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# Language Learning Barriers and Cross-Cultural Communication Strategies in Tibetan Bilingual Education Against the Background of Cultural Differences

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## ABSTRACT

This research analyses the intricate hurdles encountered by Tibetan learners trying to learn Mandarin Chinese in the context of bilingual education in the Amdo Tibetan Area of Qinghai, China. Through qualitative research approaches like semi-structured interviews with students and teachers, classroom observations, and document analysis, this research identifies linguistic and cultural barriers that impede effective language learning. It was found that Tibetan students have difficulties relating to the Mandarin language's phonological elements, character writing, and even its abstract vocabulary when these features are devoid of their cultural contexts and environments. Urban culture curriculum centred on teaching a modern lifestyle creates a cultural gap which leads to low motivation and understanding among learners. This research aims to contribute to the literature through the description of effective cross-cultural communication techniques in the specific context of Tibetan-Mandarin bilingual education, specifically bilingual scaffolding, culturally sensitive pedagogy, and participatory teaching that effectively deal with linguistic problems without erasing cultural identity. The use of Tibetan culture, visual aids, and group work activities that encourage student participation is suggested to enhance student motivation and achievement in the language. This research contributes to bilingual educational policy and practice in China's ethnic minority regions by proposing that flexible integration of language and culture tends to be more successful in achieving Mandarin proficiency than the more inflexible, monolingual mode of instruction. Relating this study to Chinese Literacy Teaching Theory and social constructivism allows the study to make recommendations for improving bilingual education in culturally diverse settings from a theoretical perspective.

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### ARTICLE INFO

Received: 6 March 2025 | Revised: 1 April 2025 | Accepted: 29 April 2025 | Published Online: 16 June 2025

DOI: <https://doi.org/10.30564/fls.v7i6.8991>

### CITATION

Wang, M., Talin, R.B., 2025. Language Learning Barriers and Cross-Cultural Communication Strategies in Tibetan Bilingual Education Against the Background of Cultural Differences. *Forum for Linguistic Studies*. 7(6): 999 – 1018. DOI: <https://doi.org/10.30564/fls.v7i6.8991>

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**Keywords:** Tibetan Bilingual Education; Mandarin Second Language Acquisition; Cross-cultural Communication; Language Barriers; Culturally Responsive Pedagogy

## 1. Introduction

The area of education concerning ethnic minority languages in China has changed remarkably with respect to the relationship between national educational policy and cultural heritage preservation<sup>[1]</sup>. The development of such policies explains a highly rich and complex combination of linguistic assimilation alongside the struggle and negotiations of cultural identity, especially in ethnically diverse regions.

In the Amdo Tibetan region of Qinghai Province, some Tibetan students learning Mandarin as a second language are facing various difficulties, revealing the link between language proficiency and cultural knowledge<sup>[2]</sup>. These difficulties extend beyond those of second language acquisition to include cultural identity, participation in education, and social relations in a sociolinguistic context<sup>[3]</sup>.

It is important to clarify that in this study, ‘Tibetan learners’ refers to students whose native language is Tibetan and who are learning Mandarin Chinese as their second language. The linguistic situation in the Tibetan regions of China, particularly in the Amdo area of Qinghai Province where this study was conducted, is characterized by significant linguistic diversity. The Tibetan language, which belongs to the Tibeto-Burman language family, is the dominant native language in the area, with several regional dialects including Amdo Tibetan, U-Tsang Tibetan, and Kham Tibetan<sup>[4]</sup>. The linguistic distance between Tibetan and Mandarin Chinese is substantial, as they belong to different language families—Tibetan to the Tibeto-Burman family and Mandarin to the Sino-Tibetan family—with fundamentally different phonological systems, writing systems, and grammatical structures. This linguistic distance contributes significantly to the learning challenges documented in this study.

The focus of this study is on the impact of cultural differences in the learning of Mandarin as a second language by Tibetan learners, with the aim of unraveling the multifaceted dimensions of second language acquisition in a multicultural context<sup>[5]</sup>. This research aims to develop effective cross-cultural communication strategies that address educational

challenges in bilingual settings by examining the relationship between language acquisition and cultural participation<sup>[6, 7]</sup>.

