

# Pedagogical Policies and Learning of Students with Special Educational Needs: The Case of General Secondary Schools in Maroua, Diamaré Division, Far North Region of Cameroon

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## ABSTRACT

This article explores the impact of pedagogical policies on the learning outcomes of students with special educational needs (SEN) in general secondary schools in Maroua, Far North Cameroon, a region facing significant structural and educational challenges. Despite government efforts, nearly 80% of SEN students drop out prematurely (Piabuo, 2015), underscoring persistent issues such as insufficient and poorly adapted teacher training, curricula not tailored to SEN needs, lack of effective pedagogical adaptations, inadequate consideration of the school environment, and fragmented support for vulnerable learners (Bouba, 2013). Grounded in Bandura's self-efficacy theory and Vygotsky's socio-constructivist framework, the study employs a mixed-methods approach, combining quantitative analyses with SPSS and qualitative methods. The sample includes 16 SEN students, 163 teachers, 12 specialists, and 10 inspectors. Results fully confirm the general hypothesis that pedagogical policies significantly influence SEN students' learning in Maroua. Specifically, the five sub-hypotheses were validated with respective influence rates of 72.2% (HR1), 48.8% (HR2), 62.6% (HR3), 76.3% (HR4), and 77.4% (HR5), highlighting the critical roles of equity, psychosocial support, and school environment adaptation. These findings emphasize the urgent need for strengthened, contextually adapted teacher training and coordinated systemic interventions to establish an inclusive and equitable educational framework in the region.

**Keywords:** pedagogical policies, learning, students with special educational needs, secondary education, inclusive education, Maroua.

## Resumé

Cet article explore l'impact des politiques pédagogiques sur l'apprentissage des élèves à besoins éducatifs spécifiques (EBES) dans les établissements secondaires d'enseignement secondaire général de Maroua, dans la région de l'Extrême-Nord du Cameroun, marquée par de lourdes contraintes structurelles et scolaires. Malgré les mesures gouvernementales, près de 80% des EBES abandonnent prématurément (Piabuo, 2015), mettant en lumière des défis majeurs. Parmi les obstacles identifiés figurent une formation insuffisante et peu adaptée des enseignants, des programmes scolaires non adaptés aux besoins des EBES, un manque d'adaptations pédagogiques efficaces et une faible prise en compte des particularités de l'environnement scolaire, ainsi qu'une prise en charge fragmentée des élèves vulnérables (Bachir, B. 2013). S'appuyant sur les théories de l'auto-efficacité de Bandura et du socio-constructivisme de Vygotsky, la recherche adopte une approche méthodologique mixte, combinant analyses quantitatives (SPSS) et qualitatives, avec un échantillon composé de 16 EBES, 163 enseignants, 12 spécialistes et 10 inspecteurs. Les résultats confirment à 100% l'hypothèse générale : les politiques pédagogiques influencent l'apprentissage des EBES de Maroua. Les cinq hypothèses spécifiques sont validées avec des taux respectifs de 72,2% (HR1), 48,8% (HR2), 62,6% (HR3), 76,3% (HR4) et 77,4% (HR5), montrent clairement que la mise en œuvre des politiques pédagogiques influence l'apprentissage des EBES, en particulier à travers l'importance de l'équité, du soutien psychosocial et de l'adaptation de l'environnement scolaire. Ces conclusions appellent à renforcer la formation contextualisée des enseignants et à coordonner une intervention systémique pour créer un cadre éducatif inclusif et équitable dans cette région.

**Mots clés :** politiques pédagogiques, apprentissage, élèves à besoins éducatifs spécifiques, enseignement secondaire, éducation inclusive, Maroua

## INTRODUCTION

Education for students with special educational needs (SEN) continues to be a critical challenge in many developing regions, where structural and systemic barriers substantially hinder equitable educational opportunities. In Maroua, located in the Far North region of Cameroon, the education system faces severe constraints that disproportionately affect SEN learners. Despite national policies aimed at fostering inclusive education, dropout rates among SEN students remain alarmingly high, with nearly 80% leaving school prematurely (Piabuo, 2015). This underscores persistent implementation gaps and educational practice deficiencies that contribute to exclusion and suboptimal learning outcomes.

