *Modes of Policymaking and Consensus*

The results invite renewed reflection on modes of policymaking within both the OEEC and the OECD. Not only does the chronological reconstruction developed in the first chapters suggest that institutional development often exceeded formal mandates and was driven, to a relevant extent, by the initiative of internal bureaucracies and technical staff, but the emergence of PISA also points in the same direction.

Indeed, recurring signs of this dynamic can be identified across the historical development of the OECD's work in education. As King (2001) noted, the report of the Working Party on Scientific and Technical Information within the OEEC appears to have passed largely unnoticed in relation to the overstepping of its assigned mandates, in part because the same meeting was also occupied with discussions surrounding Marshall Plan funding. Similarly, as Centeno has shown in detail, the internal dynamics of the organisation, particularly in the late 1960s and 1970s, were decisive in shaping the OECD's work in education, not least through the institutionalisation of education within its organisational structure (2017; 2021).

In this respect, the trajectory leading to PISA brings the same question back into view. The results indicate that the formal adoption of the 1997 data collection strategy amounted, in practice, to the official endorsement of an orientation shift that had already begun to take public

shape in the 1996 edition of *Education at a Glance*. Thus, while the most visible expression of this paradigm shift was the publication of the first PISA report in 2001, the evidence suggests that the process had already been set in motion in the late 1990s, prior to its formal approval by OECD member states.

The findings, therefore, align with the understanding that the development of the OECD's educational work was a fragmented process, also driven by internal dynamics, as Centeno (2017; 2019; 2021) compellingly demonstrates.

Results also have implications for how internal consensus itself is understood. The variations observed over time, both in thematic focus and in the salience of the different subthemes privileged across editions, invite a reconsideration of the reach of the OECD's own characterisation of *Education at a Glance* as *an expert consensus on how to measure the current state of national education systems* (OECD, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023).

From this perspective, the results point to an ambivalent consensus configuration. The stability of the indicators is, to a large extent, apparent, since even though there is a structural continuity and a strong thematic orientation over time, the results demonstrate that the more detailed focus of what is studied is quite volatile. Less than confirming the idea of *annual routinisation* advanced by Gorur (2015), they suggest a more evolving and unstable nature, which reinforces an interpretation of indicators as distinctly political instruments. A further line of interpretation would be to ask whether this self-characterisation has gradually lost force over time and become, to a considerable extent, obsolete. This possibility becomes especially plausible when one considers the apparent incongruity in the fluctuating presence of certain subthemes, such as student assessment, whose trajectory within *Education at a Glance* diverges from its much stronger articulation in autonomous publications, most notably in the PISA series.

5.3 Representations of *Educational Quality*

5.3.1 *An Overarching Framing*

Literature has argued that contemporary OECD work on education has favoured a normative view of education rooted in *human capital* theory (eg. Morgan & Volante, 2016; Sedel, 2004). This is hardly surprising, given that the organisation itself has advanced this framing since the early work associated with the INES Project, and it remains visible throughout the period under

analysis in its public-facing policy architecture. The orientation is already apparent in debates that preceded the early *Education at a Glance* publication (e.g., Alexander, 1994; Fasano, 1994; Rumberger, 1994), and it is subsequently reiterated both within EaG early editions (e.g., OECD, 1995, p. 86; OECD, 1996, p. 31) and through dedicated OECD publications on *human capital* over time (e.g., OECD, 1998a; OECD, 2022b; Miyamoto, 2003; Keeley, 2007). It also remains visible in more recent OECD outputs, including the organisation's dedicated policy content under *Human Capital and Educational Policies* (OECD, n.d.), as well as materials that connect its assessment infrastructure, notably PISA and PIAAC, to the construction of a "new aggregate measure of human capital" (Égert et al., 2022) and to analyses linking productivity, skills, and wage inequality (Criscuolo et al., 2024).

The organisation has clearly defined *human capital* as a stock of skills, knowledge, and competencies developed through education or training and treated as economically relevant attributes mobilised in the labour market (e.g., OECD, 1997, p. 257; OECD, 1998, p. 24; OECD, 2004, p. 28). This reading is consistent with Keeley (2007, p. 30) insofar as it is associated with the quality of the labour force.

In this case, this dimension, as further explored, is legible in the way metadata are framed within the publication, insofar as several coding units are interpreted through the lens of the theory. This applies, namely, to categories such as *Attainment*, *Earnings*, and assessment (in our case coded as *Performance*), but also to less expected categories such as *Social Outcomes*, *Socio-Economic Background*, and even immigration (coded under *Cultural Background* in our analysis).

The breadth with which *human capital* theory is articulated through indicator metadata elements sustains an overarching framing that positions the different indicators and their associated metadata within a normative reading of education systems anchored in the theory. While the present study is not a qualitative analysis of the publication's normative orientation, it is nonetheless prudent to acknowledge this perspective as a heuristic that supports the legibility of the salience analysis undertaken.

When the OECD states that investment in *human capital* is "at the heart of strategies in OECD countries to promote economic prosperity, fuller employment, and social cohesion", it does so from a broad understanding of the need for high levels of skills and knowledge as a route to success (OECD, 1998a).