The present investigation addresses several educational gaps and social debates simultaneously, reasoning its significance to the understanding of why Tibetan students encounter difficulties learning Mandarin. It provides evidence through data that can be utilised by policymakers to create effective bilingual education policies<sup>[8]</sup>. Furthermore, the study contributes to broader debates on educational equity, cultural identity preservation, minority language diversity, and other aspects of education<sup>[9, 10]</sup>.

From a methodological perspective, the study examines the traditionally problem-centered approach from pedagogical, cultural, and political perspectives<sup>[11]</sup>. It recognizes linguistic diversity as an educational strength rather than an obstacle. Such recognition helps develop a holistic understanding of language learning in multicultural contexts<sup>[12]</sup>.

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Based on the identified gaps in understanding language learning in multicultural contexts, this study addresses the following research questions:

RQ1: What are the primary linguistic barriers that Tibetan students encounter when learning Mandarin as a second language in the context of bilingual education?

RQ2: How do cultural differences influence the learning experience and outcomes of Tibetan students studying Mandarin?

RQ3: What cross-cultural communication strategies and teaching methods are most effective in addressing these linguistic and cultural barriers?

RQ4: How can bilingual education policies be improved to better serve the needs of Tibetan learners while respecting their cultural identity?

## 2. Literature Review

### 2.1. Theoretical Framework of Bilingual Education

Bilingual education research examines both language learning processes and cultural support mechanisms<sup>[13]</sup>. Current theoretical approaches recognize that mother tongue serves as a cognitive resource rather than a barrier in second language acquisition<sup>[14]</sup>. These approaches view language learning as contextual, where linguistic competence connects with cultural awareness<sup>[15, 16]</sup>.

Social constructivist perspectives emphasize language acquisition as socially constructed knowledge developed through interaction rather than rote learning<sup>[17]</sup>. This theoretical foundation highlights language acquisition as a complex process integrating linguistic skills with cultural identity formation.

Under this approach, the theory focuses on the active involvement of learners in the construction of meanings of words which is accomplished through interaction. This represents an evolution from earlier language teaching approaches in the Chinese educational context, where elements of memorization and teacher-centered instruction have historically played a significant role<sup>[18]</sup>. While contemporary Chinese language education has incorporated various communicative and student-centered methodologies in recent decades<sup>[19]</sup>, the persistent influence of examination-oriented education in many regions of China, including Tibetan areas, has maintained an emphasis on memorization practices alongside newer pedagogical approaches<sup>[20]</sup>. This complex pedagogical landscape creates particular challenges for Tibetan students navigating bilingual education systems.

The combination of these theoretical models demonstrates that language acquisition is intricately complex and involves much more than simply mastering linguistic skills. Theoretical models enhance understanding of the sociological, structural, and personal educational processes impacts one's cultural and sociolinguistic environment through the lens of bilingual education. Building upon the work of García and Wei on translanguaging pedagogy and Cummins' interdependence hypothesis<sup>[21, 22]</sup>, this integrated theoretical approach seeks to address limitations in decontextualized language teaching methods. Similar to frameworks developed for immigrant education contexts in Western countries,

it acknowledges the importance of students' complete linguistic repertoires and cultural backgrounds in effective language acquisition. As Duarte has demonstrated in multilingual European classrooms, such comprehensive educational frameworks that accommodate the multifaceted diversity and authentic cultures of students have shown promising results in supporting minority language learners<sup>[23]</sup>.

### 2.2. Current Status of Bilingual Education in Tibetan Areas

The system of bilingual education around the Tibetan region has changed dramatically because there is an advanced shift from more traditional "Mode 1" to an integrated "Mode 2" systems approach<sup>[24]</sup>. This change represents an attempt towards enforcing language teaching attempts to the overall state objectives of fostering integration of people ethnically and culturally<sup>[25]</sup>.

