

# **Inclusive Education in Thailand: Exploring Gaps and Opportunities Across Urban and Rural Contexts through Topic Modeling Analysis and Systematic Review**

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## **ABSTRACT**

This study addressed knowledge gaps in Thai inclusive education research and proposed strategies for improvement, with three key objectives: (1) synthesize and compare research on inclusive education across urban and rural universities; (2) analyze the topic trends in international inclusive education research; and (3) propose strategic guidelines for promoting inclusive education in Thailand. Employing a mixed-methods approach, the study was conducted in two phases. Phase one involved a systematic review of Thai university theses, guided by the PICo framework and PRISMA 2020 protocol, alongside topic modeling analysis of global studies (2020–2024). Phase two utilized focus group discussions with 13 experts to contextualize findings and formulate actionable recommendations. Key findings indicate that urban and rural universities differ significantly in their research focus areas, particularly regarding parental roles, educational supervision, curriculum and instruction, and instructional innovations. International research trends further reveal three dominant themes: discourse analysis of inclusive practices in Northern Europe (Prob. = .238), implementation studies in higher education (Prob. = .129), and teachers' attitudes toward diverse learners (Prob. = .027). Based on these findings, the proposed guidelines emphasize establishing early childhood screening and appropriate rehabilitation systems; developing diversity-responsive policies and implementation strategies; involving students with special needs in curriculum development; strengthening pre-service and in-service teacher knowledge; promoting cross-sectoral understanding of inclusive education; creating a systematic database for children with special needs; fostering strong school–community relationships; and designing inclusive learning environments.

**Keywords:** inclusive education, inclusion, disabilities, topic modeling analysis, systematic review

## INTRODUCTION

Inclusive education is a transformative approach that guarantees equitable, high-quality learning opportunities for all students by adopting teaching methods that address diversity rather than disability alone. International frameworks such as the Salamanca Statement (United Nations Educational, Scientific and Cultural Organization [UNESCO], 1994) and analyses by Ainscow (2020) and Florian (2014) emphasize systemic reform, yet implementation at the school level often remains fragmented. Insights from rural Thailand further underscore the role of context: Thongsawang and Kaewkumkong (2025) show how a historical monument park, though not an educational project, functioned as a sociopolitical tool to foster belonging and participation among marginalized groups—reminding us that inclusive school environments must similarly cultivate dignity and community connectedness. Building on this, Tantixalerm and Amornpaisarnloet (2021) propose a multi-tiered student support and development system for inclusive schools, integrating teaching processes, interventions, collaboration, and professional development. Together, these perspectives highlight how localized innovations can bridge policy and practice, embedding inclusion and equity as core principles of educational systems.

In Thailand, inclusive education is grounded in constitutional commitments and reinforced by ratification of the CRPD in 2008, yet implementation has focused mainly on students with disabilities, often overlooking ethnic minorities, migrant children, and rural or low-income learners (Vorapanya & Dunlap, 2014). Despite supportive legislation and an extensive school network, challenges persist, including inadequate teacher preparation, rigid assessment, and fragmented supports (Singh, 2022; Siribanpitak, 2018). The 2018 national disability survey signaled a shift toward a social model of disability, but teacher training remains uneven: Urban universities introduce inclusion without fully embedding evidence-based frameworks (Nelson et al., 2022), while rural universities rely on outdated pedagogy and lack expertise (Vorapanya & Pachanavon, 2022). Teachers frequently report low confidence and limited inclusive pedagogy, weak cross-sector collaboration especially in early screening, and

face social barriers such as stigma and parental hesitancy (Alzahrani, 2020; Booth & Ainscow, 2011; Meadan et al., 2017). Although research confirms the benefits of inclusion—improved interaction, empathy, and life outcomes (Moriña, 2019)—progress requires evidence-based, adaptable practices to close persistent gaps and align Thailand with SDG 4.

Therefore, this study explores the research landscape of inclusive education in Thailand through a dual approach: a systematic review of Thai university theses and a topic modeling analysis of international literature (2020–2024). By comparing thematic focuses across urban and rural contexts and situating them within global trends, the study aims to reveal critical knowledge gaps and propose strategic guidelines to strengthen Thailand's inclusive education system. This endeavor not only advances academic understanding but also informs actionable policy and capacity-building strategies for sustainable inclusion nationwide.

## Objectives

This research aims to synthesize research related to inclusive education in Thailand by comparing studies conducted in Bangkok with those from other provinces to identify and analyze the topic modeling in international research on inclusive education and to propose strategic guidelines for promoting inclusive education.

## LITERATURE REVIEW

### The Concept and Importance of Inclusive Education

Inclusive education guarantees the right of all learners, including those with special needs, to access education as enshrined in the constitution. It promotes equality by enabling students to learn alongside their peers, regardless of physical, mental, social, or cultural differences, and emphasizes that every student should be valued as a full member of the school community (Jatuchokudom et al., 2022; Moriña, 2019). Moving beyond simple integration,

inclusive education focuses on removing systemic barriers and creating adaptable, learner-responsive environments where diversity is treated as a resource rather than a challenge (United Nations Educational, Scientific and Cultural Organization [UNESCO], 2009). It is best understood as a process of strengthening the education system's capacity to reach all learners and is widely recognized as a central strategy for achieving the global Education for All agenda. The Salamanca Statement (UNESCO, 1994) reinforces this view, affirming that inclusive schools are the most effective means of combating discrimination, fostering welcoming communities, and providing efficiency and, ultimately, the cost-effectiveness of the entire education system.

Crucially, inclusion and equity must be understood not as isolated practices but as principles that shape the entire educational system. Inclusive education, as Ainscow (2020) argues, requires the proactive identification and removal of barriers to learners' presence, participation, and achievement, particularly for those at risk of exclusion. From this perspective, inclusion becomes a catalyst for comprehensive educational reform, grounded in human rights, social justice, and equity. UNESCO (2009) further underscores that inclusion ensures every learner feels valued and develops a sense of belonging, even as discrimination, stereotyping, and alienation persist across multiple identity dimensions. These mechanisms of exclusion are strikingly consistent across contexts, demanding that systems move away from stigmatizing labels that limit learner potential. Building on this, United Nations Educational, Scientific and Cultural Organization [UNESCO] (2020), Cerna et al. (2021), and Ainscow (2020) emphasize that an effective inclusive system must embrace diversity as an asset and address intersecting barriers simultaneously. In this sense, inclusion is not merely a school-level adjustment but a structural and cultural commitment—requiring coordinated policies, responsive curricula, and meaningful engagement with communities to transform education into a truly equitable and participatory space for all learners.