How the OECD has sought to measure this vision of education as investment (e.g. OECD, 1996, p. 239; OECD, 2001, p. 300; OECD, 2015, p. 132) has been the object of sustained reflection, notably within EaG. Although across several editions the OECD has advanced context-specific attempts to design specific indicators capable of capturing the influence of *human capital* on countries' performance (OECD, 2001, p. 48; OECD, 2002, p. 135; OECD, 2003, p. 168; OECD, 2003, p. 183; OECD, 2005, p. 144; OECD, 2006, p. 152), it has nonetheless remained consistent in treating a range of metadata as proxies for the underlying construct of the quality of the workforce.

Two proxies stand out in this regard. The most basic and accessible measure is, from early on, interpreted as *Attainment*, a "crude" (OECD, 2002, p. 137) indirect approximation of the national stock of *human capital* and as a proxy for the skill level of the workforce (e.g. OECD, 1996, p. 31; OECD, 2000, p. 19; OECD, 2015, p. 30). This metadata is, however, understood as having limitations, since it not only presents difficulties in capturing non-formal education, acquired experience, and vocational training, but also evidences the need to complement it with more direct skills evidence (e.g., OECD, 2000, p. 27; OECD, 2002, p. 17). It is in this sense that direct measures, based on internationally comparable literacy data and assessment of core abilities, are presented as a complementary route to estimate *human capital* (e.g. OECD, 1998, p. 7; OECD, 2000, p. 19; OECD, 2005, p. 149). In our results, these metadata coding units were operationalised as *Attainment* and *Performance*, respectively.

EaG publications also advance different, less obvious readings, framed through *human capital* theory, which inform the selection and interpretation of the metadata coding units used across the series, thereby lending the documents a normatively relevant legibility.

Viewed through an investment lens, the issue is how individual responsibility is positioned within a collective frame. On this reading, wages and remuneration are mobilised as a way of making sense of the incentives facing individuals to invest in *human capital* (OECD, 2002, p. 127). This connects with a determinant articulated more explicitly in later editions, namely the understanding, grounded in *human capital* theory, that the investor in education is primarily the individual rather than the government, since it is the individual who decides whether to continue schooling or not (OECD, 2013, p. 134).

This reading positions the state, in effect, as a regulator of individual choices, and foregrounds a tension between public and private returns and investments. It also entails a displacement of educational responsibility from a public to a private register. In this sense, the *Social Outcomes*

of education are interpreted as a positive externality of investment in *human capital* (OECD, 2002, p. 129; OECD, 2003, p. 163).

The same *human capital* lens, which lends a normative thrust to the EaG series, is also apparent in indicators addressing equity, whose readings are likewise organised around economic benefit and anchored in the expectation that the continuous strengthening of national productive capacity depends on mobilising, to the fullest extent, both domestic and migrant *human capital* within national efforts. Socioeconomic equity is presented as a way of gauging the extent to which countries draw on their full potential in generating future *human capital* (e.g. OECD, 2007, p. 118; OECD, 2008, p. 138). This dimension is then extended beyond the efficient use of domestic resources to include the capacity to attract talent, notably through migration-related indicators, which in our study are captured under the metadata of *Cultural Background* (e.g. OECD, 2006, p. 229; OECD, 2018, p. 49; OECD, 2019, p. 39).

As the 2011 edition of *Education at a Glance* notes, these normative framings are part of an "evolving narrative in human capital" that has shaped the organisation's work since its early years. Over time, the focus has shifted from a primary emphasis on expansion towards concerns with quality and value for money, concerns that informed the launch of the INES Project in 1988 and later developments that culminated in the OECD's creation of its own international large-scale assessments (ILSA) (OECD, 2011, pp. 16–17). How this overarching logic is carried through the mobilisation of metadata across the series, and what representations of educational quality it produces, is taken up in the following sections.

5.3.2 *A Black Box*

As the analysis below demonstrates, the results characterise education system quality, in part, through the lenses of educational investment and workforce quality, as the salience patterns observed in *Education at a Glance* are consistent with reading the series as advancing a set of persistent orientations. In fact, across the first thirty editions, it projects an account of education in which quality is inferred primarily from investment inputs and from selected endpoints, rather than from the processes that mediate between them.

This configuration manifests itself in different ways. While the emphasis on inputs is visible in the thematic distribution of indicators, as previously discussed, the tendency in terms of scope of analysis emerges from the metadata. As is readily identifiable, the report operates largely at a zoom-out level, presenting a distant view of education systems. This is particularly evident in

the wide band way in which educational levels are treated. As discussed, only around one-third of all indicators that make an explicit reference to educational levels (ISCED) focus on a specific and exclusive level. In most cases, levels are treated in aggregated form, which reinforces a systemic rather than a school-level or classroom-level vantage point.

When the specific incidence by educational level is considered, a further pattern becomes visible. Lower levels of education are clearly in the minority, with pre-primary and primary education receiving only limited attention as distinct foci. These results are consistent with the age-based patterns. As results make clear, when indicators are organised by reference age, children under 12 years account for a minority part of the analysis[56].

Read together, these elements point to a configuration in which the assessment of education systems is predominantly anchored in segments that lie above the foundational stages. Taken together, these patterns suggest an external and macro systemic representation of education, in which quality is constructed mainly as a function of resources and selected endpoints, while the internal and contextual dimensions of schooling remain largely backgrounded. In this sense, *Education at a Glance* does indeed operate as a *black box* representation of education systems, as suggested by Sedel (2004), specifying what goes into the system and what is observed at the exit point, but saying relatively little about the processes through which educational experiences are actually produced in between.