The present bilingual education system illustrates an almost irreconcilable disparity between curriculum materials, which were prepared for urban centres, and the actual life experience of a Tibetan student. The textbooks are based on the worldview of the Han Chinese urban communities, which inevitably produces a wide cognitive and cultural gap that impedes optimal achievement of educational objectives<sup>[26]</sup>. The gulf, however, is not simply linguistic, but also reflects a serious epistemological divide which so marginalises indigenous knowledge systems and cultural histories.

Bilingual programs face significant challenges including resource limitations and inadequate teacher preparation. Tibetan teachers work in particularly demanding environments where they must simultaneously preserve cultural identity while implementing effective pedagogy<sup>[27]</sup>. The existing system of professional development pays insufficient attention to the intricacies associated with cross-cultural language teaching<sup>[28]</sup>.

These issues reinforce the comprehensive system of triangulated bilingual multilingual education in ethnically diverse contexts. The integrated framework reflects the currently existing discussions of the state educational policy and the preservation of culture coupled with the need for language provisions, thus creating a paradoxical rich teaching context that reveals underlying tensions requiring contextualised language teaching.

The shift towards bilingual education in Tibetan regions

reflects an advancement that transcends mere educational change. It indicates a deeper phenomenon of intercultural dialogue, structural adaptation, and concern of one's linguistic and ethnic identity.

## **Recent Developments in Bilingual Education in Tibetan Areas**

Recent studies have significantly expanded our understanding of the sociopolitical dimensions of bilingual education in Tibetan regions. Zhang and Pérez-Milans have provided a critical analysis of the 'structures of feeling' in language policy implementation in Tibet<sup>[29]</sup>, demonstrating how emotional and affective dimensions significantly impact educational outcomes. Their research reveals that beyond formal policy documents, the lived experiences and emotional responses of teachers and students shape the actual implementation of bilingual education policies.

The political dimensions of Tibetan education have been comprehensively examined by Johnson<sup>[30]</sup>, who highlighted the complex interplay between national integration goals and ethnic minority educational rights. Although this research was conducted over two decades ago, many of the tensions identified continue to manifest in contemporary educational contexts, albeit in evolved forms reflecting China's changing sociopolitical landscape.

In terms of pedagogical innovations, John and Levshits have recently demonstrated the effectiveness of project-based learning approaches in enhancing language proficiency in multilingual contexts<sup>[31]</sup>. While their study was conducted in South India, their findings on how collaborative projects can bridge linguistic divides offer valuable insights that could be adapted for Tibetan-Mandarin bilingual education settings.

The integration of technology in multilingual education contexts represents another promising direction. John has explored how gamification can enhance teacher-student rapport and students' willingness to communicate in second language learning environments<sup>[32]</sup>. Additionally, John's work on utilizing AI and digital technology for personalized learning experiences in STEAM education offers innovative pathways that could potentially address some of the cultural and linguistic barriers identified in Tibetan bilingual education contexts<sup>[33]</sup>.

These recent developments suggest that effective bilingual education for Tibetan students requires a multifaceted approach that addresses not only linguistic and pedagogical dimensions but also sociopolitical contexts, emotional factors, and technological innovations.

## **2.3. Research Gaps**

The current state of bilingual education suffers from a serious gap regarding the understanding of the 'Mode 2' pedagogical practices, particularly in relation to Tibetan education<sup>[34]</sup>. The predominant discussion within academic circles seems to stem from an oversimplistic view of the intricately complex phenomenon of language teaching and ignores important features of institutional contexts<sup>[35]</sup>.

The cultural aspects that guide Tibetan learners' use of the Mandarin language are still too shallow, and there is a great gap in knowledge about the interrelation between language identity and cultural identity formation<sup>[36]</sup>. This research paradigm does not adequately capture the intricate reality of the psychological and sociocultural phenomena of language learning in ethnically diverse contexts of schooling.