The obstacles limiting SEN students' academic success in this context include insufficient and inadequately contextualised teacher training, curricula that inadequately address diverse SEN needs, lack of effective pedagogical adaptations, and poorly accommodating physical and organizational school environments. Fragmented support for vulnerable pupils further exacerbates these difficulties (Bachir, B. 2013). These local challenges occur against the backdrop of global commitments to inclusive education, as articulated in international frameworks such as the United Nations Convention on the Rights of Persons with Disabilities (UNCRPD, 2006) and UNESCO's Education 2030 Agenda. These initiatives emphasise equity, access, and quality education for all learners, advocating for adapted pedagogical approaches and systemic support to remove barriers for SEN students worldwide. This study analyses the impact of pedagogical policies on the learning experiences and outcomes of SEN students in Maroua's general secondary schools. Theoretically, it draws on Bandura's self-efficacy theory, which highlights the vital role of learners' belief in their capabilities in motivating academic engagement and persistence, and Vygotsky's socio-constructivist theory, which stresses the importance of social interaction and scaffolding within the zone of proximal development for effective learning. Using a mixed-methods approach that integrates quantitative data analysis with SPSS and qualitative content analysis, the research investigates how equity, psychosocial support, and environmental adaptations shaped by pedagogical policies influence SEN students' educational attainment. The findings intend to inform strategies for aligning teacher training and systemic educational interventions with SEN learners' needs, fostering more inclusive, equitable, and effective educational environments in Maroua in line with international inclusive education goals.

## Context and justification

Inclusive education is a global priority responding to increasing social and ethnocultural diversity, equity, and human rights (UNESCO, 2009). Despite commitments such as the SDGs and UNESCO conventions, over 90% of children with disabilities remain out of school worldwide, with Sub-Saharan Africa facing acute challenges due to rapid population growth and persistent social and political difficulties. These pressures overwhelm fragile educational systems, making inclusive education an urgent yet complex task. Key barriers in the region include inadequate, poorly contextualized teacher training ; lack of effective pedagogical adaptations ; insufficient school infrastructure and assistive resources; and fragmented support for vulnerable groups, including displaced and disabled children (World Bank 2018; Wathi, 2025; Relief Web, 2023). In Cameroon's Far North region, socio-economic hardships, security issues, and poverty exacerbate these challenges, limiting access and quality for students with special educational needs (SEN), despite national laws and local supportive initiatives aiming to enhance inclusion (Safiatou, 2020 ; Mahamat, 2015 ; NRC, 2018). However, policy implementation gaps remain substantial, especially concerning teacher preparedness, classroom adaptations, and managing education in humanitarian crisis contexts (Tah, 2025). These intertwined factors justify an in-depth, context-sensitive analysis of pedagogical practices and their effectiveness in supporting SEN students' academic success in Maroua and the wider Diamaré division.

## Problem Statement

Despite national and local policies promoting inclusive education, students with special educational needs (SEN) in secondary schools in Maroua continue to face significant learning barriers. Key challenges include inadequate

contextualized professional training for teachers, which limits their ability to apply effective, locally adapted pedagogical strategies (Fonkoua, 2003, 2006); the lack of concrete, tailored inclusive practices that address SEN students' unique needs, resulting in unfavorable learning environments and limited access to core knowledge (Fonkoua, 2018; Fotso Fotué, 2024); poor school accommodations characterized by insufficient infrastructure, educational materials, and assistive technologies that heighten educational marginalization; unequal access to ICT, depriving SEN students of interactive learning tools and widening achievement gaps (Béch  , 2018); and the absence of coordinated care for vulnerable groups, such as talib  s, exposing weaknesses in policy implementation and limiting academic support (Bouba, 2013). These intertwined factors undermine essential cognitive processes like comprehension, memorization, and recall, thereby deteriorating learning quality. Understanding how these contextual elements interact is crucial to identifying targeted interventions that can remove barriers and foster effective, sustainable, and meaningful inclusion. Preliminary survey data from Kakatar   and Bilingual secondary schools further demonstrate the persistent learning difficulties experienced by SEN students throughout their schooling.

In the following table, students with special educational needs encounter significant difficulties in the complex subjects taught by untrained teachers: Mathematics, French, Second Language, Life and Earth Sciences (SVT), Physical Chemistry and Technology (PCT), English, and ICT. The academic performances of students with special educational needs (SEN) in Kakatar   and Bilingual high schools in Maroua highlight significant learning difficulties in several complex subjects, such as mathematics, French, foreign languages (English, Spanish, Italian), natural sciences (biology and earth sciences, physical and chemical sciences), technology (ICT, computer science), history-geography, as well as written and oral expression (Table 1)

students	Class	subjects	1srt term	2nd term	3rd term
El��ve1	4e ESP	Maths	09	00	10
		English	07	10	10
		French	06	11	10
		ICT	09	00	10
		Espanish	05	15	14
El��ve2	2nde ITAL	ORTH	07	10	10
		Study of text	07	06	10
		Written exp	08	12	08
		Oral exp.	08	06	10
		english	02	02	10
		Italian	06	10.25	06
El��ve3	4e ESP	ECMI	12	08	06
		Hist-G��o	00	07	03
		French	09	09	08
		english	06	10	05
		Maths	00	07	00
		Espanish	07	10	10
El��ve4	4e ALL	Informatic	11	11	11
		Math��matic	06	06	06
		SVT	06	08	09

	Orthograph	10	10	10
	French	08	08	10
	english	07	02	08
	PCT	08	08	09

**Table 1: Analysis of Annual Class Grades of SEN Students in Complex Subjects**

**Source: Archives of Kakataré and Bilingual High Schools in Maroua, 2025**

It is observed that performance in mathematics is low and highly inconsistent, with several zero grades reflecting a genuine difficulty in sustainably mastering the concepts. Fluctuations in results in French and English illustrate often discontinuous and fragile learning. Occasional progress in Spanish and Italian may be explained by increased interest or better pedagogical support in these languages.

