

Transformation of teaching practice toward inclusive education in pre-service teachers

DOI: 10.5281/zenodo.18916314

Eunice Sarahí Moreno Pérez

Master in Educational Psychology
<https://orcid.org/0009-0004-3345-8904>
e.moreno@ibycenech.edu.mx

Institución Benemérita y Centenaria Escuela Normal del Estado de Chihuahua, Mexico

Laura Leticia Ruiz Cuesta

Master of Education
<https://orcid.org/0009-0009-8122-6135>
l.ruiz@ibycenech.edu.mx

Institución Benemérita y Centenaria Escuela Normal del Estado de Chihuahua, Mexico

Ilse Aracely Almeida Hernández

Master of Education
<https://orcid.org/0009-0000-6570-6846>
ia.almeida@ibycenech.edu.mx

Institución Benemérita y Centenaria Escuela Normal del Estado de Chihuahua, Mexico

Ruth Nohemi Oros Macías

Master of Education
<https://orcid.org/0000-0002-8853-0318>
rn.oros@ibycenech.edu.mx

Institución Benemérita y Centenaria Escuela Normal del Estado de Chihuahua, Mexico

Abstract

Keywords: Inclusive education, teacher training, teaching practices, action-research, index for inclusion

This study presents an initial report of a qualitative research project aimed at analyzing the inclusive pedagogical practices of pre-service teachers through the development of professional narratives. The objective was to describe how participants understood diversity, identified barriers to learning, and made pedagogical decisions during the first stage of an ongoing macro-research project. A qualitative approach with narrative analysis within a socio-critical perspective was adopted. The sample consisted of pre-service teachers from the Bachelor's Degree in Pre-school Education who produced reflective writings about their experiences in real classroom contexts. The thematic analysis of the narratives allowed for the identification of emerging categories linked to the understanding of diversity, the detection of barriers to learning and participation, the diversification of teaching, and the development of reflective processes regarding teaching practice. The results evidenced a tension between theoretical knowledge of inclusion and its

application in concrete pedagogical situations, as well as the emergence of practice problematization processes that favored professional awareness. It was concluded that narrative writing constituted a relevant methodological resource for documenting the initial diagnosis of inclusive teacher training and provided evidence of the value of systematic reflection as a basis for future pedagogical transformations within the ongoing research and for the strengthening of inclusive teacher education.

INTRODUCTION

Inclusive education constitutes a central pillar in teacher training by highlighting the need to recognize diversity as an inherent condition within school contexts. In this scenario, the initial training of preschool teachers faces the challenge of articulating the theoretical foundations of inclusion with situated pedagogical practices. This challenge acquires historical relevance in the current Mexican context with the implementation of the New Mexican School (NEM), which establishes equity and inclusion as guiding principles that demand a profound transformation of professional autonomy and pedagogical knowledge (Secretaría de Educación Pública [SEP], 2022).

At a local level, the urgency of this training is supported by data from the National Institute of Statistics and Geography (INEGI, 2020), which indicates that in the state of Chihuahua, 6.1% of the population between the ages of 3 and 17 presents some form of disability. In response to this reality, the Institución Benemérita y Centenaria Escuela Normal del Estado de Chihuahua (IBYCENECH) assumes the commitment of graduating teachers with solid inclusive competencies. However, a significant gap is identified between the conceptual mastery of terms such as Barriers to Learning and Participation (BAP) or Universal Design for Learning (UDL) and their systematic application in real classroom settings, especially when facing complex diagnoses such as Autism Spectrum Disorder (ASD) or ADHD.

The reflective professional perspective maintains that teacher learning emerges from the critical analysis of experience. Accordingly, the Index for Inclusion proposes that inclusion constitutes a continuous process of reviewing school practices to eliminate BAP (Agurto & Briones, 2021). Within this framework, the analysis of professional narratives is recognized as a pertinent methodological strategy for understanding the construction of teacher knowledge, allowing access to the participants' interpretation of the ethical and didactic tensions within their professional practice.