5.3.3 *The Missing Class*

Among the forms of symbolic erasure highlighted in this analysis, the most striking is the relatively low prevalence and thematic prominence of indicators referring to students' contextual socioeconomic conditions. The point becomes even more salient when read against the strong emphasis placed on metadata relating to *Entry*, *Participation and Transition*, a configuration that warrants careful reflection. This choice is particularly problematic because, counterintuitively, it intensifies the impression of a publication that projects the education system as a black box, with limited legibility of its internal dynamics. It is also problematic because it curtails the analytical visibility of education's role in mobility and social justice, by

[56] Within the group of indicators organized by reference age, the proportion with a *Minimum Reference Age* <12 is $p = 0.24$. When *Maximum Reference Age* <12 is considered $p = 0.03$.

marginalising precisely the dimensions that would allow such a role to be examined rather than simply asserted.

Although social justice is a broad and evolving term (Hytten & Bettez, 2011; Francis et al., 2017; North, 2008), our perspective treats education as a distributive sphere, where it becomes essential to ask *who receives what, in what ways, and on the basis of which principles* (Resh & Sabbagh, 2016). In this sense, social justice is a normative ideal (Nieuwenhuis, 2010), continually reworked through intervention and in response to the resilience of injustice itself, understood as both enduring and mutable (Bell, 2016).

What we find in *Education at a Glance* makes reflections on justice-related dimensions within education systems comparatively faint across multiple registers. This is particularly visible in the low prevalence of metadata related to socio-economic characterisation. The near absence of a characterisation of participants' contexts constrains a sustained reflection on inequalities of origin based on socio-economic conditions, effectively relegating these realities to the margins of the publication's analytical field.

The literature has been prolific in documenting the relationship between socioeconomic context and academic achievement. While socioeconomic status is neither the only determinant of educational success nor a construct for which measurement is uncontested, empirical findings have remained broadly consistent, albeit with variation in effect sizes and across contexts, in pointing to its relevance (Liu et al., 2022; Selvitopu & Kaya, 2021; Sirin, 2005). For this reason, this omission raises a further question: what, precisely, is being captured when *access and participation* are foregrounded without a corresponding densification of students' socioeconomic origins, and what kinds of inequality are rendered analytically invisible as a result?

The configuration invites reflection on the potentially misleading correspondence between the massification of education systems and the democratisation of education. While educational trajectories can generate upward mobility, such effects are neither automatic nor uniform. Still, higher levels of schooling are generally associated with improved average chances of accessing more highly qualified occupations and higher earnings, with implications for social mobility, labour market insertion, and the distribution of resources (Martins et al., 2016). Yet, as Thompson (2019) argues, there is no conceptual guarantee that rising participation will translate into greater social mobility. Massification and democratisation may therefore be interrelated,

but they are not synonymous, a distinction made especially visible in debates on higher education.

This issue, described by Diane Reay (2016) as *the elephant in the room*, introduces new and demanding requirements for how massification and the normative ideal of democratisation are discussed. With the massification of Western education systems, the problem of social class in education has not disappeared, it has been transformed. Reay argues that the central tension has shifted from restrictions on access to the differentiated allocation of students across institutions and programmes, in other words to questions about who attends which parts of the system.

Even if it may be ambitious to claim that debates on social class and education have entirely moved from access to patterns of participation and trajectories within the system (see Machado et al., 2003), there is nonetheless a clear need to examine how inequality is expressed, reproduced, and reconfigured inside education systems themselves. This distinction is central to the hypotheses of Maximally Maintained Inequality (MMI) and Effectively Maintained Inequality (EMI). MMI suggests that expansion is typically captured first by advantaged groups, so quantitative participation gaps only begin to narrow once their enrolment approaches saturation. EMI adds that, even when participation gaps decline, qualitative inequalities may persist or intensify, as competition shifts from entry to positional advantage within the system, particularly unequal access to more prestigious institutions and programmes. Raftery and Hout (1993) illustrate the MMI logic in the Irish case, showing that attainment gaps narrowed largely because the system became less selective as capacity expanded, not because merit displaced class at key transitions, and that expansion can generate new bottlenecks further along the pipeline. Building on this baseline, Boliver (2011) shows how stratification can be maintained through qualitative differentiation in higher education, consistent with EMI. Along similar lines, Berg (2010) shows, using quantitative evidence and interviews with low-income students in the United States, that expansion can leave opportunity structures largely intact, with socioeconomic advantage continuing to shape who gains entry and under what conditions.

In other words, many authors emphasize that the relative invisibility of subtler dimensions of inequality hampers the identification of emerging patterns of social injustice. These manifest not only in who gains access to education, but also in patterns of participation within the system, including how students are distributed across trajectories, institutions, and programmes. *Education at a Glance* engages only marginally with these dimensions, leaving the socioeconomic circumstances of educational actors as a neglected element of its analytical

architecture. While democratisation is difficult to conceive without some degree of system expansion, treating expansion as a sufficient proxy for democratisation is analytically fragile and does little to illuminate the multiple ways in which inequality can persist, shift, and reappear within education systems. The question, then, is not simply *how many* are accessing and participating, but also *who* is accessing education, and what patterns of *access and participation* reveal about the reproduction of socioeconomic inequalities. *Education at a Glance* offers, at best, only fleeting glimpses of an answer.