However, while these international frameworks provide a robust foundation, implementation in Thailand reveals persistent contextual disparities: Inclusive practices are more frequently

developed and researched in urban areas, whereas rural schools continue to face limitations in teacher preparation, resources, and institutional support. This uneven progress underscores the need for systematic analysis and comparative understanding of how inclusive education evolves across different Thai contexts to ensure that equity in opportunity translates into equity in practice.

## **The Factors Affecting the Success of Inclusive Education**

The success of inclusive education depends on multiple factors, including teachers, policy, community, and resources. Fragmented governance can undermine these efforts. For instance, Numsuk (2025) shows how overlapping agencies in Bangkok's waterway governance created conflicting policies and excluded vulnerable residents, a pattern that mirrors incoherence across ministries in education and weak school-level support. Teacher capacity is a recurring challenge, with many lacking knowledge and confidence. There are, furthermore, insufficient special education personnel to meet demand (Alzahrani, 2020; Thongtho et al., 2019). Takkachaot (2020) highlights three drivers of success: improved student outcomes, more positive parental attitudes, and greater teacher confidence in inclusive strategies. Similarly, Kim et al. (2024) identify five essential supports: professional team supports, positive school climate, accessible environments, adequate funding, and curriculum adaptation. Yet, gaps remain at both policy and institutional levels—ranging from inadequate infrastructure to limited staff training (Ainscow, 2020; Delubom et al., 2020). Evidence from community design also suggests the importance of participatory processes as Sukkasame (2019) found that urban and rural communities in Thailand used collaborative workshops to negotiate resources and build ownership, illustrating how localized, context-sensitive engagement can empower stakeholders. By analogy, inclusive education must similarly be rooted in participatory approaches that amplify the voices of learners, families, and teachers while addressing systemic barriers.

However, despite these insights, current research and implementation in Thailand continue to display uneven progress across regions. Urban schools often have greater access to resources, professional networks, and innovation initiatives, while rural schools face persistent shortages of trained personnel, limited funding, and outdated pedagogical models. Moreover, few studies have systematically compared how inclusive education policies and practices differ between these contexts or how local participation contributes to sustainable inclusion. This gap highlights the urgent need for empirical, context-based analysis to inform coherent national strategies that bridge inequities between urban and rural educational systems.

## METHODOLOGY

### Research Framework

This study explored research about inclusive education in both the Thai and international contexts through a mixed-methods research design. The first phase involved a systematic review from Thai theses, guided by the PICo framework to establish a clear and relevant scope for the literature search, and the PRISMA 2020 protocol to ensure transparent and rigorous selection of studies. Additionally, topic modeling analysis was applied to identify key themes in international research. The review encompassed scholarly works published between 2020 and 2024. Insights derived from this phase informed the second phase, which employed focus group discussions with experts and key stakeholders in inclusive education to contextualize the results, generate strategic recommendations for improving inclusive education practices in Thailand, and identify areas for future research to address existing knowledge gaps.

### Phase 1: Synthesis of Research Related to Inclusive Education

The first phase utilized a systematic review of the current state of inclusive education in Thailand, along with topic modeling analysis to examine underlying themes in international research related to inclusive education. Findings from this phase informed the second phase, which focused on existing knowledge gaps of inclusive education in Thailand. The details are as follows:

Research Search Strategy in this study was divided into two categories:

**1. Thai University Databases.** These databases include the top 10 Thai universities ranked by the Scimago Institutions Rankings in 2024, and for which database access was available. These are: Chulalongkorn University, Mahidol University, Kasetsart University, Srinakharinwirot University, Chiang Mai University, Prince of Songkla University, Thammasat University, Naresuan University, Ramkhamhaeng University, and Khon Kaen University.

**2. International Research Article Databases.** These consist of reputable international journals indexed in Scopus, with either a CiteScore Best Quartile ranking (Q1 or Q2) or among the top-ranked journals in their category. These journals apply initial editorial screening and double-blind peer review by at least two anonymous experts. The journals include the International Journal of Inclusive Education, the European Journal of Special Needs Education, the International Journal of Disability, Development and Education, and Disability & Society.

The PICo framework was applied to define the scope of the literature search. The PICo components used were: P (Population): Target population/sample; I (Phenomenon of Interest): Phenomenon being studied; Co (Context): Context of the study. The researcher identified search terms using Boolean operators, connecting terms with (AND) and expanding with (OR), as detailed in the following table.

**Table 1**

*Formulating Search Terms based on the PiCo Framework*

Keywords	Population	Phenomenon of Interest	Context
Main	Students with special needs	Education Policy, Inclusive Education	Thailand
Other	Disabled student, Neurodiverse Student	Policy Implementation, Student Support Service, Educational Barriers, Factor	Inclusive classroom

## Criteria for Selecting Research Studies

### Thai University Databases

The researcher followed PRISMA guidelines to select studies on inclusive education, reviewing titles, abstracts, and keywords for relevance. Eligible documents underwent an independent review by all researchers using a standardized approach, with disagreements resolved through further analysis during the full-text review stage. This process ensured a thorough and systematic selection of studies in Thailand.

**Step 1: Identification of Studies from Databases.** Relevant research on inclusive education in Thailand was identified using search terms based on the PiCo framework, covering the academic years 2019–2024 from the top 10 universities. A total of 85 studies were found, of which 20 were from unrelated disciplines and thus excluded.

**Step 2: Screening.** At this stage, screening was based on the title, abstract, and accessibility of the study. The following were excluded: 8 studies not related to inclusive education; 5 duplicate entries; 2 studies for which full-text access was not available; 2 studies lacking sufficient information for analysis, such as missing abstracts, no research methodology, or missing results. In total, 17 studies were excluded in this phase.

**Step 3: Inclusion for Literature Review.** Based on all screening criteria, a total of 46 studies were deemed complete and suitable for analysis to address the research questions. The process is illustrated in Figure 1.