The purpose of this study is to present an initial report of qualitative research aimed at analyzing the transformation of inclusive pedagogical practices in pre-service teachers. This article focuses on the initial diagnosis of the first generation of the Bachelor's Degree in Preschool Education, 2022 Plan, whose objective is to describe the initial understanding of diversity and the identification of barriers based on the analysis of reflective narratives developed during their intensive professional practices.

MATERIALS AND METHODS

The research was developed from a qualitative approach with a socio-critical orientation, a paradigm that directs the production of knowledge toward a reflective understanding of educational reality (Hernández-Sampieri, 2020). The design corresponded to a narrative study of descriptive scope, which allowed access to the

participants' subjective interpretations of their professional work. This article presents the initial diagnostic phase, focused on documenting the perceptions and meanings that pre-service teachers assign to educational inclusion at the beginning of their intensive professional practice.

The study population consisted of 99 pre-service teachers from the first generation of the Bachelor's Degree in Preschool Education (2022 Plan) of the "Institución Benemérita y Centenaria" Escuela Normal del Estado de Chihuahua Profesor Luis Urías Belderráin (IBYCENECH). For this analysis, an intentional non-probabilistic sample was used, composed of 20 fourth-year normalist students who conducted their internships in six public kindergartens in the city of Chihuahua during the 2025–2026 school year.

The primary technique was the production of guided reflective writings, defined as professional narratives. Data collection was carried out through a guide of prompting questions structured into six analytical dimensions: 1) understanding of diversity, 2) identification of Barriers to Learning and Participation (BAP), 3) pedagogical strategies and the incorporation of UDL, 4) configuration of the diversified classroom, 5) analysis of practice based on the field diary, and 6) improvement projection. This methodological tool was based on the reflective professional perspective (Ramón, 2013), which uses narrative to transition from the description of experience toward the construction of explicit pedagogical knowledge, integrating processes of reflection-in-action, reflection-on-action, and reflection-for-action (Klimenko, et al., 2023).

Data processing was conducted through thematic content analysis. The procedure included a deep reading of the narratives to identify units of meaning, which were organized into a mixed category system (Klimenko et al., 2023). This system articulated categories derived from the NEM regulatory framework and Universal Design for Learning (UDL), alongside emergent categories that arose from situated experiences in the preschool classroom. The validity of the findings was supported by triangulation between the participants' testimonies and the theoretical frameworks of contemporary inclusive education.

To ensure the consistency of the findings, qualitative triangulation was employed, contrasting the narratives with the foundations of the NEM and the Index for Inclusion model. The study was conducted under strict ethical principles; informed consent was obtained from the participants, and anonymity and confidentiality were guaranteed through the use of alphanumeric codes to protect the students' identities.

RESULTS

The analysis of the initial narrative writings evidenced that the pre-service teachers began the school year with an incipient yet progressively problematizing understanding of educational inclusion. This process centered on the identification of Barriers to Learning and Participation (BLP), the need to diversify instruction, and the construction of reflective pedagogical practices. Findings show that participants recognize tensions between their theoretical training and the complexity of intervention in real-world contexts, generating initial processes of transformation in their manner of understanding and acting regarding diversity within the preschool classroom. As a result of the coding process and thematic analysis of the 20 professional narratives, five central categories emerged that account for the transition in teaching practice. Table 1 presents these categories in a synthesized manner, describing the findings identified during this first diagnostic stage of the research.

Table 1.

Emergent Categories from the Initial Narrative Analysis

Category	Description
Understanding of classroom diversity	Predominance of a diagnosis-associated vision, with progress toward a contextual understanding of heterogeneity.
Barriers to Learning and Participation (BAP)	Identification of didactic, organizational, and institutional obstacles that limit full participation.
Diversification of teaching	Initial pedagogical diversification interventions guided by the principles of UDL (Universal Design for Learning).
Construction of inclusive pedagogical practices	Intentional actions to promote participation and equity in the consolidation phase.
Teacher reflection	Processes of analysis based on experience that favor professional awareness and projections for improvement.