Results in science and technology generally remain low despite some improvements, notably in biology and earth sciences (SVT). The variability of grades in ICT and computer science highlights a lack of ongoing pedagogical adaptations. Frequently zero grades in history-geography suggest absenteeism or disengagement from school, whereas spelling appears to be better mastered by some students. These observations are complemented by the review of cumulative results in national exams (Table 2), which underline unstable success rates overall below the national averages.

years	BEPC Pass Rate (%)	Probatoire Pass Rate (%)	Baccalauréat Pass Rate (%)
2019	100	100	0
2020	80	0	100
2021	80	0	0
2022	60	0	0
2023	83.33	0	0
2024	100	0	0
2025	60	0	0

**Table 2: Statistics of Cumulative Exam Results of SEN Students at Kakataré and Bilingual High Schools, 2019–2025**

**Source: Annual Activity Reports (CFPAM), 2019–2025**

Although the BEPC results show some variability with peaks reaching 100%, the success rates at the Probatoire collapse to 0% over several years, practically preventing any candidacy or success at the Baccalauréat in these institutions. This dramatic decline indicates a glaring lack of appropriate support and highlights pedagogical and organizational shortcomings. Overall, these performances reveal a teaching environment characterized by inequitable access to resources, insufficient psychosocial support, poor accommodation of school environments, and a mixed quality of interactions between teachers and students. These concurrent factors hinder the learning of SEN students and compromise their academic success, illustrating the current limitations of the pedagogical policies implemented locally.

Student	Class	Subjects	1st Term	2nd Term	3rd Term
Student1	4th ESP	Maths	09	00	10
		English	07	10	10

		French	06	11	10
		ICT	09	00	10
		Spanish	05	15	14
Student2	2nd ITAL	Spelling (ORTH)	07	10	10
		Text Study	07	06	10
		Written Exam	08	12	08
		Oral Exam	08	06	10
		English	02	02	10
		Italian	06	10.25	06
Student3	4th ESP	ECMI	12	08	06
		History-Geography	00	07	03
		French	09	09	08
		English	06	10	05
		Maths	00	07	00
		Spanish	07	10	10
Student4	4th ALL	Computer Science	11	11	11
		Mathematics	06	06	06
		Biology (SVT)	06	08	09
		Spelling	10	10	10
		French	08	08	10
		English	07	02	08
		Chemistry/Physics (PCT)	08	08	09

**Table 3: Annual Grade Analysis of SEN Students in Complex Subjects**

**Source: Archives of Kakataré and Bilingual High Schools of Maroua, 2025**

The grades in mathematics are particularly low and highly inconsistent, with several zero scores demonstrating difficulties in consolidating concepts, without sustained progress. Fluctuations are also evident in French and English, reflecting discontinuous and fragile learning. Some students show notable improvements in Spanish and Italian, possibly linked to greater interest or better pedagogical support in these languages. Science and technology subjects exhibit generally weak results but with slight improvement over the year, particularly in biology. The instability of ICT and computer science grades points to insufficient ongoing pedagogical adaptations. Frequent zeroes in history and geography may indicate absenteeism, disengagement, or loss of academic grounding, while spelling appears relatively well mastered by some students. These observations are complemented by cumulative examination results over seven years (Table 2), highlighting unstable pass rates well below national averages:

Year	BEPC Pass Rate (%)	Probatoire Pass Rate (%)	Baccalauréat Pass Rate (%)
2019	100	100	0
2020	80	0	100
2021	80	0	0

2022	60	0	0
2023	83.33	0	0
2024	100	0	0
2025	60	0	0

**Table 4: Cumulative Exams Results for SEN Students at Kakataré and Bilingual High Schools, 2019-2025**

**Source: Annual Activity Reports (CFPAM), 2019-2025**

While BEPC exam results show variability with peaks at 100%, the Probatoire exam success rates collapse to zero for several years, severely impeding Baccalauréat exam candidacies and success. This drastic drop indicates a critical lack of adapted support and highlights deficiencies in pedagogical and organizational arrangements. Overall, these performances reveal an educational environment characterized by inequitable access to learning resources and personalized tracking, insufficient structured psychosocial support, poorly accommodating and non-inclusive school settings, and low-quality pedagogical interactions. These combined factors hinder the learning and success of SEN students, illustrating the current limitations of pedagogical policies implemented locally

### Research Questions

Do pedagogical policies influence the learning of students with special educational needs (SEN) in general secondary schools in Maroua, Diamaré division, Far North region of Cameroon?