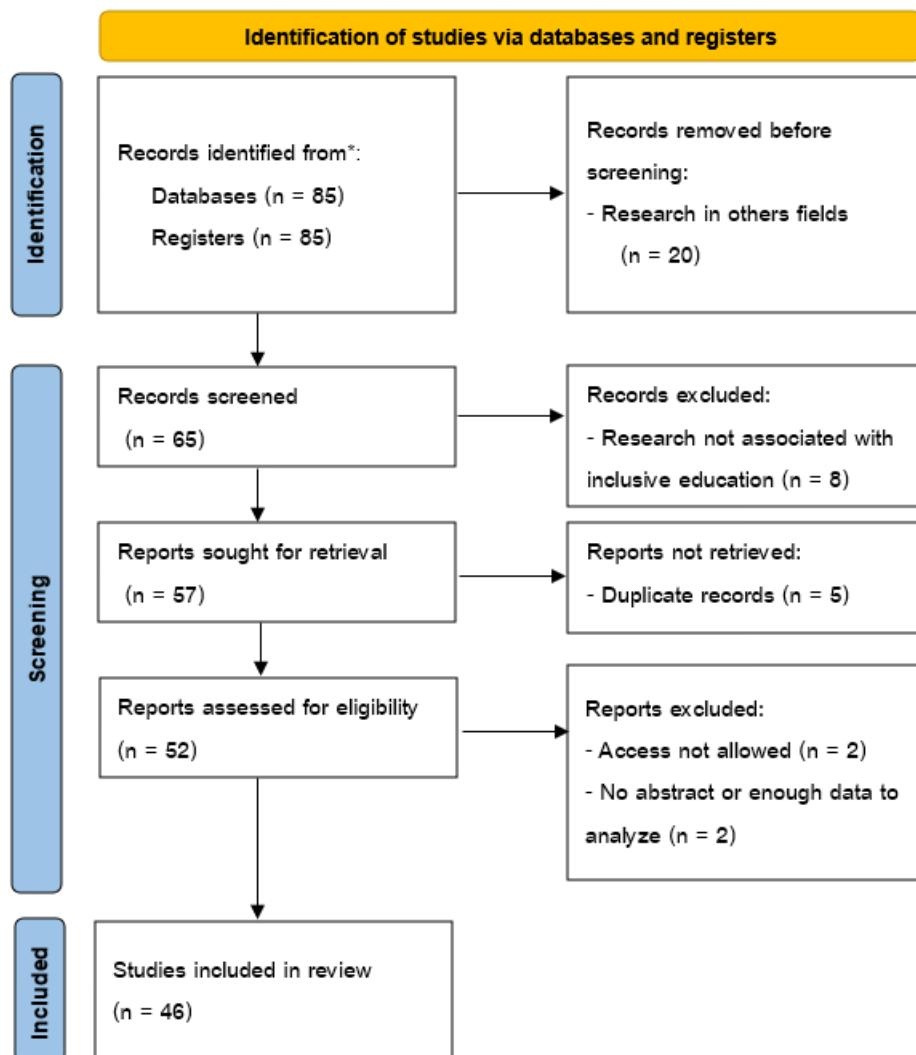
### International Research Article Databases

From the search of relevant research articles in international databases for the purpose of topic modeling analysis, the researcher initially gathered a total of 277 research articles. Among these, 33 were excluded as they were not actual research articles, while a further 15 were excluded because their content was not related to inclusive education provision. As a result, a total of 216 articles were used for the topic modeling analysis.

The selected articles from both Thai and international research databases were independently screened by the author team to determine their suitability for the study's objectives. The initial inter-rater agreement reached 90%, which was subsequently increased to 100% through team discussion and consensus. Following this, the full texts of the eligible articles were thoroughly reviewed by the authors to ensure that each study met all predetermined inclusion criteria. Only those articles that satisfied these criteria were retained for the final systematic review and topic modeling analysis.

**Figure 1**

*Research Selection Process in Thailand*



## Creation of Data Repository and Data Analysis

Creation of the data repository and analysis were divided into two parts: (1) systematic review of Thai university theses and (2) topic modeling of international research. Thai theses were organized by year, author, and institution, then analyzed collaboratively for key themes in inclusive education in Thailand. To ensure credibility of the analysis, first, the research team held a series of meetings to verify and refine the

categorization of the reviewed articles. Second, detailed descriptions of the categories that emerged in response to each research question were presented in the results section. Finally, illustrative examples were provided to demonstrate the extent to which these categories accurately represented the data and addressed the research questions. For international studies, pre-screened education research articles were formatted and processed using natural language processing techniques. Topic modeling was then performed using the BERTopic library and UMAP model to identify major themes.

## Phase 2 : Study of Approaches to Promote Inclusive Education Management in Thailand

This phase aimed to analyze the perspectives of experts on the key issues identified from the previous phase of research synthesis through the focus group method. Key informants were experts involved in inclusive education, purposively selected as part of one of three groups, with five from coming from government agencies, three from the private sector, and five from civil society and international organizations, totaling 13 participants. The specific selection criteria for each group were as follows:

### **1. Government Agency Representatives:**

Educational personnel or individuals with expertise or experience in teaching or promoting inclusive education within government agencies.

### **2. Private Sector Representatives:** Leaders or executive-level members of private organizations, and individuals working in private organizations in Thailand involved in promoting inclusive education.

### **3. Civil Society and International Organization Representatives:** Individuals with experience or roles in civil society or international organizations focused on inclusive education.

## Data Collection and Analysis

Researchers used focus group discussions to present Phase 1 findings and gather key informants' perspectives on inclusive education. Data collection included audio/video recording with permission and structured note-taking.

The data were subjected to conventional content analysis by using Google Sheets with color-coded cells to manage themes manually. During the process, the research team transcribed the focus group discussions, then familiarized themselves with the data by reviewing the transcripts. Key terms were identified to create coding categories. The team analyzed and grouped the data to extract the key informants' ideas and perspectives on inclusive education.

## Risk Prevention and Confidentiality of Research Participants

Researchers briefed participants on the study, emphasizing voluntary participation and the right to withdraw. Approved by Chulalongkorn University's ethics committee, the study adhered to ethical standards, maintaining strict confidentiality and anonymity. Data will be securely destroyed within a year of publication.

## RESULTS

The research findings can be categorized into three main parts: (1) a synthesis of research related to inclusive education in Thailand, (2) an analysis of key issues and emerging trends in inclusive education, and (3) proposed guideline strategies for promoting inclusive education management in the Thai context. Each component contributes to a comprehensive understanding of the current landscape and future directions for inclusive education in Thailand.

## Synthesis of Research related to Inclusive Education in Thailand

A theses review conducted in Thai universities on inclusive education, both in urban and rural areas, revealed six key research themes. The details of each theme are as follows:

**Parental Roles.** Studies focused on their involvement in supporting students' learning at home. These studies reflect how parental roles in student learning are influenced by different social contexts and how they create learning-conducive environments. Parents also expressed a need to receive regular updates about their children through all available communication channels to keep track of student activities and behaviors. For example, Petchdee & Srisukvatananan (2021) found that parents played a loving and supportive role in areas such as providing knowledge, preparing learning environments, encouragement, and praise. In contrast, another study explored reducing parental prompting in

students' morning routines. The results showed that tactile schedules improve students' ability to manage their morning routines independently, with parental cooperation playing a key role (Srisopharatch, 2023).