Source: *Author's own elaboration (2026)*

For the presentation of qualitative evidence derived from the writings, the nomenclature MF (*Maestra en Formación* [Pre-service Teacher]) is used, followed by a correlative Arabic numeral (MF1 to MF20). This coding system allows for the identification of the source of the testimonies while preserving the anonymity of the participants and the confidentiality of the practicum institutions, in accordance with the ethical criteria established for this study.

Understanding Diversity in the Classroom

The narratives revealed that diversity is interpreted through a duality: as a universal ethical value and as a management challenge. Participants agree that diversity is "inevitable" (MF9) and constitutes a "wealth" (MF6) that must be addressed with empathy. However, a strong association persists between diversity and clinical diagnoses; students identify heterogeneity primarily through specific labels such as Autism Spectrum Disorder (ASD), language difficulties, or hearing impairment (MF2, MF3, MF10). Despite this initial medical focus, a more humanistic vision emerges that defines inclusion as a process of "justice, values, and equity" (MF1), where what makes students "special and unique" (MF20) is precisely their difference.

Barriers to Learning and Participation

Regarding the identification of BLPs, the pre-service teachers demonstrate conceptual mastery of the *Nueva Escuela Mexicana* (NEM) terminology, although they tend to locate barriers in factors exogenous to their own practice. Participants recurrently pointed to institutional and organizational obstacles, such as overcrowded groups (MF13), the scarcity of adapted materials for motor disabilities (MF6), and the lack of support from families (MF18). Nevertheless, a process of awareness regarding curricular barriers stands out; students recognize that their own "lack of training" (MF11, MF17) and rigidity in activity planning become impediments to students learning together.

Diversification of Instruction

Diversification appears in the writings as a pedagogical intention in the process of consolidation. The narratives evidenced a significant situation: the shift from reasonable adjustments toward universal planning. Some participants expressed having understood the foundations of Universal Design for Learning (UDL), noting that "it is not necessary to make adjustments if from the beginning we plan activities already designed so that everyone can participate" (MF13). Among the implemented strategies, the use of Mexican Sign Language (LSM), the employment of visual supports, and the pursuit of flexible environments that allow for a response to the different learning paces detected stand out (MF10, MF6, MF9).

Construction of Inclusive Pedagogical Practices

This category reflects the efforts of the pre-service teachers to transcend physical integration toward real inclusion. For the participants, inclusive practice implies "generating an environment or a space of respect and equity" (MF16) where the student is not only present but feels like a participant. Actions oriented toward ensuring that students with specific conditions manage to stand out "like any regular student" (MF18) were reported, promoting participation through individualized accompaniment and the modification of instructions to ensure that learning is meaningful for all (MF7).

Teacher Reflection

Finally, reflection emerged as the transversal axis and engine of change in practice. Following the reflective professional model, the students used their writings to perform an honest self-critique of their performance. The narratives express an emotional tension between ethical commitment and professional uncertainty; participants admitted to feeling "stress and anxiety" (MF5) or a "lack of tools" (MF12) to address diversity optimally. However, this reflective process culminates in a clear projection for improvement: future teachers recognize the need for continuous training in laws, agreements, and inclusion programs (MF19), assuming that the strengthening of their teaching practice is both a professional and personal commitment (MF1).

DISCUSSION

The analysis of the pre-service teachers' narratives evidences a significant process of awareness regarding diversity and the urgency of transforming pedagogical practice. The findings suggest that, although a solid ethical foundation aligned with the NEM (New Mexican School) exists, a gap persists between "knowing how to say" (theory) and "knowing how to do" (intervention), generating tensions that act as a catalyst for teacher reflection.

In relation to the Understanding of Diversity, the results reveal that participants begin their practice with an "individualizing" vision centered on medical diagnoses (ASD, ADHD, Deafness), which coincides with the theoretical framework regarding the persistence of integration models that preceded the current reform. However, as observed in the testimonies (MF9, MF20), there is a transition toward a broader conception that recognizes diversity as an inherent characteristic of the human being. This evolution aligns with Bronfenbrenner's Ecological Systems Theory, where learning is understood as the result of interaction between contextual systems rather than solely an individual capacity (Álvarez, 2022). The pre-service teachers are beginning to view

diversity not as a "problem to be solved," but as a "wealth" (MF6), validating the principles of the National Strategy for Inclusive Education (ENEI).