5.3.4 *Diversity and Intersectionality*

While most social contract theories are grounded in notions of equity and access to resources under conditions of equal opportunity (Schugurensky, 2010, p. 50), it is important to clarify that this dimension does not reduce to socioeconomic status alone. Multiple dimensions are at stake, ranging from the right to education, to who participates and how resources are allocated, but also to pedagogical practices and modes of evaluation (Resh & Sabbagh, 2016). For this reason, inequalities should be approached as a constellation rather than as isolated variables, with attention to their intersections and to the ways in which they can mutually reinforce one another (da Costa et al., 2018).

In the case of *Education at a Glance*, several demographic axes of characterisation remain comparatively marginal, namely those related to S*ocioeconomic Background* and *Disabilities and Giftedness*. By contrast, contextual characterisation is more consistently made visible through *Gender*, and, to a lesser extent, through *Cultural Background*.

Metadata further reveal a concrete limitation in the publication's capacity to support an intersectional lens. As addressed, research on educational inequality increasingly points to the limits of analysing socioeconomic background, gender, and racial or ethnic difference as separate factors. This is why intersectionality, developed within feminist scholarship, has become influential in education research, offering a way to frame inequality as a configuration of interlocking advantages and disadvantages rather than as a set of independent variables (Bécares & Priest, 2015; Keller et al., 2024; McMaster & Cook, 2019).

As the results support, across the 913 indicators analysed, these intersectional demographic characterizations rarely co-occur. In practical terms, this means that *Education at a Glance* seldom provides indicator constructions that can illuminate how socioeconomic disadvantage is patterned within minority groups, or how cultural background intersects with class and gender

to shape educational pathways, participation, and outcomes. Instead, difference is typically captured one axis at a time, which limits the visibility of compounded disadvantage and narrows the range of equity-relevant questions that can be addressed from within the publication's indicator architecture.

Crucially, these axes are also rarely brought into relation with one another, which limits the publication's capacity to capture compounded disadvantage and to sustain an intersectional reading of inequality.

5.3.5 *Beyond the Quantity Challenge?*

Emerging challenges in the mobilisation of *human capital* are already addressed in the 2006 edition of *Education at a Glance*, which signals a growing awareness that OECD countries could no longer assume an advantage in attracting and mobilising skills once countries outside the OECD were no longer characterised by low qualifications, thereby creating a more open and competitive market for talent, with direct implications for talent retention (OECD, 2006, p. 14). This question, addressed in the editorial signed by Barbara Ischinger as part of the "quantity challenge" is partially visible in the evolution of metadata use across editions, namely through *Attainment*, *Cultural Background* and *Socioeconomic Background*.

As shown across editions, *Attainment* remains a central reference marker, with one of the highest average use levels across the thirty editions analysed. The results are consistent with its characterization as a crude, readily accessible marker, as previously discussed, and also indicate its sustained relevance and a growing tendency across the series. This persistent reliance on attainment-centred, credential-based proxies of *human capital*, and the negligence of assessment-related dimensions (in our analysis, captured under *Performance*), appears to characterise both the early and the more recent phases of the publication. To some extent, this trajectory sits uneasily with recurrent discussions within OECD of the limitations of proxies that capture educational expansion and qualification stocks without directly observing quality or proficiency (e.g. OECD, 1998a, p. 10; OECD, 2022b, p. 9). That is, although the 2006 edition reflects on the "Quality Challenge" (OECD, 2006, pp. 14-15), with attention to drop out (in our analysis captured under *Graduation and Completion*) but fundamentally to students' assessment capacity, the publication does not appear to have incorporated that reflection consistently. Likewise, it also seems to have struggled to incorporate, in a sustained and systematic way, the "Equity Challenge" (OECD, 2006, pp. 16–17), articulated through the

observation that socio-economic inequality plays a stronger role in shaping student success across the OECD than in several Asian systems, in which "education systems succeed better in creating meritocracies that maximise the human potential of their countries more effectively".

This trajectory illustrates the difficulty the document has faced across its first thirty editions in aligning its identity with some of the broader reflections it advances. This is partly explained by EaG's intermittent engagement with educational *Outputs and Outcomes*, reflected in oscillating decisions and positions.

The publication is, in fact, inconsistent with the aforementioned reflections. *Crude* outcome measurements are not definitely overcome, nor is greater emphasis consistently placed on *outputs and outcomes* within educational system analysis. It also diverges from the more pressing imperative of ensuring that educational capacities are fully realised, including through the meritocratic rationale advanced in this context. In effect, the metadata collected point to only an incipient engagement with the socio-economic contextual dimension, alongside a continued reliance on metadata grounded in categories that appear to advance little beyond the *Quantity Challenge*. Such inconsistencies indicate that EaG's evolution has been defined by an ongoing search for identity and a clear analytical positioning within the global educational landscape.

5.3.6 *Representations of Workforce Capacity*

The focus of the first thirty editions of *Education at a Glance* is anchored in *investment* in *human capital*, *participation* in education systems, and *attainment*. Read through the metadata framing in light of *human capital* theory, this emphasis is fundamentally investment-oriented, centring on capacity both in terms of production and in terms of the stock of a qualified labour force. When read in light of EaG as an OECD expert consensus on how to assess the state of education systems (OECD, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023), this is a noteworthy dimension. Indeed, more than assessing education systems, the publication projects itself as an assessment of investment in labour force and of current and future productive capacity.