#### ***Inclusive Education Provisions in Schools.***

Research on school-level management highlights efforts to foster positive attitudes, supportive environments, and the use of Individualized Education Programs (IEPs) that respect learner diversity. However, a shortage of specialized personnel remains a major barrier (Tongprem & Kaewchinda, 2020). Instructional approaches vary—teachers use methods such as social stories, video modeling (Kaosomboon et al., 2021), and Universal Design for Learning (UDL) (Mokrid & Jamsai, 2021) to meet diverse needs. Effective inclusion also requires robust screening tools and stronger teacher preparation, yet many programs remain lecture-based and fail to embed inclusive pedagogies or UDL principles in practice (Chanboon, 2021). This underscores the urgent need for teacher education curricula that systematically integrate inclusive strategies across all stages of preparation.

***School Administration.*** This theme explores the administrative needs of inclusive schools. Some schools face moderate administrative challenges, especially in engaging stakeholders more actively in school management (Sakulsilsiri et al., 2022). The COVID-19 pandemic further impacted schools, necessitating the adoption of online learning formats. Schools now need to develop teacher skills in instructional technology and media production to support online learning, which has become a regular component of hybrid instruction (Sookong & Srisukvatananan, 2021). School management must therefore adapt to these evolving educational formats.

***Innovation and Instructional Media.*** This theme focuses on developing tools and media to support diverse learning needs and improve outcomes. Examples include health and safety education for students with intellectual disabilities (Meesupmun, 2020), and Positive Behavior Interventions and Supports (PBIS) for behavioral challenges (Ongkasing, 2021). Some initiatives also empower parents, though few target attitudes and skills directly, highlighting a gap and opportunity for future research. While innovation is expanding, continued development

is needed to match the evolving needs of learners.

***Student Behavior Support.*** Student behavior support is a critical issue in inclusive education research in Thailand, often addressed directly or as a sub-theme. Despite its importance, schools currently lack a structured system for effective behavior management, highlighting the need for greater scholarly attention and systemic solutions. This lack of support becomes a major challenge for teachers in managing classroom instruction. Efforts have been made to develop support systems to intervene when students display inappropriate behavior, aiming to reduce such behaviors (Ongkhasing, 2021). Strategies have also been explored for managing undesirable behaviors among students, particularly those with autism in inclusive classrooms. These include proactive and reactive strategies, planned ignoring, verbal warnings, non-physical disciplinary methods, and calming techniques (Srithongdee, 2020). These approaches have been found to effectively improve student behavior.

***School Supervision.*** This refers to studies exploring approaches to develop special education supervision processes with the aim of improving schools for students with special needs. One key finding is the importance of building a shared understanding among all stakeholders, as well as the need to develop teachers' capacity to provide effective education for students with special needs. Furthermore, schools should be prepared to undergo evaluations from various organizations (Sainark, 2022). This topic has received less research attention compared to other areas.

When considering the nature of the research topics, divided between universities in Bangkok and those in other provinces, similarities and differences in research focus can be identified as shown in Table 2.

The table highlights key differences in research focus between Bangkok universities and those in other provinces. In Bangkok, studies on parental roles emphasize collaboration among schools, families, and agencies to support students with special needs, whereas provincial research explores reducing parental prompts to foster student independence in daily living and self-care. In terms of administration and supervision,

Bangkok studies concentrate on school management challenges, while provincial studies focus more on evaluation and supervisory processes. Curriculum and instructional research in Bangkok centers on developing programs for students with intellectual disabilities and enhancing teacher knowledge through approaches such as Universal Design for Learning (UDL). By contrast, provincial universities pursue broader curriculum development, addressing not only intellectual but also physical and visual impairments, and developing screening tools to support individualized planning. Innovation and instructional media are a shared area of contribution, though Bangkok research emphasizes tools that strengthen parental knowledge and engagement, underscoring the importance of family involvement in inclusive education. When considering geographical context, spatial differences between urban and rural universities appear to influence the selection of research themes. In provincial areas, challenging terrain and limited transportation infrastructure lead scholars to emphasize students' independent mobility as a pathway to

future autonomy. Conversely, in urban settings, convenient transportation reduces the need to study this issue, shifting research attention instead toward parental involvement via diverse and accessible communication channels. These contrasts are illustrated in Figure 2.

## Synthesis of Key Issues and Trends in Inclusive Education

Key issues and trends in inclusive education were based on latent topic analysis used to categorize research topics from international inclusive education journal databases.

Descriptive statistical analysis showed that the 216 research articles could be divided by journal as follows: *International Journal of Inclusive Education*: 86 articles, *European Journal of Special Needs Education*: 58 articles, *International Journal of Disability, Development and Education*: 41 articles, *Disability & Society*: 17 articles, and *Cogent Education*: 14 articles. The articles can also be classified by year of publication as shown in Table 3.

**Table 2**

*Similarities and Differences in Research Topics between Universities in Bangkok and Other Provinces*

Research Topic	Universities in Bangkok	Universities in Other Provinces
1. Role of Parents	- Participating in supporting student learning and daily living	- Reducing prompts to encourage student independence
2. Educational Administration and Supervision	- Institutional needs in terms of administration	- Approaches to developing special education supervision processes
3. Curriculum and Instruction	- Mostly focused on curriculum development for students with intellectual disabilities - Development of teacher knowledge in instructional design, such as UDL	- More diverse curriculum development - Development of student screening models
4. Innovations and Instructional Media	- Innovations for student development - Innovations to enhance parents' knowledge and skills	- Innovations for student development

**Figure 2**

*The Spatial Differences Between Urban and Rural Universities*



*Note.* Adapted from *The Spatial Differences Between Urban and Rural Universities*, by Google Map, 2026. Copyright 2026 by Google LLC.

**Table 3**

*Number of Theses, Categorized by Year*

<b>Journals</b>	<b>2020 (%)</b>	<b>2021 (%)</b>	<b>2022 (%)</b>	<b>2023 (%)</b>	<b>2024(%)</b>
International Journal of Inclusive Education	22 (25.58)	32 (37.21)	10 (11.63)	7 (8.14)	15 (17.44)
European Journal of Special Needs Education	12 (20.69)	11 (18.96)	7 (12.07)	17 (29.31)	11 (18.97)
International Journal of Disability, Development and Education	0 (0.00)	5 (12.19)	13 (31.71)	8 (19.51)	15 (36.59)
Disability & Society	0 (0.00)	1 (5.89)	8 (47.06)	2 (11.76)	6 (35.29)
Cogent Education	1 (7.14)	2 (14.29)	1 (7.14)	4 (28.57)	6 (42.86)

## Categorization of Research Topics from Inclusive Education Journal Databases

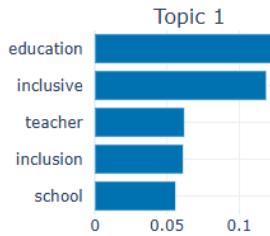
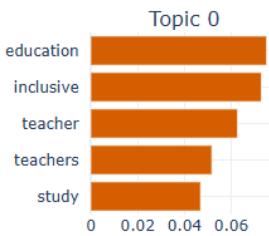
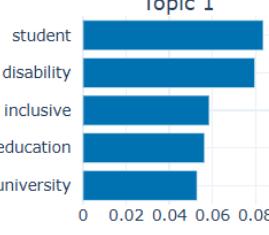
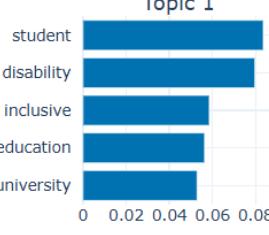
**Analysis Based on Article Titles.** The analysis of research topic categorization from inclusive education journal databases using article titles revealed only one latent topic category: research related to teacher and student attitudes toward inclusive education, or research on teacher attitudes toward diverse learners in inclusive classrooms (Probability = .991). That is, based on occurrences of words in the article titles, the model projected that 99.1% of the titles belonged to articles of a single topic. The word “education” was a strong key term for the topic.

