The Eurasia Proceedings of
Educational & Social Sciences (EPESS)
ISSN: 2587-1730

The Eurasia Proceedings of Educational and Social Sciences (EPESS), 2025

Volume 47, Pages 283-295

IConSE 2025: International Conference on Science and Education

Methodological Challenges in Assessing the Quality of Inclusive Education

Natasha Angeloska-Galevska
Ss. Cyril and Methodius University in Skopje

Ivana Vasilevska- Petrovska
Ss. Cyril and Methodius University in Skopje

Abstract: Introduction: Assessing the quality of inclusive education is a critical yet complex task, particularly in countries undergoing education reform. In the Republic of Macedonia, inclusive education has been elevated in national policy through the Law on Primary Education (2019) and supported by donor-funded projects promoting equity and access. However, the practical assessment of inclusion remains challenging, as traditional metrics—such as enrolment and attainment—do not capture the full scope of participation, differentiated instruction, or social inclusion (Black-Hawkins & Florian, 2011; UNESCO, 2020). Methods: This study critically examines methodological approaches to evaluating inclusive education with particular reference to the Macedonian context. It reviews international tools such as the Index for Inclusion (Booth & Ainscow, 2011), UNESCO's Inclusive Education Monitoring Framework, and OECD inclusion indicators, alongside recent evaluation reports and pilot studies from Macedonia. Emphasis is placed on mixed-methods approaches, including school self-assessment, stakeholder interviews, and classroom-level observations. Results: Findings suggest that while Macedonia has adopted inclusive education as a strategic goal, the evaluation mechanisms remain underdeveloped. Quantitative indicators (e.g., number of inclusion support teams or individualized education plans) offer limited insight without qualitative data that reflect classroom realities and stakeholder experiences. In some municipalities, locally adapted tools inspired by the Index for Inclusion have shown promise but lack systematic integration. Discussion/Conclusion: A national framework for evaluating inclusive education in Macedonia should balance system-level indicators with school-level processes and community voices. The paper argues for a participatory and reflexive evaluation model that combines standardized data with context-rich qualitative evidence. Such an approach would better inform policy, support teacher practice, and contribute to building an inclusive culture across schools.

Keywords: Inclusive education, Assessment, Index for inclusion, Indicator development

Introduction

Inclusive education has emerged as a fundamental principle in global educational policy, seeking to ensure that all learners — regardless of ability, background, or socio-economic status — have equitable access to quality education. In the context of the Republic of Macedonia, the 2019 Law on Primary Education introduced a legal obligation for inclusive practices, marking a major policy shift towards equity and participation for all students. The philosophy of inclusion promotes education for all students according to their individual abilities. By redefining societal attitudes, those who are different can be valued for who they truly are—whether they are persons with psycho-physical developmental disabilities, gifted children, children without parental care, displaced individuals, socially disadvantaged persons, minority groups, or others with special educational needs. This approach calls for profound changes in people's thinking—challenging ingrained beliefs and transforming attitudes toward those who are different from ourselves. However, translating inclusive ideals into measurable progress has proven difficult, especially in the absence of robust frameworks for evaluating the quality of inclusion at both systemic and school levels.

Globally, several conceptual tools have been developed to support this task. The Index for Inclusion (Booth & Ainscow, 2011) emphasizes participatory, school-level self-assessment rooted in inclusive values. The UNESCO's Guide for Ensuring Inclusion and Equity in Education (UNESCO, 2017) provides a policy-level framework for governments to monitor and review inclusion and equity in national education systems. The OECD's Input–Process–Outcome framework (Calvel & Mezzanotte, 2023) offers a scalable, outcome-oriented model, aligning indicators across levels of governance. While each framework presents valuable insights, they also carry limitations in terms of operational clarity, scalability, and school-level usability. These limitations become especially apparent in the Macedonian context, where evaluation data is scarce, systematic monitoring is underdeveloped, and international tools remain largely unused.

In the Macedonian context a comprehensive and coordinated national evaluation framework that explicitly addresses inclusion is yet to be developed. While national strategic documents and education legislation emphasize inclusion, there is limited alignment between policy objectives and operational tools for assessment. For example, the 2019 Law on Primary Education mandates inclusive practices but does not articulate how these should be monitored or assessed in practice, nor does it specify inclusive education indicators in national assessment cycles. The Comprehensive Education Strategy (2018-2025) outlines broad commitments to inclusion, however without specific, measurable goals and indicators related to the inclusion of marginalized or disadvantaged learners. Without concrete benchmarks, there is no reliable way to monitor progress or assess the impact of policies on students with special education needs (SEN), ethnic minorities, or other vulnerable groups (Kitchen et al., 2019).

Reforms to create a fully inclusive education system cannot be implemented overnight, and require a step-by-step process. Moreover, the steps that need to be taken – or that can feasibly be taken – differ by country context (UNICEF, 2014). While it is important for international cooperation to take place, and for best-practices and lessons-learned to be shared widely and across contexts, it is equally important to ensure that each country develops an implementation strategy that is fully contextualized within its own reality and takes into account its existing challenges and opportunities for development.