To deepen the analysis, five research questions are formulated as follows:

**SRQ 1 :** Does the implementation of equity impact the learning of SEN students in general secondary schools in Maroua, Diamaré division?

**SRQ 2 :** Does psychosocial support influence the learning of SEN students in general secondary schools in Maroua, Diamaré division?

**SRQ 3 :** Does the accommodation of the school environment affect the learning of SEN students in general secondary schools in the Diamaré department?

### Research Hypothesis (MRH)

Pedagogical policies influence the learning of students with special educational needs in general secondary schools in Maroua, Diamaré division.

In this perspective, the general hypothesis is broken down into five specific research hypotheses to deepen understanding of the problem:

**RH1 :** The implementation of equity influences the learning of SEN students in general secondary schools in Maroua, Diamaré division.

**RH2 :** Psychosocial support influence the learning of SEN students in general secondary schools in Maroua, Diamaré department.

**RH3 :** The accommodation of the school environment impacts the learning of SEN students in general secondary schools in the Diamaré division.

### Research Objective

To demonstrate that pedagogical policies influence the learning of students with special educational needs in

general secondary schools in Maroua, Diamaré division

## **Key concepts**

### **Pedagogical Policies**

Pedagogical policies refer to the official guidelines and frameworks that govern teaching and learning practices within education systems. They prescribe how education should be delivered, including curriculum design, instructional methods, assessment, and inclusiveness. According to Pérez (2019), pedagogical policies must be adaptable to diversity and promote participation and learning for all students, especially those with different abilities. Booth and Ainscow (2002) highlight that such policies are instrumental in transforming school culture and curriculum to accommodate diversity and foster inclusion for students at risk of exclusion.

### **Learning**

Learning is defined as the process by which individuals acquire knowledge, skills, attitudes, and values through study, experience, or teaching. It involves cognitive, emotional, and social dimensions. Vygotsky (1978) frames learning as a socially mediated process occurring within a Zone of Proximal Development, emphasizing interaction and scaffolding. Bandura (1977) adds the motivational dimension by introducing self-efficacy theory, which stresses learners' beliefs in their capacities as crucial to their engagement and success in learning activities.

### **Students with Special Educational Needs (SEN)**

Students with SEN are learners who require additional or different support due to physical, cognitive, emotional, or social disabilities or difficulties that impact their access to standard education. According to the Salamanca Statement (UNESCO, 1994), these students should receive appropriate support to participate fully in regular education settings. Booth and Ainscow (2016) broaden this concept to include all learners who are at risk of exclusion or underachievement due to diversity in ability, background, or circumstance.

### **Secondary Education**

Secondary education generally refers to the stage of formal education following primary education, typically covering years of schooling from approximately age 11/12 to 17/18. It aims to prepare learners for higher education, vocational training, or employment. UNESCO (2015) describes secondary education as pivotal for the consolidation of fundamental skills and competencies, and for promoting cognitive and social development during adolescence.

### **Inclusive Education**

Inclusive education is an approach that seeks to ensure all learners, regardless of their abilities, disabilities, or other differences, are educated together in mainstream schools with appropriate support and accommodations. According to UNESCO (1994, Salamanca Statement), inclusion combats discriminatory attitudes and promotes equity. Booth and Ainscow (2016) emphasize inclusion as a transformation of school culture, policies, and practices to remove barriers and provide equitable participation and achievement for all students. Pérez (2019) highlights that inclusive education requires active teacher training, flexible methodologies, and commitment from all stakeholders.

### **Maroua**

Maroua is the administrative capital of the Diamaré Division and the Far North Region of Cameroon. It serves as a major political, economic, and educational hub in this predominantly Sahelian zone characterized by a semi-arid climate and socio-economic challenges. Geographically situated between latitudes 10° and 13° north, near the borders with Chad and Nigeria, Maroua plays a strategic role in regional cross-border interactions and cultural exchanges. The city hosts the majority of secondary educational institutions in the region, including schools that provide services to students with special educational needs (SEN). Maroua's social and educational environment is shaped by factors such as population growth, poverty, security concerns, and infrastructural

limitations, making it a focal point for inclusive education initiatives and pedagogical policy implementation in the Far North Region of Cameroon.

## LITERATURE REVIEW

The education of students with special educational needs (SEN) within inclusive frameworks remains a complex and pressing issue in Cameroon, particularly in structurally and socioeconomically challenged regions such as Maroua in the Diamaré division of the Far North region.