**Analysis Based on Article Abstracts.** The analysis of research topic categorization using

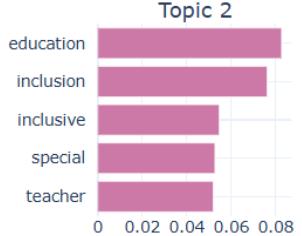
abstracts identified the top three latent topic categories based on the highest probability values: (1) research related to discourse analysis and practices of inclusive education at the college level in Northern European countries (Probability = .238); (2) research on the implementation of inclusive education in higher education settings (Probability = .129); (3) research on teacher and student attitudes toward inclusive education, or research on teacher attitudes toward diverse learners in inclusive classrooms (Probability = .027). Based on occurrences of words in the article abstracts, the model projected 23.8% of abstracts as being related to Topic 3, 12.9% as related to Topic 2, and 2.7 % as related to Topic 1. The word “education” was a strong key term for Topics 1 and 3, while the “student” was a strong key term for Topic 1. Details of the analysis results are shown in Table 4.

**Table 4**

*Results of the Categorization of Research Topics from Inclusive Education Journal Databases*

Topic	Analysis of Titles		Analysis of Abstracts																									
	Keywords	P	Keywords	p																								
1	<p><b>Latent Topic: Teachers' attitudes toward diverse learners in inclusive classrooms</b></p> <p>education, inclusive, teacher, school, teachers, towards, student, attitude, special</p>  <table border="1"> <caption>Data for Topic 1 (Analysis of Titles)</caption> <thead> <tr> <th>Word</th> <th>Probability</th> </tr> </thead> <tbody> <tr><td>education</td><td>0.09</td></tr> <tr><td>inclusive</td><td>0.07</td></tr> <tr><td>teacher</td><td>0.04</td></tr> <tr><td>inclusion</td><td>0.03</td></tr> <tr><td>school</td><td>0.02</td></tr> </tbody> </table>	Word	Probability	education	0.09	inclusive	0.07	teacher	0.04	inclusion	0.03	school	0.02	.991	<p><b>Latent Topic: Teachers' attitudes toward diverse learners in inclusive classrooms</b></p> <p>education, inclusive, teacher, teachers, study, attitude, school, inclusion, student, towards</p>  <table border="1"> <caption>Data for Topic 0 (Analysis of Abstracts)</caption> <thead> <tr> <th>Word</th> <th>Probability</th> </tr> </thead> <tbody> <tr><td>education</td><td>0.055</td></tr> <tr><td>inclusive</td><td>0.052</td></tr> <tr><td>teacher</td><td>0.048</td></tr> <tr><td>teachers</td><td>0.045</td></tr> <tr><td>study</td><td>0.042</td></tr> </tbody> </table>	Word	Probability	education	0.055	inclusive	0.052	teacher	0.048	teachers	0.045	study	0.042	.027
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teachers	0.045																											
study	0.042																											
2	<p><b>Latent Topic: The implementation of inclusive education in higher education</b></p> <p>student, disability, inclusive, education, university, social, learning, faculty, higher, students</p>  <table border="1"> <caption>Data for Topic 1 (Analysis of Abstracts)</caption> <thead> <tr> <th>Word</th> <th>Probability</th> </tr> </thead> <tbody> <tr><td>student</td><td>0.075</td></tr> <tr><td>disability</td><td>0.068</td></tr> <tr><td>inclusive</td><td>0.055</td></tr> <tr><td>education</td><td>0.052</td></tr> <tr><td>university</td><td>0.045</td></tr> </tbody> </table>	Word	Probability	student	0.075	disability	0.068	inclusive	0.055	education	0.052	university	0.045		<p><b>Latent Topic: The implementation of inclusive education in higher education</b></p> <p>student, disability, inclusive, education, university, social, learning, faculty, higher, students</p>  <table border="1"> <caption>Data for Topic 1 (Analysis of Abstracts)</caption> <thead> <tr> <th>Word</th> <th>Probability</th> </tr> </thead> <tbody> <tr><td>student</td><td>0.075</td></tr> <tr><td>disability</td><td>0.068</td></tr> <tr><td>inclusive</td><td>0.055</td></tr> <tr><td>education</td><td>0.052</td></tr> <tr><td>university</td><td>0.045</td></tr> </tbody> </table>	Word	Probability	student	0.075	disability	0.068	inclusive	0.055	education	0.052	university	0.045	.129
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inclusive	0.055																											
education	0.052																											
university	0.045																											