This paper critically examines the methodological challenges in evaluating inclusive education, analyzing how the three leading international frameworks address key dimensions of monitoring and assessment. By organizing the discussion around thematic concerns — such as conceptual clarity, data generation, and school-level usability — the paper identifies their respective strengths, limitations, and potential for adaptation. Special attention is given to the IPA Scale (Cottini et al., 2016), a simplified, validated tool developed in Italy as a practical derivative of the Index, which may offer a viable model for Macedonia. The goal is to inform the development of context-sensitive, scalable, and evidence-based mechanisms for assessing the quality of inclusive education in the country.

Input–Process–Outcome (OECD framework)

One of the most influential models to emerge over the past decade is the European Framework for Examining Inclusive Education developed by Kyriazopoulou and Weber (2009). This framework for evaluating inclusive education is structured around three interconnected levels of analysis, commonly used in European education systems:

- Micro Level – This level focuses on individuals and classrooms. It includes interactions between students and teachers, classroom practices, and the support given to individual learners. Evaluation at this level looks at how inclusive education is experienced day-to-day by students and educators.
- Meso Level – This level refers to the whole school and its immediate context. It includes school policies, leadership, school culture, staff collaboration, and the involvement of families and local communities. Assessment here considers how a school, as an institution, supports inclusion.
- Macro Level – This is the broader system level, including national and local government structures, laws, policies, funding mechanisms, and national curricula. Evaluation at this level focuses on how the education system as a whole creates the conditions for inclusion.

This multi-level framework recognizes that inclusive education cannot be evaluated or improved by focusing only on classroom practice. Rather, it must be assessed at all levels—from individual interactions to school systems and national policy. The effectiveness of inclusive education depends on how well these three levels work together.

Therefore, a second analytical frame is proposed, the inputs–processes–outcomes model, that is applied across these three levels of inspection. This helps identify what resources (inputs) are in place, how they are used (processes), and what results are achieved (outcomes). Together, these two frameworks allow for a comprehensive understanding of the factors that support or hinder inclusive education at every level of the system. The Relationship between the Micro-Meso-Macro Levels and the Inputs-Processes-Outcomes Model, appearing in a review by Loreman et.al. (2014) is described in Table 1.

Table 1. The Inputs–Processes–Outcomes framework applied across the Micro–Meso–Macro levels

Level	Inputs	Processes	Outcomes
Macro	Policy; Staff professional development (PD) and teacher education; Resources and finances; Leadership;	Climate; School practice; Collaboration and shared responsibility; Support to individuals; Role of special schools;	Participation; Student achievement; Post-school options;
Meso	Policy; Staff PD and teacher education; Resources and finances; Leadership Curriculum;	Climate; School practice; Classroom practice; Collaboration and shared responsibility; Role of special schools;	Participation; Student achievement; Post-school options;
Micro	Resources and finances; Leadership; Curriculum;	Climate; School practice; Classroom practice; Collaboration and shared responsibility; Support to individuals;	Participation; Student achievement; Post-school options;

Note: Sourced from Measuring indicators of inclusive education: A systematic review of the literature. by Loreman, Forlin, & Sharma, 2014, *Measuring inclusive education,* 165-187.

This European approach was further developed by Loreman et al. (2014), and has steadily gained recognition for its effectiveness in conceptualizing inclusive education, and was adopted within the OECD's 2023 framework proposal (Table 2). Complemented by Cerna et al. (2021) the OECD has articulated a suite of indicators for each element (Calvel & Mezzanotte, 2023) designed to provide supportive examples for real interventions in assessing inclusion. The intended scope of these indicators is not to prescribe a fixed set of indicators or a universal measurement instrument. Rather, its framework is designed to provide illustrative examples of indicators that policymakers and practitioners might consider when developing or refining their own national or institutional IPO models (Cerna et al., 2021; Calvel & Mezzanotte, 2023).

Table 2. Components of the OECD Inputs–Processes–Outcomes framework

Category	Elements
Inputs	Policy; Material and financial resources; Curriculum; Teacher education and continuous; professional development; Leadership
Processes	School climate; Teaching and pedagogical practices; Collaboration; Support to individuals
Outcomes	Educational outcomes; Well-being outcomes; Economic and labour market outcomes

UNESCO's Inclusive Education Monitoring Framework

The UNESCO Guide for Ensuring Inclusion and Equity in Education (UNESCO, 2017) was developed within the broader context of the 2030 Agenda for Sustainable Development, adopted in September 2015. This global agenda established a comprehensive framework for addressing the well-being of people and the planet by promoting social development, environmental sustainability, economic prosperity, and equity. Among its 17 Sustainable Development Goals (SDGs), Goal 4 explicitly focuses on ensuring inclusive and equitable quality education and promoting lifelong learning opportunities for all. Recognizing the centrality of education to sustainable development, the guide positions inclusive education not only as a stand-alone objective (SDG 4) but also as a cross-cutting enabler for achieving the other SDGs. As such, the guide supports countries in aligning their education policies with the commitments of the 2030 Agenda.

Its development reflects an understanding that inclusive quality education is fundamental to achieving broader goals of social justice, human rights, and sustainable development. It is designed not as a monitoring instrument

for individual schools, but as a framework for guiding system-wide reflection and reform. Its primary users are education policymakers —alongside stakeholders such as teacher educators, curriculum developers, and representatives of development agencies. It seeks to address barriers to access, learning, and meaningful engagement by providing a structured self-assessment approach that helps countries examine the extent to which equity and inclusion are embedded in their existing educational policies and strategies.