This reading is consistent with what is observed in the portrayed actors across editions. In fact, although students are the main actors in focus, the active population outside the school system is analysed more extensively than teachers or other staff. Indeed, pedagogical dimensions (captured under *Pedagogy and Evaluation*), appear secondary to elements interpreted either as

productive capacity in *human capital*, such as *Graduation and Completion* (see OECD, 2010, p. 60), or as incentives to invest in *human capital*, such as *Earnings and Employment* (see OECD, 2002, p. 127). As such, education systems are analysed not in pedagogical terms, not through quality standards or quality assurance methods, nor through their responsiveness to contextual realities, but essentially through the stock and productive effort of national skilled labour.

Education at a Glance renders it difficult to escape the imagery of educational systems as mass-production structures, opaque to those who attempt to glimpse what takes place inside. Although the publication explicitly engages with some of these concerns, it nonetheless seems to unintentionally echo that portrayal. Education systems are portrayed as a backdrop for reading national effort in present and future international competitiveness. More than *representations of educational quality*, the publication projects representations of national *workforce capacity*.

5.4 Limitations and Methodological Considerations

It must be acknowledged that anchoring the analysis in the *Education at a Glance* 2023 framework introduces potential conceptual biases, as indicators developed under prior frameworks may pose difficulties to the codification process. Furthermore, the reliance on a sole-coder protocol presents inherent risks to inter-rater reliability. To mitigate these misalignments, the research design incorporates multiple analytical layers through a triangulation of *Thematic Incidence*, *Metadata* categories, and *Structure of Chapters* (see Table 1.1). This approach is further bolstered by the substantial scale of the corpus (n = 913).

Moreover, the necessarily subjective nature of selecting coding units must be acknowledged, since both inclusion and exclusion entail choices. While the breadth sought through the design of 37 thematic tags aims at comprehensive coverage, it is inevitable that some realities will be underrepresented and that some metadata omissions might occur. In other words, it is necessary to guard against the possibility that our coding scheme may overvalue or undervalue particular metadata dimensions. While the analysis in subsection 4.3.2 partially mitigates the risk of a core area being overlooked, this safeguard is warranted.

A further methodological feature, while not a limitation, warrants explicit recognition. Given the salience-based design, most categories are expected to be coded as absent for any given

indicator, and some may exhibit limited overall presence. This reflects the nature of the study rather than a flaw in its design and should be taken into account when interpreting the results. Finally, it should be noted that the aim of this study is not to exhaust the topic but to provide a strong, empirically grounded basis for subsequent debate and inquiry. On that basis, the thesis can usefully inform a range of subsequent research agendas, including analyses of OECD's education policy ecosystem, examinations of the OECD's interactions with other international organisations, investigations into how these dynamics are translated or institutionalised at national level, and longitudinal accounts of how specific issues and problem framings evolve as indicator agendas are revised and re-stabilised.

6. Conclusion

This thesis has examined the evolution of the OECD's educational priorities by subjecting widely accepted claims in the literature to systematic methodological scrutiny. Using *Education at a Glance* (EaG) as an instrument of analysis, it has treated the publication as a benchmark of expert consensus on national education systems.

This thesis provides the most comprehensive and granular longitudinal thematic analysis of *Education at a Glance* indicators to date. By analysing all indicators across the first thirty editions of EaG (n = 913), it establishes a substantial empirical foundation for future research on global education agendas.

The database, comprising 33,781 coding cells, offers a substantial scope for future research and development collaboration. In particular, the dataset lends itself to more focused sectional studies of modes of representation across specific policy issues and educational levels, while also opening up opportunities for collaboration both with more specialised areas of research and across adjacent fields of inquiry. In this respect, the thesis also provides a valuable empirical basis for further research on the relationship between national agendas and the EaG framework and for critical works on the evolution of representations across the OECD's expanding portfolio of educational flagship publications.

More broadly, the findings point to a growing need to revisit and update parts of the existing literature on the development of the OECD's educational indicator complex. In particular, the thesis advances an original periodisation of EaG, challenging more linear accounts of its development. It also relocates the emergence of PISA within the longer trajectory of EaG, demonstrating that orientations later consolidated under PISA were already taking shape within the publication before the programme's formal approval. In this respect, the study not only repositions EaG within the history of OECD education governance, but also provides a stronger empirical basis for a more historically grounded critical account of PISA.

Finally, the analysis developed in the thesis reinforces an understanding of *Education at a Glance* as a hybrid technical and shifting political instrument within global educational governance, calling for reflection on the decisions that have shaped its development and for closer scrutiny of the assumptions and reorientations through which it has acquired its present authority.

6.1 The Emergence of INES Project

We contend that the INES Project should be viewed not just as a technical innovation, but as the result of a wider convergence of internal dynamics, changing economic contingencies, the history of ideas, and geopolitical imperatives of the post-Second World War period. Established in 1988, the OECD's International Indicators of Education Systems (INES) Project cannot, therefore, be reduced to a purely academic undertaking. It emerged from concerted efforts to improve the quality and comparability of data on education policies (Bottani, 1996) but also as a response to the understanding that prosperity would be grounded in knowledge-based societies within an increasingly globalised context.