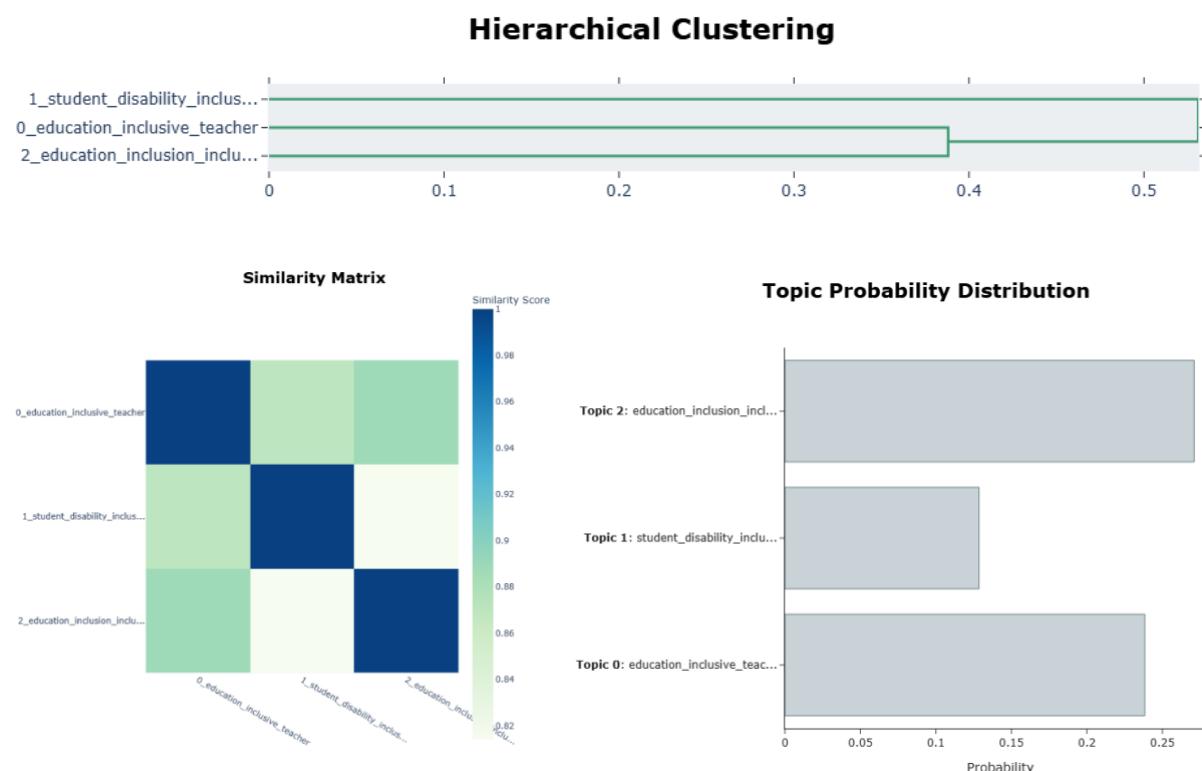
**Table 4 (Continued)**

Topic	Analysis of Titles		Analysis of Abstracts	
	Keywords	P	Keywords	p
3			<p><b>Latent Topic: Discourse analysis and practices of inclusive education at the college level in Northern European countries</b></p> <p>college, inclusion, inclusive, special, teacher, educational, discourse, Nordic , practice ,analysis</p> 	.238

The Figure 3 presents the results of the categorization analysis based on the abstracts, which are divided into three research topics. The similarity matrix indicates that Topic 1 and 3 exhibits high similarity values. Moreover the topic probability distribution shown in the figure reveals that Topic 3 has the highest overall probability. For clarity, the topics were relabeled such that topic 0 corresponds to topic 1, topic 1 to Topic 2, and topic 2 to Topic 3. Accordingly, the original topic order produced by the program in Figure 3 is topics 0–2.

**Figure 3**

*Data Visualization of the Categorization Analysis Results based on Abstract*



*Note.* Analyzed using the BERTopic library and UMAP model to identify major themes. by Google Colab, 2026. Copyright 2026 by Google LLC.

## Differences Between Research Findings in Thailand and at the International Level

**Scope Across Educational Levels.** International research on inclusive education spans all educational levels—from early childhood to higher education. In contrast, most Thai studies focus on schools or vocational colleges, with relatively little attention to higher education. The international emphasis on inclusive practices in universities reflects a commitment to lifelong inclusivity, preparing students not only academically but also with essential life and social skills for the workforce.

**Research Methodologies.** International research includes a higher number of *systematic reviews* and *meta-analyses* compared to Thai research. This suggests that inclusive education has been studied extensively abroad, with a wealth of primary studies available to support secondary analysis, synthesis, and categorization—often using established research databases.

**Diversity of Research Topics.** International research topics are broader and more varied than those in Thailand, which mostly concentrate on instructional media and classroom teaching strategies. For instance, international studies cover ethical competence, inclusive education policies, legal and human rights perspectives, interprofessional collaboration, teacher perceptions, teacher preparation for inclusive classrooms, racial and gender diversity, and more. This indicates that the concept of inclusive education abroad is regarded by all diverse students.

**Policy-Level Emphasis.** International studies often focus on planning at the policy level to support inclusive education. Strong, inclusive policies are seen as foundational for effectively implementing inclusive practices nationally. Thai research, however, includes relatively few studies related to policy development for inclusive education.

**Teacher Capacity Building.** International research prioritizes developing teachers' capacity to implement inclusive education effectively. This includes promoting both academic skills and fostering positive attitudes and mindsets toward inclusion. These efforts help teachers better

understand and address learner diversity with quality instruction. In contrast, Thai research tends to focus more on developing students' capacities, resulting in a high volume of work related to instructional strategies, curricula, and innovations for learners with special needs.

## Proposing Guideline Strategies to Promote Inclusive Education in Thailand

These findings are based on the results from systematic review and topic modeling from Thai studies and international journals, including expert opinions gathered through group discussions to create practical guidelines for promoting inclusive education in Thailand as a core guideline for every school to apply in its own context. The suggested guidelines are:

### Guideline 1: Establishing Early Childhood Screening and Appropriate Rehabilitation Systems

Establishing a collaborative system for early childhood screening and rehabilitation is essential to reducing the risks and prevalence of special needs. Families, educators, and healthcare professionals must work together to identify needs early and provide timely interventions, which can mitigate the severity of disabilities and decrease the number of individuals requiring intensive support. This approach enables a more focused allocation of resources, fostering comprehensive care for a smaller group with less severe and diverse needs, ultimately leading to long-term benefits for individuals and society.

### Guideline 2: Developing Inclusive Education Policies and Implementation that Respect Learner Diversity and Local Resources

Inclusive education policies must be practical and action-oriented, emphasizing the development of students' social and participation skills for future employment. Government support is essential to provide resources, improve teacher welfare, and reduce workloads, ensuring long-term sustainability. Policies should remain flexible to reflect regional differences, engage the private

sector, and foster collaboration across stakeholders, while legal enforcement is needed to turn policy into meaningful outcomes. Importantly, regional policy design must account for sociopolitical realities: As Thongsawang and Kaewkumkong (2025) demonstrate in rural development, projects framed around symbolic or cultural agendas may neglect genuine needs. Similarly, inclusive education policies must avoid symbolic compliance and ensure that resource allocation directly supports learners, particularly in under-resourced rural areas.

### **Guideline 3: Enabling Students with Special Needs to Participate in Curriculum and Classroom Instruction Design**

Providing opportunities for students with special needs to participate in designing curricula and classroom instruction can lead better outcomes and address their actual needs. This fosters greater happiness and motivation in learning. Collaboration among all stakeholders is key to creating tailored, responsive curricula. Giving these students a voice in classroom activities fosters a sense of belonging, engagement, and a positive learning environment, ultimately enhancing motivation and learning success. The more the teaching and learning process aligns with the needs of the learners, the more successful and effective it becomes.