Whether at the national or more local level, countries can use the policy review framework presented in this Guide in three ways: (1) to assess existing education policies for their attention to equity and inclusion; (2) to create and implement an action plan to advance education policy; and, (3) to monitor progress as actions are taken. The framework includes 4 dimensions, each with four defining features that form the basis of the self-assessment framework (Table 3).

Table 3. Dimensions and key features of the UNESCO ınclusion and equity framework

Dimension	Key Features
1. Concepts	1.1 Inclusion and equity are overarching principles that guide all educational policies, plans and practices. 1.2 The national curriculum and its associated assessment systems are designed to respond effectively to all learners. 1.3 All partners who work with learners and their families understand and support the national policy goals for promoting inclusion and equity in education. 1.4 Systems are in place to monitor the presence, participation and achievement of all learners within the education system.
2. Policy Statements	2.1 The important national education policy documents strongly emphasize inclusion and equity. 2.2 Senior staff at the national, district and school levels provide leadership on inclusion and equity in education. 2.3 Leaders at all levels articulate consistent policy goals to develop inclusive and equitable educational practices. 2.4 Leaders at all levels challenge non-inclusive, discriminatory and inequitable educational practices.
3. Structures and Systems	3.1 There is high-quality support for vulnerable learners. 3.2 All services and institutions involved with learners and their families work together in coordinating inclusive and equitable educational policies and practices. 3.3 Resources, both human and financial, are distributed in ways that benefit potentially vulnerable learners. 3.4 There is a clear role for special provision, such as special schools and units, in promoting inclusion and equity in education.
4. Practices	4.1 Schools and other learning centres have strategies for encouraging the presence, participation and achievement of all learners from their local community. 4.2 Schools and other learning centres provide support for learners who are at risk of underachievement, marginalization and exclusion. 4.3 Teachers and support staff are prepared to respond to learner diversity during their initial training. 4.4 Teachers and support staff have opportunities to take part in continuing professional development regarding inclusive and equitable practices.

Both the OECD framework and the UNESCO Guide function as a policy-level framework intended to promote structural and cultural transformation within education systems. It complements, but does not replace, more operational frameworks such as the Index for Inclusion or other instruments, which are better suited for school-level self-evaluation and data collection.

Index for Inclusion

Inclusion indicators, when implemented at the school level, can serve as valuable tools for internal self-assessment processes. A leading example is the Index for Inclusion (Booth & Ainscow, 2011), developed in 2002 and revised in 2011. Drawing on prior research, the Index provides a comprehensive set of indicators and is designed for school-level use through a self-evaluation process. Widely recognized as one of the most influential frameworks for analyzing inclusion, the Index has been adapted into 35 languages (CSIE, 2020) and

contextualized to reflect local needs. It has been applied in over 400 schools across the United Kingdom and internationally (Loreman et al., 2014).

The Index proposes a participatory methodology for planning inclusive education, one that fosters the involvement of students, teachers, parents, school leaders, administrators, and members of the local community. Its foundational perspective is aligned with the social model of disability and special educational needs, which, through clearly defined indicators and descriptors, seeks to eliminate all barriers that hinder social participation and learning for all students. This approach encourages developmental pathways that value the potential of every individual—students, educators, families, and the school community as a whole—and promotes the transformation of educational environments. The Index explores the concepts of inclusion and exclusion through three key dimensions, each subdivided into two interrelated sections intended to guide the process of transforming the school context, to increase learning and participation in a school. According to the Index, these development priorities include:

A. Creating inclusive cultures (A1: Building community; A2: Establishing inclusive values);
B. Producing inclusive policies (B1: Developing the school for all; B1: Organizing support for diversity);
C. Evolving inclusive practices (C1: Constructing curricula for all; C2: Orchestrating learning).

Each of these sections contains between five and eleven indicators, which are constituted of statements represents an important aspect of a school. They are aspirations against which existing arrangements can be compared, in order to set priorities for school development. Each indicator is then accompanied by at least ten pre-formulated questions, along with additional, context-specific questions that the school—acting as the subject of evaluation—may choose to use to further explore its own unique situation. As such, the structure of the tool is relatively complex, comprising approximately 150 evaluative elements per dimension.

Over time, the Index has become a major international point of reference for school-based inclusive planning. It has proven to be a valuable tool for investigating school culture as shaped by pedagogy, curriculum, organizational structures, classroom dynamics, and decision-making processes (Slee, 2006). For instance, the Index was used in Queensland, Australia, to support the development of a learning community. Teachers involved in this initiative employed the Index as a stimulus for reflective discussions and integrated its values, indicators, and questions into their action plans (Duke & Carrington, 2014; Duke, 2009).

One notable adaptation of the Index is found in Alberta, Canada, where educational authorities introduced the Indicators of Inclusive Schools—a model inspired by the original framework. This resource provides school leaders with tools and reflective guidance to evaluate how inclusivity is manifested within their institutions. Moreover, it supports the development of targeted strategies and action plans aimed at enhancing inclusive practices and addressing the diverse learning needs of all students (Government of Alberta, 2013).