The development of the INES Project was marked by a diminishing role for researchers and the growing predominance of policymakers, who had already assumed a central position by the first General Assembly of the Project, held in Lugano in September 1991. The discussions surrounding the meeting make clear that indicator design was understood as an inherently political exercise. Although some accounts emphasised the need to balance its technical and political dimensions (e.g. Hermanson, 1994), the latter came to prevail (Bottani & Tuijnman, 1994). In this sense, indicators were conceived as instruments of change (cf. Alexander, 1994; Bottani & Tuijnman, 1994; Wyatt, 1994), carrying an aspirational dimension concerned with both the present condition of education systems and their desired direction. Against this background, the design of indicators within INES came to be framed as a hybrid endeavour structured around two axes: one conceptual and the other pragmatic (Bottani, 1998). From the outset, their practical utility was treated as central to the project, and, despite their scientific and technical basis, this utilitarian dimension was understood as a condition of their institutional viability and success.

The INES Project marked a new phase in the development and maturation of the OECD's organisational structure, particularly regarding its role in public education policy. Grounded in the comparable assessment of educational systems' quality, INES history stands as a defining moment in the consolidation of comparability as a mode of governance.

6.2 The Four Phases of *Education at a Glance*

A central contribution of this thesis lies in the development of an original periodization of *Education at a Glance*, structured across four distinct phases. This periodization is grounded in

the evolution of the publication's organizational architecture and by the empirical findings derived from the thematic distribution of its indicators.

Our work renders visible that, while EaG's chapter structure offers limited insight into the thematic focus of individual indicators, it appears to reflect internal reconfigurations and shifts in the conceptual frameworks that guide the OECD's design and selection of indicators. As such, the publication chapter structure aligns with the successive phases of reorientation in the thematic incidence of indicators across the publication's first thirty editions, indirectly signalling tentative normative and theoretical adjustments, in part coinciding with changes in the publication framework. It is therefore through the articulation between the publication's structure and our coding effort that the evolution of *Education at a Glance* across its first thirty editions becomes fully legible.

The first period, the *Formative Years* (1992 – 1995), marks the assembly of indicators and the establishment of a systematic production framework predominantly oriented toward inputs. This initial phase articulates with the established institutional chronology of the INES Project's inception, moving from an exploratory period between 1988 and 1989 to a stage of developmental indicator construction from 1990 to 1991 (OECD, 2012a).

Towards the end of these *Formative Years*, however, several of the elements that would later define the Transitional Stage had already begun to emerge. Even before the publication of the 1995 edition of *Education at a Glance*, the organisation had begun, in 1994, to reorient itself around a new framework anchored in lifelong learning, signalling what Thompson et al. (2022, p. 687) describe as an "acceptance within the OECD of the centrality of education to economic growth". Alongside, Network A, responsible for the development of learning outcomes indicators, elaborated a new strategy that was presented to INES members in 1995, adopted in 1997, and would later contribute to the emergence of PISA.

The 1996 edition inaugurates the *Transitional Stage* (1996 – 2001), a period of pronounced instability in both the publication structure and the thematic incidence of indicator orientation. In *Education at a Glance*, the chapter reconfiguration started to exhibit more fragmented structures, with between six and seven chapters per edition, suggesting a moment of conceptual turmoil and reconfiguration. This was also visible in the priority shift of indicators toward outputs and learning outcomes. Our results are consistent with the interpretation of Thompson et al. (2022), supporting an interpretation of the year 1996 as a moment of *policymaking assemblage*.

The *Maturity* period (2002 – 2017) represents a strategic realignment of the publication's architecture and a phase of gradual stabilization, standing in stark contrast to the volatility of the preceding *Transitional Stage*. During this era, the document's structure consolidated, diminishing the more fragmented structure approach of the previous phase, and establishing a template that remained largely intact through the subsequent phase. The most relevant architectural shifts involved the dissolution of chapters dedicated exclusively to strictly contextual dimensions and the integration of the various output and outcome chapters, which had proliferated between 1996 and 2001, into a unified section.

Although the *Maturity* phase begins with a renewed results-based orientation in its first three editions (2002 – 2004), it gradually consolidates into an input-oriented profile. This suggests a partial overlap between the final years of the *Transitional Stage* and the early years of *Maturity*, as the publication moved through a period of successive adjustment before stabilising, from around 2010 onwards, into a more balanced distribution between outputs and outcomes, and participation and progression.

Finally, *Renewal* (2018 – 2023) is marked by minor adjustments to the chapter structure, alongside the consolidation of the publication's input-oriented profile and a broadly balanced distribution between participation and access indicators, on the one hand, and outcomes and outputs, on the other, a pattern already visible from around 2010 onwards.

Taken together, the findings indicate that *Education at a Glance* developed through a series of distinct phases, whose shifting thematic orientations reflect successive reconfigurations across its thirty-year trajectory, establishing the publication as a living and continuously evolving object of analysis whose richness is better captured from a longitudinal perspective.

6.3 A Call for a Renewed Reading of the Literature

The findings underscore a pressing need for a renewed reading of some of the most relevant contributions on *Education at a Glance*. In particular, they suggest revisiting Gorur's (2015) reading of Bottani's (2006) claim that the 2000s were defined by *an obsession with performance indicators.* From a longer-term longitudinal perspective, a central nuance in Bottani's original formulation comes more clearly into view as the shift in question is located in the late 1990s rather than in the 2000s as a whole. The present analysis shows that this distinction is of

considerable interpretive importance, with implications both for how the emergence of PISA is situated within the evolution of EaG and for the tentative periodisation proposed in this thesis.