### **Guideline 4: Developing Pre-service Teacher Knowledge for Teaching Students with Special Needs, Including In-service Teacher Training**

Developing pre-service teacher knowledge of teaching students with special needs is essential for preparing effective educators who are able to support diverse learners, including those with complex identities. This involves understanding the fundamental concepts of inclusive education, designing an inclusive learning process, and providing appropriate support in various situations. Pre-service teachers should also be equipped with creative problem-solving skills for managing real-world classroom challenges. Incorporating compulsory courses on managing classroom diversity, initial screening, and assessment into education programs equips future teachers to handle diverse needs and partially addresses the shortage of special education teachers. Equally

important is ongoing training for in-service teachers, focusing on skills like creating Individualized Education Programs (IEPs) and effective communication with diverse learners, empowering them to independently manage and support students with special needs.

### **Guideline 5: Strengthening Community Partnerships and Cross-Sector Understanding to Promote Inclusive Education**

The success of inclusive education depends on strong partnerships between schools, families, communities, and multiple sectors. Community involvement not only enriches learning and fosters belonging but also equips students with life skills and opportunities to contribute meaningfully to society. Effective strategies include joint school-community committees, forums, and cultural activities that build trust and shared responsibility. Inclusive education also requires cross-sector understanding that diversity—in abilities, backgrounds, and identities—is a resource for creating a more equitable society. Awareness campaigns and research can highlight these benefits, addressing concerns about academic outcomes while strengthening collective commitment to inclusion. Lessons from Bangkok's urban waterways governance underscore the risks of symbolic participation: Numsuk (2025) shows that symbolic consultation without genuine inclusion of residents leads to conflict, inefficiency, and exclusion. For education, this means that family and community engagement must go beyond token meetings, adopting participatory approaches that share decision-making power and empowers them to co-create inclusive practices.

### **Guideline 6: Establishing a Systematic Database for Children with Special Needs**

Collecting accurate data on the number of children with disabilities can provide valuable insight into educational access. This information can guide more effective policy decisions and highlight patterns or concentrations of students in specific areas. Moreover, knowing how long students stay in the education system can help clarify the overall picture. This database could also connect to other information, such as students' economic backgrounds and academic performance. A robust data system like this could support more consistent

and serious research, enabling the creation of innovations that help address a variety of challenges faced by students, such as school dropout, learning delays, or health issues.

#### **Guideline 7: Designing Spaces and Facilities to Support Learner Diversity**

Inclusive education requires schools to prioritize accessible environments that support all learners. Many Thai schools lack infrastructure for students with special needs, hindering inclusivity. Physical accessibility, flexible classroom layouts, and inclusive materials like audiobooks, screen readers, and captioned videos are essential. On-site support from specialists, such as interpreters and learning assistants, further ensures equitable opportunities. Thoughtful design and comprehensive resources are vital for fostering academic, emotional, and social success for every student.

informed interventions, student engagement strategies, and sustained teacher development, the model addresses evaluation gaps often overlooked in school reform and demonstrates measurable improvements in school readiness. Such localized, research-based frameworks illustrate how national policy commitments can be operationalized within schools, though their impact remains uneven, particularly outside major urban centers.

Crucially, Thai policy and research have yet to meaningfully address other marginalized groups—including LGBTQ+ learners, gifted students, underprivileged youth, and those not in education, employment, or training (NEETs). While legal protections for LGBTQ+ students exist, family and school environments often remain unsupportive (Visessuvanapoom et al., 2022). Similarly, research on gifted education underscores the importance of coordinated family and school support in preventing “talent loss,” where gifted individuals disengage from learning opportunities, diminishing both personal and societal potential (Visessuvanapoom et al., 2024). Underprivileged youth continue to face compounded disadvantages, particularly in rural areas where poverty and recurrent crises exacerbate educational inequality. Vin et al. (2025) show how wealthier families sustain stability during natural disasters, while poorer households experience severe disruptions to their children’s education—highlighting the enduring vulnerability of rural learners.

These dynamics resonate with broader rural development patterns. Thongsawang and Kaewkumkong (2025) demonstrate how built environment projects in rural Thailand often prioritize symbolic or political agendas over practical needs, reinforcing structural inequities. In education, similar dynamics emerge: Schools in rural areas frequently comply symbolically with inclusive mandates without securing the resources necessary for substantive implementation. At the same time, urban schools, particularly in Bangkok, enjoy greater access to staff and resources but remain constrained by centralized and unresponsive governance. As Numsuk (2025) illustrates in her study of Bangkok’s waterways, top-down decision-making and tokenistic consultation exclude local voices, a dynamic mirrored in education where available resources do not guarantee meaningful inclusion for students and families.

## **FINDINGS AND DISCUSSION**

### **Evolving International Perspectives and Persistent Challenges in Thai Inclusive Education**

International scholarship increasingly views inclusive education as a systemic response to learner diversity, extending beyond disability to encompass cultural, linguistic, and socioeconomic differences. Frameworks such as Universal Design for Learning (UDL) and Multi-Tiered System of Supports (MTSS) are widely applied to promote flexible, equitable instruction and early intervention. In contrast, Thai research remains focused primarily on students with disabilities—particularly those with learning difficulties—while other dimensions of diversity receive limited attention. This emphasis reflects a policy orientation that continues to frame disability through a clinical lens rather than a social or rights-based perspective.

Local innovations demonstrate the potential to bridge this divide. For example, Tantixalerm and Amornpaisarnloet (2021) developed a prototype student support and development system grounded in MTSS principles. By integrating data-

The differences between urban and rural university topics reflect how geographic and contextual differences shape the research agendas of Thai universities. While Bangkok-based institutions prioritize specialized instructional models and school-level management, provincial universities appear more concerned with foundational processes that enable equitable access, early support, and holistic curriculum development. These differences underscore the need for national policies that bridge the gap between specialized innovation and broader systemic capacity-building, ensuring that inclusive education efforts are responsive to the diverse realities of schools across Thailand.

Persistent urban–rural disparities in Thailand contrast sharply with international contexts where inclusive education is underpinned by robust policy frameworks, equitable funding, and intersectoral coordination (Loreman, 2017). Although Thailand ratified the United Nations Convention on the Rights of Persons with Disabilities (UNCRPD) in 2008, implementation has been undermined by political instability, fragmented governance, and weak ministerial coordination. Moreover, the neurodiversity paradigm remains underdeveloped, limiting opportunities for innovation and early intervention. Unlike international systems that adopt tiered supports and proactive screening, most Thai schools have limited institutional capacity to implement such approaches effectively (Tantixalerm & Amornpaisarnloet, 2021).

Taken together, these findings underscore how Thailand's inclusive education reform is hindered less by a lack of legislative frameworks than by fragmented governance, narrow conceptualizations of diversity, and uneven capacity across urban and rural contexts. Addressing these challenges requires more than policy expansion; it demands systemic alignment of teacher training, curriculum reform, and cross-sector collaboration, alongside a deliberate shift toward recognizing diversity as a societal asset. Only through such structural and cultural transformation can Thailand move toward an inclusive education system that reflects both global frameworks and its own sociocultural realities.