Method

This study employs a qualitative, document-based analysis to examine methodological approaches to evaluating the quality of inclusive education, with particular reference to the Macedonian context. It centers on a comparative review of three internationally recognized frameworks: the Index for Inclusion (Booth & Ainscow, 2011), the OECD Input–Process–Outcome Framework (2019) and the UNESCO Guide for Ensuring Inclusion and Equity in Education (2017). These tools were selected due to their prominence in international policy discourse and their varied design purposes — ranging from school self-assessment to system-level policy evaluation.

In line with the structure of the study, these frameworks were not examined in isolation, but analyzed through a thematic lens corresponding to three core dimensions of evaluation in national context: (1) the conceptualization of inclusive education, (2) the operationalization of inclusive practices, and (3) the integration of evaluation within school and policy systems. Emphasis was placed on the extent to which each framework supports school-level assessment, mixed-method evaluation, and data collection on learner participation and outcomes, as well as comparing these with the systemic and practical realities in Macedonia.

In addition to peer-reviewed literature, national legislation, reports, policy briefs, and other grey literature were analyzed to contextualize the findings and assess the current state of inclusive education evaluation. Key sources include the Law on Primary Education (Ministry of Education and Science, 2019/2025), the Concept for Inclusive Education (MoES, 2020), the Concept on Elementary Education (MoES, 2021) and the Education

Strategy of the Republic of North Macedonia 2018–2025 and its Action Plan (MoES, 2018). Complementary evidence was drawn from UNICEF's 2024 Situation Analysis of Children and Adolescents in North Macedonia and the 2024 Policy Brief on Inclusive Education, and the Ombudsman's 2023 report on the right to educational and personal assistance for students with disabilities and the OECD Review of Evaluation and Assessment in Education in North Macedonia (OECD, 2019).

These documents were examined to identify references to evaluation frameworks, evidence of their application in pilot programs or policy initiatives, and any documented barriers to their adoption in practice. Where relevant, supplementary insights were drawn from comparative studies, including the development of indicators for measuring inclusive education outcomes in Alberta, Canada (Loreman, 2014), and the evaluation framework proposed by Pagano for the Italian context (Pagano, 2024). This methodology enables a structured, comparative understanding of both global approaches and local implementation realities, informing the discussion on how inclusive education evaluation practices can be improved and adapted in the Republic of Macedonia.

Results and Discussion

Conceptualizing Inclusive Education: Coherence and Applicability

A central challenge in evaluating inclusive education lies in how inclusion itself is conceptualized (Haug, 2017; Loreman et al., 2014; Pagano, 2024). The Index for Inclusion (Ainscow & Booth, 2011) adopts a rights-based, participatory view rooted in the social model of disability. It emphasizes cultural transformation within schools through inclusive values, and promotes reflection across three dimensions: inclusive cultures, policies, and practices. Similarly, UNESCO defines inclusive education as being proactive in identifying the barriers and obstacles learners encounter in attempting to access opportunities for quality education, as well as in removing those barriers and obstacles that lead to exclusion (UNESCO, 2017).

Acknowledging the variety of uses of the term inclusion, and its overlap with concepts such as equity and integration, and its impact on efforts to measure and monitor ways to improve the inclusiveness of education systems, the OECD framework offers a more pragmatic and policy-oriented definition, articulating inclusion through measurable inputs (resources, teacher training), processes (pedagogical practices, student engagement), and outcomes (achievement, well-being) (Calvel & Mezzanotte, 2023). Conceptual ambiguities persist due to the lack of clear agreement on defining what inclusion entails, often inclusive contexts are mistakenly interpreted as applying only to disability and access to mainstream education. Compounding this confusion is the persisting tendency to conflate the concepts of "integration" and "inclusion".

Traditionally, integration implies modifying the learner to fit into the existing educational system—often through special classes or supplementary assistance within general classrooms. In contrast, inclusion requires a systemic shift: it embraces diversity by adjusting the educational environment to meet varied needs, promoting individualized support to ensure the participation and success of all students. Whereas integration may reinforce segregation, inclusion actively seeks to establish equitable, cooperative, and supportive learning conditions that affirm difference and foster well-being and achievement of all students (Pagano, 2024).

In Macedonia, the legal mandate for inclusive education introduced by the Law on Primary Education (2019) defines inclusion primarily as access and participation for children with SEN. Inclusive education is a process that recognizes the diverse individual developmental needs of students, providing equal opportunities for the realization of fundamental human rights to personal growth and quality education. Although the Macedonian legislation incorporates the term 'inclusion' and adopts, at least nominally the broad definition of inclusive education (Haug, 2017), promoting education for all within the mainstream school system, it simultaneously supports the existence of a dual education system. The law on primary education formally mandates that primary schools be organized in such a way—structurally, in terms of personnel, and in content—that they can support the inclusion of all children. The Concept for Inclusive Education and other strategic documents follow the principles of the UN Convention on the Rights of Persons with Disabilities, incorporating recommendations from the Committee on the Rights of Persons with Disabilities.