The absence of deep and well-organised examination of effective teaching methods is a manifestation of scant scholarly attention on bilingual education problems<sup>[37]</sup>. Contemporary academic debate often talks about teaching a language very simplistically without taking into account the numerous aspects of the cultural context that affect the processes of language teaching and learning.

As previously stated, the innovation of technologies and the development of methods seem to be able to address the difficulties that were earlier mentioned and indicate the possible benefits of multidisciplinary approaches in bilingual education<sup>[38]</sup>. Current literature, however, is still in a disjointed state, lacking an integrated approach for the problem of language acquisition in different cultures.

The gaps in the literature that this analysis attempts to fill illustrate not only the lack of observable engagement from the academe but also the considerable obstacles to understanding language acquisition as an active phenomenon deeply situated within, for instance, meaning-making and identity formation. In order to resolve these gaps, there is need to rethink the fundamental constituents of research design, theoretical frameworks, and teaching methodologies.

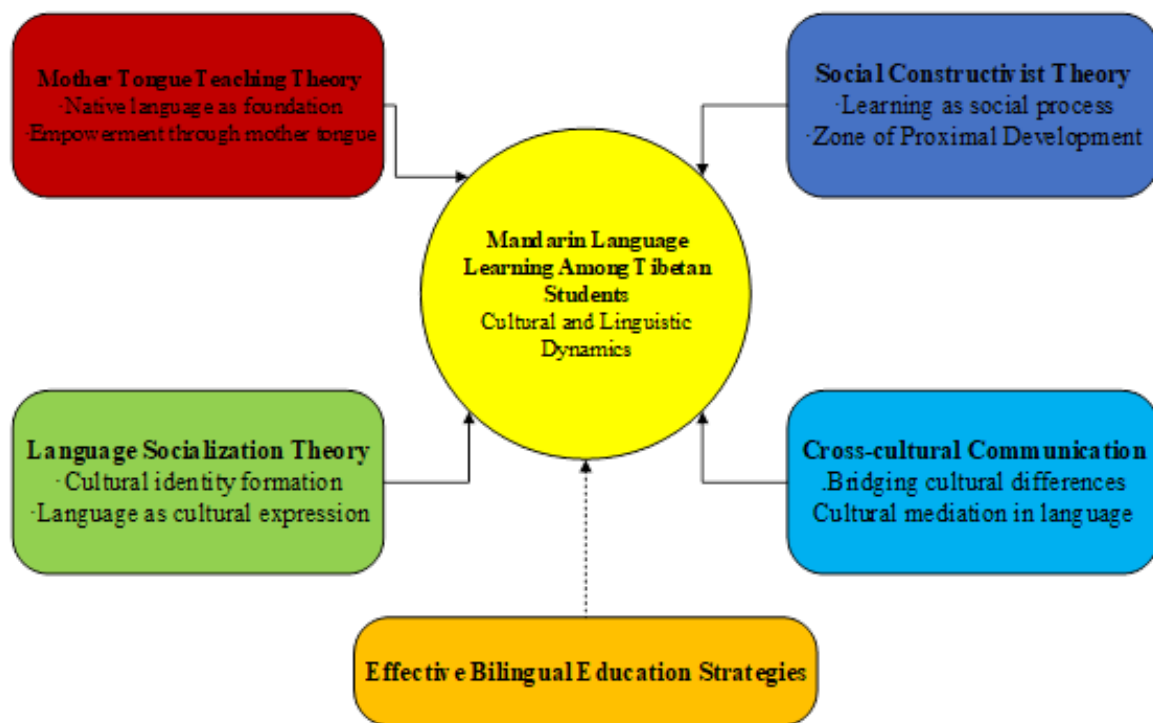
### 3. Theoretical Framework

This study integrates four complementary theories to analyze Mandarin acquisition by Tibetan students: Mother Tongue Teaching Theory, Social Constructivist Theory, Language Socialization Theory, and Cross-Cultural Communication Theory.