## **Broadening Awareness and Engagement for Inclusive Education Through Strategic Communication**

### **Addressing Stakeholder Blind Spots in Inclusive Education**

Large segments in Thailand remain insufficiently engaged and misconceptions about special needs, such as associating them with low intelligence or behavioral issues, marginalize learners and delay support. Many parents lack awareness of inclusive education principles or feel shame, further hindering access to services and contributing to school dropout (Florian & Black-Hawkins, 2011). Thummanond and Jantharasiriphut (2025) identified the family as a critical determinant in preventing school dropout, emphasizing that parental bias and lack of acceptance toward children's diverse needs significantly contribute to educational disengagement. Such dropout is linked to heightened risk behaviors, particularly drug involvement and incarceration, reinforcing social exclusion. These findings highlight that social and familial acceptance is essential for achieving genuine inclusion. The public health sector often works separately from education, leading to weak collaboration that hinders timely student support. In many schools, especially those under-resourced, inclusive education is seen as an added burden and is mainly associated with visible disabilities, rather than embracing all learner diversity (UNESCO, 2020). This is partly due to the lack of inclusive pedagogy in teacher and leadership training programs.

### **Mobilizing Media for Inclusive Education Awareness**

Thailand must adopt strategic communication tools that actively reshape societal attitudes and foster cross-sector understanding. Socially-driven awareness campaigns can play a pivotal role in shifting perceptions and bridging the knowledge gap between policy and practice. For instance, campaigns such as *“Who are the neurodiverse learners?”* can help normalize cognitive differences by introducing the concept of neurodiversity as a natural human variation rather than a deficit (Armstrong, 2012). These campaigns can

demystify inclusive education, promote empathy, and encourage collective responsibility. When carefully crafted and contextually relevant, communication strategies become powerful tools for unifying stakeholders around a shared vision of inclusion.

### **Expanding the Research Agenda to Include Marginalized Voices**

Inclusive education research in Thailand has largely neglected key groups such as migrant and stateless children, girls from marginalized communities, and NEET youth (International Labour Organization [ILO], 2022). These populations often study outside formal systems or drop out due to societal pressures and lack of support. Emotional and psychological challenges, crucial to their educational experiences, remain overlooked in policy and research, underscoring the need for more inclusive, context-sensitive approaches. Another marginalized group comprises formerly incarcerated individuals, particularly female drug offenders, who predominantly reside in slum or peri-urban areas. Returning to their original environment combined with societal stigmatization often limits their access to education, lifelong learning, and employment opportunities (Thummanond & Jantharasiriphat, 2025).

Additionally, Nelson et al. (2022) found that studies overwhelmingly focus on students with autism spectrum disorders (ASD) and specific learning disabilities (SLD), while learners with complex or low-incidence disabilities remain underrepresented. A large portion of the research also tends to prioritize students identified as “at risk” by assessments, overlooking those facing intersecting exclusions (Cook & Odom, 2013). Similarly, Thai research prioritizes administratively convenient groups, overlooking marginalized learners. Without expanding the evidence base, inclusive policies risk reinforcing these gaps.

### **Uneven Pathways to Inclusion: Urban and Rural Disparities in Thailand’s Teacher Education and Practice**

Thailand’s teacher preparation system reflects marked urban–rural disparities. Echoing Sukkasame’s (2019) observation that urban communities prioritize spatial planning while rural

communities focus on household-level needs, teacher education similarly diverges: urban universities emphasize formal frameworks but often lack depth in practice, whereas rural institutions operate within resource constraints and limited expertise. This indicates that, as in community development, inclusive education requires context-sensitive models that balance structural reform with localized agency.

Urban programs in cities such as Bangkok and Chiang Mai have begun to integrate inclusive principles, yet systemic implementation of frameworks like Universal Design for Learning (UDL) or tiered interventions remains limited. By contrast, regional universities in northeastern and southern provinces continue to rely on traditional pedagogies with insufficient infrastructure, leaving graduates underprepared to address learner diversity. These uneven training practices, compounded by fragmented research that often focuses on small-scale interventions, impede the development of consistent, evidence-based inclusive education policies at the national level.

## **CONCLUSION AND RECOMMENDATIONS**

The Thai case illustrates the importance of community collaboration in driving sustainable change, echoing Sukkasame’s (2019) findings that participatory processes empower stakeholders and address local challenges. Applied to education, this highlights the need for inclusive schools to move beyond externally imposed models and instead engage families and communities in co-creating meaningful learning environments that bridge policy–practice gaps across urban and rural settings. Addressing the persistent divide between policy and practice requires stronger alignment between teacher education and inclusive policy, particularly in rural regions where resources are limited. Universities must therefore prioritize inclusive pedagogy grounded in equity and social justice, supported by faculty development, curriculum reform, and the integration of evidence-based frameworks such as UDL and tiered support models. Without such systemic investment, educators will remain underprepared, limiting the effectiveness of inclusive education reforms.

A critical implication for both research and practice lies in reconceptualizing diversity within inclusive education. Thai scholarship has largely concentrated on learners with diagnosed disabilities, while other marginalized groups—including ethnic minorities, LGBTQ+ students, gifted learners, and underprivileged youth—remain overlooked, despite facing substantial barriers to access, participation, and achievement. Future policy and scholarship must embrace a broader, intersectional understanding of diversity that is consistent with global frameworks that emphasize inclusion for all learners at risk of exclusion due to social, cultural, or economic disadvantage (UNESCO, 2020).

In terms of policy recommendations, the proposed guidelines can be operationalized at the school level through, for example, school-based implementation strategies, leadership roles, teacher professional development, and collaborative planning mechanisms.

This study acknowledges limitations in classifying universities solely by geographic location. Institutions such as Chiang Mai University, though situated outside Bangkok, reflect urban characteristics due to their economic and technological capacity. Future research should therefore adopt more nuanced criteria that consider socioeconomic and contextual readiness to provide a more accurate representation of urban–rural divides. Researchers should also employ participatory and intersectional approaches to address systemic barriers and lived realities, co-creating policies that are both sustainable and contextually grounded (Artiles et al., 2016).

Ultimately, inclusive education—both in Thailand and globally—must move beyond a narrow, disability-centered paradigm toward a holistic, rights-based approach that addresses structural inequities and contextual disparities, whether rural–urban, economic, or cultural. Strengthening connections between teacher education, research, and policy, while amplifying marginalized voices, is essential to building education systems that are equitable, inclusive, and socially responsive. Such a shift aligns national reforms with international commitments, ensuring that inclusive education becomes not only a local imperative but also a global driver of equity and sustainable development.

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