However, a dual education system remains in place. Parents, following a recommendation of the functional assessment commission (based on the International Classification of Functioning, ICF), can choose to enroll their child in a resource center (formerly special schools, now transformed). The resource centers not only continue to provide education in segregated settings but also are responsible for partial provision of the modified curricula for a category of students with complex needs. These students attend regular classes as well as classes

at the resource center. Moreover, resource centers serve as providers of professional assistance to other schools—supporting children with disabilities (specialist provision), school staff, and inclusive teams at mainstream schools.

Instead of fully embracing the broad, rights-based definition of inclusive education, the Macedonian system reveals evidence of an 'alternative way to practice the narrow approach'(Haug, 2017) —one that prioritizes the student's optimal learning environment over full integration in mainstream classrooms. This model, as described by Warnock (2005), emphasizes educational benefit, well-being, and belonging as the primary criteria for placement, thereby legitimizing the continued existence of special schools within an inclusive ideology. In contrast to the prevailing definitions and theoretical frameworks that emphasize full participation and equal membership within mainstream education settings, this represents a relatively rare standpoint that aligns with a segregated discourse of inclusion.

Although inclusion in principle should encompass all forms of marginalization or difference—international literature still often equates inclusion primarily with disability. Inclusive education is still frequently shaped by normative categories of "ability" and "intelligence," thereby reinforcing existing inequalities and perpetuating stigmatization. This dynamic is further complicated by the commodification of inclusion—the so-called "inclusion industry"—which profits from the continuous generation of new categories and diagnostic labels (Dell'Anna, 2021). This objectively complex discourse, is often suspended between the need to categorize, in order to implement targeted and specific interventions, and the inherent risk of "labelling" action, with the need to necessarily find a balance between these two dimensions (Pagano, 2024). Finally, mere access to education without corresponding accommodations is itself a form of discrimination. Thus, any evaluation of inclusion must assess not only access but also the quality of services provided and the outcomes achieved (Dell'Anna, 2021).

In practice, efforts to implement inclusive education in Macedonia follow the narrow definition of inclusion that concerns exclusively with students with Special Educational Needs (SEN); however, the definition and scope of SEN are not consistently articulated across national policy documents. The Concept for Inclusive Education identifies the SEN students as follows:

- Students with disabilities—those with long-term physical, mental, intellectual, or sensory impairments which, in interaction with various barriers, may hinder full and equal participation in society.
- Students with behavioral, emotional, or learning difficulties.
- Students from disadvantaged socio-economic, cultural, or linguistic backgrounds.
- Students with complex needs—those with multiple impairments, complex health issues, and requiring intensive support.

However, this broad categorization of SEN students does not align with other national documents, such as the Law on Primary Education and the Education Strategy of the Republic of North Macedonia 2018–2025 and its Action Plan, risking systematically overlooking the most vulnerable students. They define SEN more restrictively, focusing only on (a) mental or physical developmental impairments; (b) socio-emotional and behavioral difficulties; and (c) disadvantaged educational circumstances due to socio-economic, cultural, or linguistic factors. As evaluation rely on a clear and inclusive definition of target learner groups, this observation should be taken into account in any national methodological effort at monitoring, measuring or evaluating inclusive practices.

On the other hand, as observed in other European contexts (see Pagano, 2024), this fragmentation of definitions in the Macedonian national context may inadvertently reinforce segregation within the education system. This includes both the movement of students into private schools perceived as elite and divisions within the public system itself (Bruschi & Milazzo, 2018). Prominent scholars like Ainscow et al. (2006) have long warned that the very concept of SEN can be a barrier to inclusion. Categorizing and labelling students tends to lower expectations and, paradoxically, re-inscribe the very forms of exclusion it aims to dismantle. Moreover, such focus on specific groups diverts attention from systemic challenges—curricula, school culture, and relational dynamics which affect all students, not just those formally identified as SEN. This contributes to a "taxonomy of individuals" and a bureaucratization of interventions that risks moving further away from the ideals of inclusive education.

Operationalizing the Evaluation: Indicators, Instruments and Data

A mixed-methods approach of collecting both quantitative and qualitative data is considered best practice for evaluations (Angeloska - Galevska & Iliev, 2018; Mezzanotte & Calvel, 2023; UNICEF, 2014). Quantitative data yield uniform, easily comparable measures of outcomes that can be gathered in representative samples to characterize the entire population and various sub-populations. They can also be used to examine the statistical correlations between various factors. Qualitative data can explain the dynamics of a situation – that is, the processes underlying the correlations found in the quantitative data. The frameworks reviewed in this article also endorse triangulation of qualitative and quantitative data to evaluate inclusion comprehensively. However, they differ in design, level of application, and specificity of guidance offered to practitioners and policymakers.

The Index for Inclusion is primarily designed as a reflective school-level tool and provides a comprehensive structure for self-evaluation. It includes guiding questions for each indicator and offers dedicated questionnaires for teachers, parents, and students, which enhance triangulation of perspectives within the school community. Its strength lies in its cyclical, participatory process that fosters inclusive cultures and practices, though its qualitative richness can be a barrier to structured, large-scale assessment. In response to such limitations, the IPA (Inclusive Process Assessment) Scale (Cottini et al., 2016) was developed in Italy as a simplified and validated instrument based on the Index. It preserves the conceptual foundations of the original framework but restructures its components into quantifiable indicators distributed across two dimensions: Inclusive Organization and Inclusive Didactics. The IPA Scale enables statistical analysis, school comparison, and tracking of improvements — capabilities critical for contexts like North Macedonia, where no standardized instruments currently exist for monitoring school-level inclusion efforts.