A relevant finding within the category of Barriers to Learning and Participation (BLP) is the recognition that homogeneous planning is, in itself, a didactic barrier. While classical literature (Agurto & Briones, 2021) situates BLPs within school culture, the students' narratives (MF12, MF13) demonstrate a higher level of introspection by identifying that their own "instructions" or "lack of tools" are what exclude. This represents a fundamental advancement in initial teacher training: the shift from blaming the context or the student to assuming the pedagogical responsibility of minimizing barriers through instructional design, as suggested by the SEP (2024).

Regarding the Diversification of Instruction, the described tensions reflect the challenge of applying Universal Design for Learning (UDL) in large preschool groups. Although participants demonstrate an understanding that UDL seeks to eliminate subsequent reasonable adjustments (MF13), actual practice remains largely reactive. This finding confirms the proposition in the theoretical framework: planning for variability requires not only ethical will but also technical mastery of "multiple means of representation and action." The detected gap between UDL knowledge and its implementation suggests that normal school training must deepen practical experimentation to prevent universal design from remaining on a purely discursive level (Moya-Pérez et al. 2024).

Concerning Inclusive Pedagogical Practices, the narratives show that inclusion is not an attained state but a process of constant "pedagogical mediation." Attempts to incorporate Mexican Sign Language (MF10) or adapted materials demonstrate that pre-service teachers are transitioning from "tolerance" to "valuation," as proposed by UNESCO (2020). These actions, though initial, are consistent with the "Orchestrating Learning" dimension of the Index for Inclusion, where the mobilization of resources (human and material) is key to equity.

Finally, Teacher Reflection emerges as the transversal component that grants scientific and ethical validity to the research. The use of narrative as a tool allowed participants to perform "reflection-on-action" and, most importantly, "reflection-for-action" (Ramón, 2013). The honesty with which the students admit their stress and lack of training (MF5, MF17) should not be read as a weakness, but as the first step toward a critical professional identity. As noted by Molina (2022), reflective writing favors the construction of situated pedagogical knowledge; in this study, it allowed pre-service teachers to project concrete improvements, linking their initial training with the real demands of educational justice.

CONCLUSIONS

The present diagnostic phase provides substantive evidence regarding the role of professional narrative as a high-impact methodological and formative device for the transformation of inclusive teaching practice. Based on the qualitative analysis performed, the following conclusions are derived:

First, it is established that the transition toward effective inclusive education in initial training is not a linear event, but rather a process of conceptual reconfiguration. Pre-service teachers have begun to shift their gaze from a medical-clinical model (centered on the student's diagnosis) toward a social and pedagogical model (centered on environmental design). This awareness of heterogeneity as the norm, rather than the exception, constitutes the unavoidable starting point for the implementation of the NEM.

Second, the research demonstrates that the identification of Barriers to Learning and

Participation (BLP) functions as a driver of the teacher's ethical responsibility. The findings confirm that, by narrating their experiences, participants manage to problematize their own intervention, recognizing that homogeneous planning and a lack of technical mastery over UDL act as didactic barriers that they themselves can and must remove. In this way, narrative transcends description to become a tool for educational justice.

Furthermore, it is concluded that the exercise of teacher reflection under the framework of Schön and Dewey (reflection in, on, and for action) allows normal school students to manage the uncertainty and anxiety generated by the complexity of the real-world classroom. Systematic writing has allowed the "fear of diagnosis" to be converted into a "commitment to training," validating narrative as an effective bridge between the academic knowledge of the Escuela Normal and the situated knowledge of the preschool setting.

Finally, although the results correspond to a diagnostic phase within a macro study, they allow for the assertion that inclusive teacher training requires spaces for accompaniment that prioritize subjectivity and the critical analysis of experience. This research opens the door for future inquiries to follow up on these processes, ensuring that the transition toward diversified teaching is not a reactive response to urgency, but a consolidated professional competency.

In conclusion, this study reaffirms that to "leave no one behind and leave no one out," it is imperative to train teachers who not only understand the theory of inclusion but also possess the reflective capacity to transform their own practices in favor of the dignity and learning of all their students. Only in this manner is it possible to approach a truly inclusive model.