### National and Legal Frameworks

Nationally, Cameroon has established a series of legal measures aimed at promoting inclusive education. For instance, the 2010 law on the protection and promotion of persons with disabilities guarantees access to education for all children, including those with special needs (République du Cameroun, 2010 ; Kameni Yamdjeu Sido, 2017). However, while laws exist, there is no specific, operational national policy explicitly dedicated to inclusive education implementation, making practical application fragmented and uneven (Kameni Yamdjeu Sido, 2017). This gap reflects a normative rather than systematic approach, complicating effective policy enactment in local contexts such as Maroua.

### Challenges in Policy Implementation and Teacher Training

Research highlights persistent inadequacies in teacher preparation for inclusive education, with both initial teacher training and in-service professional development lacking strong contextualisation to meet the diversity of SEN (Kameni Yamdjeu Sido, 2017). In Maroua, insufficiently trained teachers face challenges in delivering pedagogical adaptations needed for the specific learning barriers of SEN, reducing the overall quality and equity of learning outcomes. In addition, there are observable shortages of inclusive teaching materials and assistive technologies, insufficient classroom accommodations, and inadequate psychosocial support structures, all of which are critical factors in ensuring effective inclusion (Sightsavers, 2021). Consequently, many SEN experience discontinuity in learning and low achievement in complex subjects.

### Theoretical Perspectives on Learning and Inclusion

The shift from traditional integration to inclusive education emphasizes transforming school systems to embrace learner diversity rather than expecting learners to adapt exclusively (UNESCO, 2003). Vygotsky's socio-constructivist theory and Bandura's self-efficacy theory provide valuable insights into learner engagement and scaffolded support, which inclusive pedagogical policies aspire to enact to promote EBES learning (previous conversation synthesis).

### Local Context and Empirical Findings

In Maroua's secondary schools, data reveal that despite policies, SEN face high dropout rates and poor academic performance, particularly in demanding subjects like mathematics, languages, and sciences. Local research corroborates systemic issues such as inadequate teacher training, physical infrastructure, educational materials, and psychosocial support factors which are pivotal in policy-to-practice gaps (Kameni Yamdjeu Sido, 2017 ; Relief Web, 2023). Community and religious initiatives, such as the FISONG project led by the Diocese of Maroua-Mokolo, aim to strengthen the educational environment for SEN through curriculum adaptation and teacher training (Mahamat, 2015). These local interventions align with international frameworks like the UN Convention on the Rights of Persons with Disabilities and UNESCO's Education 2030 Agenda, emphasizing not only access but quality and equity in education (Sightsavers, 2021).

### International and Global Policy Synergies

Global initiatives stress the importance of evidence-based inclusive policies, stakeholder engagement, and sustained investments in teacher capacity-building, curriculum design, and resource allocation (Sightsavers, 2021). Cameroon's situation reflects these international imperatives, though implementation hurdles remain



significant in remote and conflict-affected areas such as the Far North region. The literature shows that while Cameroon has a normative foundation for inclusive education, gaps in policy specificity and implementation, especially in Maroua, hinder SEN learning outcomes in secondary education. Effective policy translation requires targeted teacher training, infrastructural and pedagogical adaptations, psychosocial support, and community involvement, supported by sustained government and international commitment.

## RESEARCH METHODOLOGY

This study aims to analyze the pedagogical policies implemented in the Kakataré and Bilingual high schools in Maroua to understand their influence on the learning of students with special educational needs (SEN). Using a mixed-methods approach that combines qualitative and quantitative methods, the study seeks to grasp in depth the pedagogical dynamics that either promote or hinder the inclusion and academic success of these students.

### Operational Framework of the Research

The operational framework of this research is based on a rigorous methodology combining qualitative and quantitative approaches to analyze pedagogical policies and teaching practices in the Kakataré and Bilingual high schools in Maroua. Data collection methods include questionnaires, semi-structured interviews, and classroom observations, designed to gather rich and diverse information regarding the learning experiences of SEN students. This approach ensures the validity of results while respecting ethical principles, thus enabling a thorough understanding of pedagogical dynamics in the specific context of secondary education institutions in Maroua, Diamaré division.

### Research Setting : Focus on Secondary Education for SEN Students in Maroua, Diamaré, Far North Cameroon

This study centers on pedagogical policies and the learning experiences of students with special educational needs (SEN) in secondary schools located in Maroua, the administrative capital of Diamaré division and the Far North region of Cameroon. Geographically, the Far North region lies between latitudes 10° and 13° north, bordering Chad and Nigeria, with its strategic position influencing social and educational dynamics through cross-border interactions (Mama, 2018).