The UNESCO Guide (Calvel & Mezzanotte, 2023) includes a monitoring framework with structural similarities to the Index. It outlines four key dimensions—concepts, policy statements, structures and systems, and practices—each containing indicators supported by reflective questions. Its primary target is national policymakers rather than school-level practitioners. In encourages evidence-informed reflection at the system level. It does not provide or suggest specific instruments for data collection, rather it reviews concepts that are relevant to each indicator. Its emphasis on policy reform and governance accountability does, however, make it a useful resource for national strategic planning in the context of North Macedonia — provided local adaptation and training mechanisms are in place, especially regarding the role of special schools and specialist provision addressed at the policy level as well as the level of structures and systems in the evaluation matrix.

The OECD Framework, in contrast, is a set of conceptual categories and example indicators intended as an initial conceptual scaffold. The framework includes illustrative examples of possible questions and data sources for each indicator, explicitly supports triangulated, mixed-method data collection. It serves to guide reflective practice and inform the design of more comprehensive and context-sensitive evaluative frameworks. Through iterative adaptation and methodological refinement, these indicators can support the creation of robust tools for assessing initiatives aimed at enhancing social inclusion.

Nevertheless, translating the indicators into operational, measurable variables demands a deliberate and methodologically rigorous approach. While certain indicators may lend themselves readily to quantification, others require more sophisticated strategies—such as the use of Likert-scale items—to accurately capture their conceptual depth. Designing coherent and targeted question pathways is essential to effectively elicit the information embedded within each indicator, ensuring that the data collected yields substantive and contextually relevant insights. The inherent flexibility of the indicator set also allows researchers to adapt and integrate specific probing questions that align with their unique evaluative goals and contexts. The framework is organized in 3 dimensions: inputs, processes and outcomes.

Inputs represent the foundational conditions required to enable inclusive education. However, these components are often undermined by systemic challenges. For instance, national policies may lack clarity, coherence, or cross-sectoral alignment, and often fail to translate into actionable school-level strategies. Similarly, teacher preparation programs are frequently reported to inadequately prepare educators for diverse classrooms, a limitation compounded by difficulties in evaluating the content and impact of such training, especially across diverse systems. In many contexts, financial and material resources are inconsistently distributed (between countries or regions within countries), making it difficult to assess their influence on inclusive outcomes. Leadership, while recognized as essential, remains context-dependent and challenging to measure. Furthermore, although universal design for learning (UDL) is promoted as a curricular principle, its practical implementation and evaluation remain inconsistent across systems, particularly in the Macedonian context where individualized education plans (IEPs) dominate.

The large-scale surveys such as the Teaching and Learning International Survey (TALIS) to evaluate key input variables, such as teacher preparedness, professional development, and self-efficacy offer valuable standardized insights into the perceptions and capacities of teachers across systems. However, in this domain the survey currently lacks questions directly related to teaching students with special educational needs (SEN). Consequently, TALIS data in the Macedonian context as well all other countries participating in the survey, should be supplemented with alternative methods—such as school-level questionnaires, structured interviews, or standardized scales—to meaningfully capture SEN related teacher preparedness and professional development. Teacher self-efficacy in relation to students with special needs has not yet been systematically studied in Macedonia. Notably, a recent step in this direction is the validation of the TSE_ASDI Teacher self-efficacy scale for autism inclusion (Vasilevska - Petrovska, 2025).

Processes refer to what actually happens in schools and classrooms to implement inclusive education. They are inherently complex and contextually variable, posing significant methodological challenges. For example, the assessment of school and classroom climate requires attention to interpersonal dynamics, which are not easily captured through standard indicators. Positive beliefs and attitudes are central but also hard to quantify. Whole-school approaches are emphasized, but there is no standard method to assess the extent or quality of such practices. Instruments often overlook informal or less visible dimensions of school life. Assessment of teaching strategies is complicated by diversity in pedagogy, curriculum demands, and class composition. Observation-based data is resource-intensive and difficult to standardize. The importance of teamwork among teachers, families, and communities is acknowledged, but metrics for evaluating collaboration are underdeveloped. Similarly, evaluating the effectiveness of additional support mechanisms (e.g., specialist services, differentiated instruction) is challenging because supports vary widely and may be poorly documented. Lastly, the evolving role of special schools (e.g., acting as resource centers) raises questions about how to measure their contributions to inclusive education across systems.