Indeed, the early 2000s emerge not as an unprecedented turning point, but rather as the visible apex of a trajectory already set in motion during the mid-1990s. The data collected on student assessment point to its continuous presence from the very first edition of *Education at a Glance* and to a clear intensification of this metadata category from the 1996 edition onwards, indicating that the external manifestation of the OECD's work under the INES Project was already moving in this direction several years before the first PISA publication. This interpretation is further supported by the thematic coding of the indicators, which points to a short-lived orientation towards outputs and outcomes in EaG.

At the same time, our results indicate that Bottani's characterisation is best understood as a historically situated reading, one that later editions of *Education at a Glance* show must be approached with caution. More broadly, this points to a limitation in the literature itself, which has to date evolved only to a limited extent beyond the interpretive horizons established at the creation of *Education at a Glance* and around the turn of the 2000s, often reproducing the OECD's own historically situated view of a reorientation towards outputs and outcomes (OECD, 1997, 2000, 2001, 2002) without sufficiently re-examining the publication in light of its subsequent development. Looking back, what seemed at the time to be a consolidated shift towards an output-focused agenda was in fact a short-lived reorientation, tentatively sketched in the mid-1990s and early 2000s, and only marginally representative of the publication's broader trajectory, which remained predominantly input-oriented.

The longitudinal breadth of this thesis also makes it possible to show that the interpretation advanced by Teodoro and Estrela (2010), based on the chapter structure of *Education at a Glance*, can be enriched by an additional interpretive layer. From the publication's chapter structure, the authors identified a process of indicator stabilisation. While such a tendency may indeed be suggested at the structural level, it is only partially confirmed by the present analysis. More specifically, the chapter structure points to broad tendencies in the publication's evolution, but it fails to capture the direction in which these tendencies unfold. Nor does it reveal that beneath apparent moments of stabilisation, there are continuous shifts in what is actually being measured across editions, a feature that becomes visible only through a closer reading of the content of individual indicators. To grasp the orientations of the publication more fully, it is

therefore necessary to move beyond chapter structure and examine the indicators themselves in greater detail.

6.4 An Expert Consensus?

Our results also invite a reconsideration of the OECD's own characterisation of *Education at a Glance* as *an expert consensus on how to measure the current state of national education systems* (OECD, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023).

To take *Education at a Glance* seriously in these terms implies, first of all, recognising the evolving nature of *consensus* itself, thereby reinforcing an interpretation of indicators as distinctly political instruments. If the literature review had already identified, among several of the actors involved in their construction, an explicit recognition of a dimension that exceeded their merely technical character, the findings of this thesis corroborate that view in a particularly clear way. The variations observed over time are evident not only in shifts of thematic focus but also in the changing salience of the different subthemes privileged across editions.

A further line of interpretation would be to ask whether this self-characterisation has gradually lost force over time and become, to a considerable extent, obsolete. This possibility becomes particularly consistent when one considers the apparent incongruity in the fluctuating presence of certain subthemes, such as student assessment, whose trajectory within *Education at a Glance* diverges from their much stronger assertion in autonomous publications, namely in PISA series.

Indeed, recent scholarship has consistently called for an integrated reading of the OECD's educational publication portfolio (Lingard & Grek, 2007; Niemann et al., 2017). More specifically, recent findings have cautioned against broad generalisations derived from specific publications. Our study corroborates that perspective, particularly in cautioning against the extrapolation of PISA's influence as having a totalising effect on the complexity and diversity of the OECD's educational work (Seitzer et al., 2021).

The findings appear to suggest, albeit as a hypothesis requiring further investigation, that across its first thirty editions *Education at a Glance* was engaged in a recurrent process of repositioning. This may be understood not only in relation to an evolving understanding of *educational quality*, but also as part of an ongoing search for identity. Such a hypothesis would

be consistent with its status as the first, and for a considerable period the only, regular flagship publication created under the INES Project, before successive phases of specialisation and expansion reshaped the OECD's portfolio of regular educational publications. This issue becomes particularly salient in light of the crossroads created by the expansion of the publication ecosystem itself, as the publication appears to confront an evident dilemma: how to render an increasingly scattered indicator architecture legible without becoming redundant within the OECD's growing portfolio of educational publications.

This hypothesis of recurrent repositioning also helps to illuminate *Education at a Glance*'s difficulty in matching its own reflections and ambitions for the publication's development. This is evident in its limited capacity to move beyond *crude* measurements, despite recurrent OECD discussions of the limits of proxies centred on educational expansion and qualification stocks and the objective to move beyond the *quantity challenge* (OECD, 2006). In this sense, the evolution of EaG appears to be marked by a series of unfulfilled ambitions, revealing a persistent struggle to define its identity within the global educational landscape.

6.5 Education at a Distance

The results show that EaG primarily projects educational quality through the lenses of educational investment and workforce quality. Across its first thirty editions, it advances an account of education in which quality is inferred primarily from investment inputs and selected endpoints, rather than from the processes that mediate between them. More broadly, the report operates at a largely zoomed-out level, presenting a distant view of education systems. This is particularly evident in the broad way educational levels are treated, most often through wide-band representations of the ISCED levels covered by different indicators.