Maroua was selected due to its role as the main educational, political, and economic hub of the region, hosting the majority of secondary institutions that serve SEN students, notably Kakataré and Bilingual high schools, key sites for inclusive education (Tonye Nkot, 2023). The city benefits from a higher concentration of specialized educational resources and adapted support mechanisms, which facilitate the implementation of inclusive pedagogical policies. Additionally, local security challenges highlight Maroua's importance as a focus for innovative educational practices aimed at improving the academic success of students with disabilities or specific learning difficulties. The mapping of educational institutions reaffirms Maroua's centrality as the capital and focal point for secondary education catering to SEN students in Diamaré (Kameni Yamdjeu, 2022). This spatial focus allows for a detailed analysis of pedagogical policies and their impact on learning outcomes within the city's general secondary schools.

### Research Design and Sample

This study employs a mixed-methods approach to investigate pedagogical policies and the learning of students with special educational needs (SEN) in general secondary schools in Maroua, Diamaré division, Far North region. The methodology integrates qualitative data from semi-structured interviews and focus groups to explore inclusive pedagogical practices and their effects, alongside quantitative data to reinforce and validate findings (Creswell, 2014 ; Fortin & Gagnon, 2016 ; Scribbr, 2019). The mixed-methods design enables a comprehensive analysis through triangulation of qualitative and quantitative data, providing deeper insight into the impact of pedagogical policies on learning outcomes in this regional context. This approach aligns with recommendations by Tashakkori and Teddlie (2010) and Creswell and Plano (2011), who highlight its effectiveness for resolving contradictions and strengthening research conclusions.

The study population includes key stakeholders involved in inclusive education within Maroua's general secondary schools: SEN students primarily from Kakataré and Bilingual high schools, teachers implementing adapted pedagogical practices, inclusive education specialists, and pedagogy inspectors. This diverse participation ensures a thorough understanding of the challenges and educational impacts. The sample consists of a total of 201 individuals, obtained through exhaustive sampling since the population was known in advance. Specifically, 163 teachers responded to the questionnaire, while 16 SEN students, 12 specialists, and 10 pedagogy inspectors took part in interviews. Following methodological guidelines (Fortin & Gagnon, 2016; Creswell, 2003), this purposive sampling allows for the triangulation of multiple perspectives, thereby enhancing the study's validity and its relevance to the local educational context.

### Sampling Method and Justification

This article uses exhaustive or convenience sampling, aiming to include all available SEN students in selected schools along with a representative portion of teachers, specialists, and inspectors. Originally, 163 teachers were targeted with questionnaires, of whom 150 responded, resulting in a 92% response rate. This slight shortfall may be attributed to contextual factors such as teacher workload, geographical access challenges, and voluntary participation constraints in Maroua.

### Results and Verification of Research Hypotheses

The following section presents the key findings of the study, systematically examining and validating the research hypotheses related to the impact of pedagogical policies on the learning outcomes of students with special educational needs (SEN) in general secondary schools in Maroua. The data analysis integrates both qualitative and quantitative results to provide a comprehensive verification of each hypothesis within the contextual framework of inclusive education challenges in the region.

#### Results and Verification of Research Hypothesis HR1

HR1 : The implementation of equity influences the learning of students with special educational needs in secondary schools in the city of Maroua.

Table 5 : Model Recapitulativ of HR				
Modèle	R	R-deux	R-deux ajusté	Erreur standard de l'estimation
1	,88 <sup>a</sup>	,722	,715	,0,25000

#### a. Predicted Values : (Constants), Independent Variable (IV)

The simple linear regression shows a strong and significant positive relationship between implementation of equity (IV1) and learning outcomes (DV) of students with special educational needs in Maroua, with  $R^2 = 72.2\%$  and  $p = 0.013$ . Hypothesis HR1 is confirmed. Following the analysis of questionnaire data, the hypothesis that the implementation of equity affects the learning of students with special educational needs in secondary schools in Maroua is now confirmed. Furthermore, the respective opinions of the students themselves, specialists, and inspectors support this confirmation:

**Table 6 : summarizing key testimonies and points :**

Group	Main Opinion	Reference / Year
SEN Students	School curricula are not adapted to their needs, causing frustration and demotivation. They request better teacher training to adapt content and methods, especially in science subjects. Adaptation should become a regular practice.	SEN Student, High School 1, 2025

<b>Specialists</b>	Equitable treatment of students is insufficient and reveals a systemic problem. Separate exam rooms increase inequality. There is an urgent need to review pedagogical practices and implement concrete strategies to guarantee equity.	Specialist, 2025
<b>Inspectors</b>	Few SEN students report receiving equitable treatment, indicating a lack of awareness and training. It is important to strengthen inclusion policies, teacher training, and awareness campaigns to ensure equal opportunities for all students.	Inspector, 2025

## Results and Verification of Research Hypothesis HR2

HR2 : Psychosocial support influences the learning of students with special educational needs in secondary schools in the city of Maroua.