Outcomes represent the intended results of inclusive education and include academic achievement, well-being, and long-term life trajectories such as participation in the labor market. However, these indicators are often the most contested. Participation is frequently reduced to physical presence in classrooms, overlooking the meaningful engagement that is the corner stone of inclusion. Methodologies that rely on enrollment or attendance data risk oversimplifying this complex outcome. Data on academic performance and achievement is commonly used but may not account for the full range of learning goals relevant to inclusion. Teachers in the educational process have difficulty in their efforts to assess the knowledge accurately and adequately when it comes to students with special educational needs, especially those involved in the inclusive classrooms. In the absence of specialized policies and recommendations, many teachers apply informal, individual assessment and adaptations to students with disabilities. (Angeloska - Galevska & Ilić - Pešić, 2018). Large-scale assessments (e.g., PISA) often exclude students with disabilities, limiting comparability. Finally, there is little robust data on long-term outcomes for students with diverse needs. This makes it difficult to assess whether inclusive education has lasting benefits beyond the school setting.

Regarding the National Data Collection Systems, the OECD Review of Evaluation and Assessment in Education

North Macedonia (Kitchen et al., 2019) notes a lack of systematic data disaggregation by disability, socio-economic background, ethnicity, or learning needs, and identifies this as a core limitation in both external school evaluations and internal school development planning, which often do not incorporate metrics on student participation, well-being, or differentiated support. Furthermore, national databases do not adequately support longitudinal or school-level tracking of inclusive outcomes. The OECD recommends integrating the Education Management Information System (EMIS) with other data systems and positioning it closer to the Ministry of Education's leadership to enhance its authority and operational capacity. While the country collects considerable data through exams and school inspections, these are underused in informing inclusive practices or school improvement plans. For example, evaluation results are not consistently shared with stakeholders or used to support inclusive teaching strategies. Within the framework of the OECD, several areas present valuable opportunities for strengthening the evaluation of inclusive education in North Macedonia. Input indicators, such as the systematic collection of data on support staff availability, teacher's self-efficacy and the accessibility of infrastructure, could be more consistently integrated into national monitoring practices. Enhancing the inclusion of process indicators, like teacher attitudes, inclusive pedagogical approaches, and school-level collaboration, would offer richer insights into how inclusive practices are implemented across settings. Furthermore, by developing mechanisms to disaggregate and track outcome indicators—such as student learning progress and

well-being, particularly among marginalized groups—policymakers and practitioners can better assess the long-term impact of inclusion efforts and ensure that progress is both equitable and measurable (Kitchen et al., 2019).

Embedding Evaluation in Practice: Institutional Capacity and Systemic Gaps

The effectiveness of any framework depends on its integration into ongoing school and policy practice. The Index for Inclusion promotes a cyclical process of school-based review, planning, and action. However, the absence of institutional capacity and sustained support mechanisms has been a key barrier to its implementation. Documented evidence of challenges associated with the Index's implementation in schools, is particularly concerned with lack of self-evaluation capacity among teaching staff. The authors of several studies researching the role of the Index for Inclusion in supporting school development in Western Australia (Forlin, 2004), Hong Kong (Heung, 2006), Norway (Nes, 2009), Kosovo (Behluli & Zabeli, 2014) noted limited engagement with the tool, largely due to the perceived complexity of its content and recommended external support to help schools overcome this barrier. Findings suggested that due to its comprehensive nature and the time required for effective application, a clearly structured process of professional development is essential to facilitate its use. Without such support, the tool risks functioning merely symbolically within schools. While the Index offers a rich resource for addressing all dimensions of school processes, the threshold for user accessibility is sometimes considered too high and its effectiveness is constrained in the absence of external critical support to facilitate its meaningful use in schools (Loreman et al., 2014).

While national reports and educational materials prior to the legal mandate of inclusive education in 2019 (BDE (BDE, 2018; Jachova, 2013; UNICEF, 2014), refer to the Index as a valuable tool for school self-assessment and systemic monitoring, to date no empirical studies or school-based data are available to demonstrate its practical uptake in Macedonian settings. This may reflect the methodological complexity of the tool, its scale and qualitative nature, as well as the lack of sustained professional support for its adoption at the school level—factors widely acknowledged in literature as limiting its practical utility.

The previously mentioned IPA Scale (Cottini et al., 2016) offers a practical means of addressing some of the limitations associated with the Index for Inclusion—particularly its perceived complexity, the need for external facilitation, and the time-intensive nature of its implementation. However, any attempt to adapt and validate this tool for use in North Macedonia should be complemented by qualitative instruments—such as focus group interviews, open-ended surveys, or reflective practitioner logs—to capture the contextual nuances, stakeholder perspectives, and lived experiences of inclusion that quantitative tools alone may overlook. This mixed-methods approach would ensure a more holistic and context-sensitive evaluation of inclusive practices.

The OECD and UNESCO frameworks, by contrast, assume a higher level of institutional involvement. For example, the OECD's emphasis on multi-level governance and the use of longitudinal data contrasts sharply with the current Macedonian context, where even basic statistics on learners with disabilities remain fragmented or outdated. As noted in a UNICEF policy brief (UNICEF, 2024), until recently, data collection practices were aligned with the medical model of disability, and comprehensive inclusion data is still lacking. Consequently, the potential benefits of these frameworks — including policy feedback loops, teacher development tracking, and outcome benchmarking — remain largely untapped in Macedonia. Without national-level guidance and localized tools, schools cannot reliably measure progress or develop data-informed action plans.