A similar pattern can be observed in the more limited specific attention given to lower levels of education, namely pre-primary and primary education. This is consistent with the age-based data, which show that children under 12 account for only a minority share of the analysis. Taken together, these patterns suggest an external and macro-systemic representation of education, predominantly anchored in segments that lie above the foundational stages.

EaG operates as a *black-box* representation of education systems (see Sedel, 2004), specifying what goes into the system and what is observed at the exit point, while saying relatively little about the processes through which educational experiences are produced in between.

Consistently, the results show a relatively low thematic prominence of indicators referring to students' socioeconomic conditions. This invites reflection on the analytically fragile correspondence often drawn between the massification of education systems and the democratisation of education. While system expansion may support upward mobility, it does not in itself illuminate how inequality persists, shifts, or reappears within education systems. The key question is therefore not only how many access and participate, but also who does so, and what those patterns reveal about the reproduction of socioeconomic inequality. In this respect, *Education at a Glance* offers only limited insight. The data further point to a restricted capacity to sustain an intersectional reading of inequality, as socioeconomic background, gender, and cultural difference are seldom brought into relation with one another, thereby obscuring forms of compounded disadvantage.

Indeed, more than assessing education systems, the publication projects itself as an assessment of investment in labour force and of current and future productive capacity. This reading is consistent with what is observed in the portrayed actors across editions. In fact, although students are the main actors in focus, the active population outside the school system is analysed more extensively than teachers or other staff. As well, pedagogical dimensions, appear secondary to elements interpreted either as productive capacity in human capital. As such, education systems are analysed not in pedagogical terms, not through quality standards or quality assurance methods, nor through their responsiveness to contextual realities, but essentially through the stock and productive effort of national skilled labour. More than representations of *educational quality*, the publication projects representations of national *workforce capacity.*

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8. Annexes

8.1 Annex A

Table 8.1

Input Indicators Without Unassigned Focus Metadata Across Education at a Glance (1992-2023)

Coding Unit	Year	Subject
Decision-making levels in lower secondary education	1992	Decision-making
Decisions taken by primary and secondary schools	1992	Decision-making
Decision-making areas of lower secondary schools	1992	Decision-making
Modes of decision-making in lower secondary schools	1992	Decision-making
Autonomy of decision-making for public and private lower secondary school	1992	Decision-making
Locus of decision-making	1993	Decision-making
Decision-making by schools	1993	Decision-making
Domains of decision-making	1993	Decision-making
Modes of decision-making	1993	Decision-making
Teacher characteristics	1995	HR Characteristics
Staff co-operation	1996	HR miscellaneous
Eighth-grade mathematics teachers' reports on their age, gender and teaching experience	1997	HR Characteristics
Eighth-grade mathematics students' reports on how they spend their daily out-of-school study time	1997	Others
Age and gender distribution of teachers	1998	HR Characteristics
Locus of decision-making in lower secondary education	1998	Decision-making
Decision-making about the curriculum in lower secondary education	2000	Decision-making
Age and gender distribution of teachers, and staff employed in education	2001	HR Characteristics
Age and gender distribution of teachers, and staff employed in education	2003	HR Characteristics
Decision making in education systems	2004	Decision-making
Public and private providers	2005	Others
Institutional differentiation	2005	Differentiation
What is the level of decision making in education systems	2008	Decision-making
How are schools held accountable	2011	Others
How do early childhood education systems differ around the world	2012	Differentiation
Who are the teachers	2012	HR Characteristics

Who makes key decisions in education systems	2012	Decision-making
How do early childhood education systems differ around the world	2013	Differentiation
Who are the teachers	2013	HR Characteristics
How do early childhood education systems differ around the world	2014	Differentiation
In what ways do public and private schools/ institutions differ	2014	Differentiation
Who are the teachers	2014	HR Characteristics
How do early childhood education systems differ around the world	2015	Differentiation
Who are the teachers	2015	HR Characteristics
How do early childhood education systems differ around the world	2016	Differentiation
Who are the teachers	2016	HR Characteristics
How do early childhood education systems differ around the world	2017	Differentiation
Who are the teachers	2017	HR Characteristics
How do early childhood education systems differ around the world	2018	Differentiation
Who are teachers	2018	HR Characteristics
Who makes key decisions in education systems	2018	Decision-making
How do early childhood education systems differ around the world	2019	Differentiation
Who are the teachers	2019	HR Characteristics
How do early childhood education systems differ around the world	2020	Differentiation
How do vocational education systems differ around the world	2020	Differentiation
Who are the teachers	2020	HR Characteristics
How do early childhood education systems differ around the world	2021	Differentiation
Who are the teachers	2021	HR Characteristics
How do early childhood education systems differ around the world	2022	Differentiation
How do early childhood education systems differ around the world	2023	Differentiation

This dissertation has used assistance from Artificial Intelligence tools, primarily for translation, linguistic revision, and stylistic refinement in a non-native language (ChatGPT, Grammarly, Gemini), as well as to support the preliminary analysis of manually coded data (Julius.ai). All bibliographic sources were selected and cited by the author. The methodological choices, coding decisions, analyses, interpretations, and conclusions are the author's own. The author assumes full responsibility for the integrity and accuracy of the dissertation.