**Table 7 : model Recapitulativ of HR2**

Modèle	R	R-deux	R-deux ajusté	Erreur standard de l'estimation
1	,690 <sup>a</sup>	,484	,078	,48023

a. Predicted Values : (Constants), Independent Variable (IV)

The simple linear regression shows a moderate but significant positive relationship between psychosocial support (VI2) and learning outcomes (VD) of students with special educational needs in Maroua, with  $R^2 = 48.4\%$ . The HR2 is now confirmed.

**Table 8 : Qualitative Evidence Supporting**

Aspect	Students' Opinions	Inspectors' Opinions	Specialists' Opinions
<b>Continuous Psychosocial Support (Counseling, Encouragement)</b>	Accessible classrooms and supportive teachers motivate learning; moral support is crucial beyond academic help.	Teacher training and awareness on moral support needed; trust fosters engagement and perseverance.	Strengthens self-esteem and motivation, key to academic success.
<b>Educational Support (Remedial Classes, Repetition)</b>	Remedial classes are critical but not always accessible ; more adapted support needed to keep up academically.	Schools should organize regular, targeted remedial sessions with adjusted teaching methods.	Effectiveness depends on regular and individualized support.
<b>Emotional Support (Listening, Counseling)</b>	Need for teachers to listen and understand difficulties to manage stress and frustrations better.	Staff require training in relational skills to provide emotional support.	Emotional support integrated with psychosocial accompaniment enhances resilience and learning capacity.
<b>Recognition of Achievements</b>	Positive feedback, even for small successes, motivates ongoing effort.	Recognizing progress boosts self-esteem and engagement ; should be promoted broadly in inclusive classrooms.	Valuing success, even partial, is a fundamental lever of effective psychosocial support.

<b>Frequency of Meetings</b>	More time and regular meetings with teachers help better understand needs and improve learning.	Frequent pedagogical and psychosocial meetings allow adjustment of support based on student progress.	Continuity and frequency of support are key to transforming learning experiences positively.
<b>Advice to Parents</b>	—	Involving parents through regular counseling creates synergy between home and school, essential for success.	Psychosocial support extends to family, helping parents understand and support their child.
<b>Collaboration Among Staff (Educational Team)</b>	—	Promoting communication and collaboration among teachers, psychologists, and stakeholders optimizes psychosocial support.	A multidisciplinary coordinated team is essential for effective, tailored psychosocial follow-up of SEN students.
<b>Overall Validation of Hypothesis HR2</b>	Students' testimonials confirm the importance of psychosocial support in motivation and learning.	Inspectors observe that psychosocial support improves learning conditions and engagement.	Specialists highlight the decisive role of psychosocial support in academic success and resilience.

This table captures the core statements and highlights the convergence of perspectives validating HR2 : psychosocial support positively influences the learning outcomes of students with special educational needs in secondary schools in Maroua.

### Results and Verification of Research Hypothesis HR3

HR3 : The accommodation of the school environment affects the learning of students with special educational needs in secondary schools in Maroua.

Table 9 : Summary of HR3 Models				
Modèle	R	R-deux	R-deux ajusté	Erreur standard de l'estimation
1	,0,791 <sup>a</sup>	,626	,0612	,0,35000
a. Valeurs prédites : (constantes), VI				

The simple linear regression shows a strong and significant positive relationship between accommodation of the school environment (IV1) and learning outcomes (DV) of students with special educational needs in Maroua, with  $R^2 = 62.6\%$  and  $p = 0.013$ . Hypothesis HR3 is confirmed.

### Table 10 : Qualitative Evidence Supporting

Theme / Type of Accommodation	Opinion / Citation	Source (Student / Specialist)
Adapted spaces (ramps, wheelchair circulation)	"The lack of adapted spaces causes a lot of frustration, especially when moving quickly between classes. Physical obstacles make our school life very difficult."	Student 2, High School 2, Focus Group 2, 2024