While the 2019 Law on Primary Education marks a significant strategic milestone by mandating inclusive education, North Macedonia is now well-positioned to take the next essential step: the development of a coherent national framework for monitoring and evaluating the quality of inclusive education. The 2020 Concept for Inclusive Education, developed by the Ministry of Education and Science (MoES), clearly articulates a commitment to an Input–Process–Output (IPO) model that mirrors international best practices such as those promoted by the OECD. This alignment offers a strong foundation upon which a comprehensive evaluation system can be built.

The Concept outlines thoughtful mechanisms for both internal and external monitoring. At the school level, inclusive teams are envisioned to lead self-evaluation processes, supported by structured annual reporting and school board oversight. At the national level, responsibilities are distributed among key institutions such as the State Education Inspectorate, the Bureau for Development of Education (BDE), and the Centre for Vocational Education and Training, which are charged with analyzing school-level data, reviewing individualized education plans (IEPs), and engaging stakeholders through interviews. The proposed evaluation dimensions—including

enrollment, retention, individualized support, and school readiness—represent a holistic view of inclusive education.

This framework, although ambitious, presents a valuable opportunity to transition from conceptual planning to systematic implementation. Establishing a unified national monitoring and evaluation system—anchored in clearly defined indicators, verification sources, and accountability structures—would significantly enhance the ability to track progress, inform policy decisions, and ensure that inclusive education goals are being met in practice.

While the Index for Inclusion may offer valuable school-level guidance, and the OECD's IPO model provides a structured policy-level framework, their application would need to be carefully aligned with national priorities and system capacities. Drawing selectively from these frameworks, and adapting them where appropriate, could support the development of a more coherent and evidence-based approach to monitoring inclusive education—one that reflects the country's legal commitments while promoting continuous reflection and improvement. The incorporation of validated tools—such as Macedonian versions of the TSE_ASDI or IPA Scale —alongside carefully designed qualitative instruments, could serve to operationalize key elements from international frameworks in a manner that is both actionable and locally relevant. School self-evaluation should prioritize pedagogical and relational indicators that are critical for understanding the real experiences of inclusion within classrooms. This shift is essential to enable the formative use of evaluation findings and to strengthen the feedback loop necessary for continuous improvement in inclusive practices (Kitchen et al., 2019).

School-based self-evaluation of inclusive practice, although not yet fully embedded in the national practice (Kitchen et al., 2019), holds significant potential to become a powerful tool for monitoring and improving inclusion when guided by clear indicators and supported through training and collaboration. Teachers play a central role in this process and should be empowered to enhance their ability to observe, assess, and reflect on inclusive practices. Strengthening their capacity through targeted professional development and familiarization with inclusive monitoring tools can build confidence and autonomy in leading school-level change. By embedding inclusive evaluation within school development planning and ensuring structured support—such as from trained facilitators or regional resource centers—schools can take ownership of their inclusive journeys. This proactive approach transforms evaluation into a dynamic driver of equity, allowing educators and institutions alike to engage more deeply with the principles of inclusive education and translate them into meaningful outcomes for all learners.

Conclusion

The national framework for evaluating inclusive education in Macedonia should balance system-level indicators with school-level processes and community voices. The paper argues for a participatory and reflexive evaluation model that combines standardized data with context-rich qualitative evidence. Such an approach would better inform policy, support teacher practice, and contribute to building an inclusive culture across schools.

To be effective, this framework must begin by clearly articulating a shared national understanding of inclusive education and establishing conceptual coherence. Second, the framework should incorporate a balanced mix of quantitative and qualitative indicators, aligned with the OECD's input–process–outcome structure. This includes standardized tools to measure access, participation, and achievement, but also methods to assess relational and pedagogical dimensions of inclusion. A micro–meso–macro alignment—from classroom practice to national policy—is essential to ensure that the evaluation captures both top-down commitments and bottom-up experiences. Finally, attention must be given to building capacity across all levels of the education system. Teachers require training and support to conduct school-based self-evaluation, while schools need external facilitation and expert guidance. At the same time, national institutions must invest in coordination, data infrastructure, and long-term strategic oversight. Bridging these gaps would not only bring coherence to evaluation efforts but also foster a culture of learning, reflection, and shared responsibility for inclusion at every level of the education system.

Scientific Ethics Declaration

Conflict of Interest

* The authors declare that they have no conflicts of interest.

Funding

* This research received no external funding.

Acknowledgements or Notes

* This article was presented as an oral presentation at the International Conference on Science and Education (www.iconse.net) held in Antalya/Türkiye on November 12–15, 2025.

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Author(s) Information

Natasha Angeloska-Galevska
Ss. Cyril and Methodius University in Skopje (UKIM), Faculty of Philosophy, Institute for Pedagogy, Boulevard Goce Delchev 9, Skopje 1000, North Macedonia
Contact e-mail: *natasa@fzf.ukim.edu.mk*

Ivana Vasilevska - Petrovska
Ss. Cyril and Methodius University in Skopje (UKIM), Faculty of Philosophy, Institute for Pedagogy Boulevard Goce Delchev 9, Skopje 1000, North Macedonia

To cite this article:

Angeloska-Galevska, N., & Vasilevska-Petrovska, I. (2025). Methodological challenges in assessing the quality of inclusive education. *The Eurasia Proceedings of Educational and Social Sciences (EPESS), 47,* 283-295.