CONFLICTS OF INTEREST

The authors declare that there is no conflict of interest regarding the development or disclosure of the research results.

REFERENCES

- Agurto-Agurto, S. J., & Briones-Mendoza, M. N. (2021). Modelo de Tony Booth y Mel Ainscow para fortalecer la educación inclusiva en educación religiosa. *South Florida Journal of Development*, 2(5), 8252–8267. <https://doi.org/10.46932/sfjdv2n5-139>
- Álvarez, A. (2022). Teoría ecológica de Urie Bronfenbrenner: ¿En qué consiste la teoría de los sistemas? *Psicología y Mente*. <https://psicologiymente.com/desarrollo/teoria-ecologica-bronfenbrenner>
- Echeita, G., y Ainscow, M. (2011). La educación inclusiva como derecho: Marco conceptual y retos actuales. *Revista de Educación*, 394, 11–36.
- Hernández-Sampieri, R. (2020). *Metodología de la investigación*. McGraw-Hill.
- Klimenko, O., Hernández-Flórez, N. E., Tamayo-Lopera, D. A., Cudris-Torres, L., Niño-Vega, J. A., & Vizcaino-Escobar, A. E. (2023). Assessment of the teaching performance favors to creativity in a sample of Colombian public and private educational institutions. *Revista de Investigación Desarrollo E Innovación*, 13(1), 115-128. <https://doi.org/10.19053/20278306.v13.n1.2023.16071>

- Klimenko, O., Flórez, N. H., Escobar, A. E. V., Moreno, M. D., & Gómez, S. M. (2023). Características de la enseñanza favorable para la creatividad en una muestra de los docentes universitarios. *Psicoespacios*, 18(32), 1-17. <https://doi.org/10.25057/21452776.1539>
- Instituto Nacional de Estadística y Geografía (INEGI). (2020). Educación y discapacidad en México: Un análisis estadístico. <https://cuentame.inegi.org.mx>
- Molina, E., & Montoya, L. S. (2022). Manifestaciones en la convivencia en estudiantes de preescolar a partir de la diversidad humana [Tesis de maestría, Universidad Tecnológica de Pereira]. Repositorio Institucional UTP. <https://repositorio.utp.edu.co/server/api/core/bitstreams/2b3bc2cf-4c5a-4bba-8d0f-43e8d3cbf90a/content>
- Moya-Pérez, M, Hernández-Flórez, N, Lara-Posada, E. (2024). “Neurodiversity and Inclusive Education: A Therapeutic and Pedagogical Approach from Music Therapy in Early Childhood Education from a Systematic Review.” *Salud, Ciencia y Tecnología* 4. <https://doi.org/10.56294/saludcyt2024.1371>
- Ramón Ramos, R. (2013). Las teorías de Schön y Dewey: hacia un modelo de reflexión en la práctica docente. *Cinzontle*, (10). <https://revistacinzontle.ujat.mx/Cinzontle/es/article/view/2456>
- Secretaría de Educación Pública. (2019). Estrategia nacional de educación inclusiva. Gobierno de México. <https://cdnsnte1.s3.us-west-1.amazonaws.com/wp-content/uploads/2020/04/11073434/ENEI.pdf>
- Secretaría de Educación Pública [SEP]. (2024). Instrumento de registro de las barreras para el aprendizaje y la participación (BAP). Subsecretaría de Educación Básica. https://gestion.cte.sep.gob.mx/insumos/docs/2425_s0_insumos_docen_instrumento_registro_barreras_aprendizaje_participacion.pdf
- Secretaría de Educación Pública. (2022). Plan de estudios 2022. Educación básica. Gobierno de México. <https://educacionbasica.sep.gob.mx/wp-content/uploads/2024/06/Plan-de-Estudio-ISBN-ELECTRONICO.pdf>
- UNESCO (2020). Inclusión y educación: todos, sin excepción. Informe de seguimiento de la educación en el mundo. <https://unesdoc.unesco.org/ark:/48223/pf0000373718>