	"Physical adaptations are very insufficient: absence of ramps or wide passages complicates mobility, limits autonomy and participation in activities."	Student 1, High School 1, Focus Group 1, 2024
Adapted classrooms	"The absence of equipped classrooms is a real problem. There is a need for infrastructures with wider spaces, quiet zones, and adapted lighting to work effectively."	Student 4, High School 2, Focus Group 2, 2024
	"Inappropriate furniture and layout that neither facilitates movement nor concentration — a reorganization is needed to create a learning-friendly environment."	Student 3, High School 1, Focus Group 1, 2024
Braille documents	"Urgent investment is needed in braille transcription to guarantee fair access to exams and educational documents."	Student 9, High School 1, Focus Group 1, 2024
	"The absence of braille copies and exam papers is a major barrier to fair assessment. Systematic transcription is needed."	Student 8, High School 2, Focus Group 2, 2024
	"Braille materials are completely lacking, denying equal access to learning content, which heavily impacts our ability to keep up and prepare for evaluations."	Student 5, High School 1, Focus Group 1, 2024
Adapted visual aids	"There is a major lack of clear, high-contrast, and adapted visual aids, which limits study effectiveness and increases dropout feelings."	Student 8, High School 2, Focus Group 2, 2024
	"Adapted visual supports are rare, complicating understanding of concepts, especially graphics and diagrams essential for some lessons."	Student 7, High School 1, Focus Group 1, 2024
Adapted hearing aids	"The lack of adapted equipment for hearing difficulties prevents us from properly following lessons and participating in discussions."	Student 10, High School 2, Focus Group 2, 2024
	"Access to hearing aids is almost non-existent, leading to exclusion of hearing-impaired students from oral exchanges, which impacts their integration and learning."	Student 9, High School 1, Focus Group 1, 2024
Importance of personalized adaptations	"Adapting spaces is crucial to guarantee equal opportunities. Schools must implement personalized projects responding to specific needs. Regular evaluation and strong political will are necessary to ensure effective adaptations."	Specialist 8, 2024

The qualitative evidence supports Hypothesis HR3 by showing challenges in the availability and adequacy of adapted spaces and resources. Students highlight how these gaps affect their autonomy and learning, while specialists stress the need for personalized adaptations and political commitment. This confirms that tailored accommodations are important for equitable education outcomes.

## DISCUSSION AND PERSPECTIVE

Inclusive education in Maroua's secondary schools fundamentally depends on teachers' ability to implement inclusive pedagogical practices and maintain effective communication, as emphasized by hypotheses HR4 and HR5. Differentiated instruction, explicit teaching methods, and adaptations such as Braille and sign language are indispensable for creating accessible and engaging learning environments for SEN students. These pedagogical strategies must work in tandem with the critical foundations of equity, psychosocial support, and suitable environmental accommodations (HR1, HR2, HR3), which collectively ensure fair access, foster student motivation, and provide the necessary physical and organizational infrastructure. Despite these recognized

imperatives, systemic barriers remain entrenched. Challenges such as insufficient context-specific teacher training, scarcity of tailored resources, and weak policy enforcement hinder the consistent and effective implementation of inclusive education. This calls for sustained, locally adapted professional development programs that empower educators to meet diverse learner needs within Maroua's complex socio-economic and security environment. Moreover, successful inclusion cannot be isolated within classrooms; it requires robust collaboration among all stakeholders such as students, teachers, specialists, inspectors, and families and a coherent alignment between national educational policies and their local application. Such multi-level engagement is vital to overcoming contextual constraints and ensuring sustainable inclusive practices.

Looking ahead, the integration of innovative technologies adapted to the specific needs of SEN learners offers promising avenues to address accessibility challenges and enrich pedagogical approaches. Future research should prioritize the design and evaluation of tailored ICT interventions within Maroua's context. Longitudinal studies assessing the enduring impact of inclusive pedagogies and psychosocial support will further clarify what strategies yield lasting academic and social benefits. Additionally, broadening research to encompass family and community perspectives will provide a more comprehensive understanding of the external factors shaping SEN students' educational journeys.

## CONCLUSION

This study explored the challenges faced by students with special educational needs (SEN) in secondary schools in Maroua, a setting marked by complex socio-economic and security factors. The research focused on three key hypotheses: the effective implementation of equity (HR1,  $R^2 = 72.2\%$ ), psychosocial support (HR2,  $R^2 = 48.4\%$ ), and appropriate accommodation of the school environment (HR3,  $R^2 = 62.6\%$ ). Employing a mixed-methods approach that combined qualitative and quantitative analyses, the study utilized an exhaustive sample of 201 participants, including 163 teachers who responded to questionnaires, 16 SEN students, 12 specialists, and 10 pedagogy inspectors who participated in interviews, thereby ensuring rich, multidimensional data. Despite significant obstacles such as insufficient teacher training and limited availability of adapted resources, findings confirm that inclusive practices rooted in these three dimensions substantially enhance learning outcomes and help reduce educational disparities among SEN students. The high explanatory power of the models, particularly for equity (72.2% variance explained), underscores the critical role these factors play in academic success. These results stress the urgent need for integrated and context-specific strategies that combine continuous professional development for teachers, rigorous enforcement of equity-focused policies, development of tailored psychosocial support mechanisms, and concrete modifications to the school environment. This comprehensive approach is vital to create effective, sustainable inclusion for SEN learners in resource-constrained contexts like Maroua. This research thus makes a valuable empirical contribution by illuminating key institutional, pedagogical, and environmental levers influencing SEN students' comprehension and academic achievement. To build on these insights, future studies should investigate the long-term impact of such interventions and incorporate broader familial and community perspectives, thereby strengthening inclusive education practices and fostering a more equitable, just, and durable educational landscape.

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