Mother Tongue Teaching Theory emphasizes using students' first language as a resource to enhance second language learning<sup>[39]</sup>. Social constructivism highlights how

learning occurs through meaningful social interaction with teachers, peers, and cultural tools<sup>[40, 41]</sup>. Language Socialization Theory examines how language acquisition intertwines with cultural identity formation<sup>[42]</sup>. Cross-Cultural Communication Theory explores how individuals navigate linguistic and cultural differences in communicative contexts<sup>[43]</sup>.

**Figure 1** illustrates how these theories interconnect to explain Tibetan students' experiences learning Mandarin, acknowledging that effective language education must incorporate both linguistic instruction and sociocultural contexts.



**Figure 1.** Integrated Theoretical Framework for Analyzing Mandarin Learning Among Tibetan Students.

The Language Socialization Theory focuses on the interactions of mechanisms of language development, the construction of cultural identity, and the processes of socialisation. This model was developed in part by Ochs and Schieffelin who suggested that language acquisition is more than a set of linguistic rules<sup>[42]</sup>; it also includes the cultural values, norms, and practices of the society where the language is spoken. Specifically, for Tibetan speakers of Mandarin, this part of the theory helps explain how such people construct their cultural identities while striving to master a language that comes with a certain cultural worldview. Moreover, the theory places great emphasis on social actors such as teachers, classmates, and other family members who contribute

to the process within the language socialisation system.

The last part of this broad outline is cross-cultural communication theory, which offers great explanations of how people cope with linguistic and cultural differences in different communicative contexts. This theory describes communication as the interplay between cultural values, beliefs, and communicative activity of a given society and the use and comprehension of language. As applied to Tibetan-Mandarin bilingual education, this part of the cultural pedagogy framework describes cultural difference phenomena in educational settings and how varying teaching styles combined with students' cultural backgrounds affect their educational achievements.

**Figure 1** illustrates the comprehensive theoretical framework pertinent to this analysis, demonstrating the interconnection of various foundational models in relation to Tibetan students' experiences in learning Mandarin.

In **Figure 1**, the theoretical framework facilitates the progression of this study by offering multiple lenses to analyse the experiences of Tibetan learners who are acquiring the Mandarin language. The research aims to provide a complete picture of the cultural, social, and definable issues in a particular context pertaining to the language acquisition by applying the different perspectives of ethnography of communication, cultural studies, and social science theory.

This model of language education accepts the existence of language and culture interdependence and, therefore, stipulates that for language learning to be effective, both the language itself and the surrounding sociocultural context need to be incorporated. The Mother Tongue Teaching Theory advocates for working from what the students know, which is their native language, and Social Constructivist Theory stresses the collective aspect of the process of knowledge construction. Language Socialisation Theory looks at the relation between learning a language and forming an identity, while Cross-cultural Communication Theory considers the interactions that transcend language and cultural boundaries in education.

Collectively, these theoretical models provide a comprehensive comprehension of the difficulties enrolled Tibetan pupils encounter in acquiring the Mandarin language. Additionally, they assist in developing teaching methods that honour their language while encouraging learning of a new one. This comprehensive model examines and explains how sociocultural differences impact language learning and contributes to the formulation of educational interventions that are adapted to the sociocultural context, achieving the desired linguistic outcomes without harming cultural identity.

## 4. Methodology

### 4.1. Research Design

This study employs a qualitative approach to analyze cultural factors, language barriers, and teaching methods for Tibetan learners of Mandarin. This approach was selected for its capacity to capture the nuanced human experiences and sociocultural contexts that quantitative research might fail to

address. The study is informed by an interpretivist paradigm, which recognizes that reality is socially constructed through human interactions.

The research site was a primary school in the Amdo Tibetan Region of Qinghai Province, China, selected due to its recent adoption of the 'Mode 2' bilingual education model, which mandates Mandarin as the medium of instruction for all subjects except Tibetan language courses. The school's remote location and predominantly Tibetan student population provided an ideal setting to examine cultural and linguistic barriers to Mandarin acquisition.

The study employed a multiple case design, using purposive sampling to identify participants based on specific criteria. Participants included Tibetan students learning Mandarin and teachers involved in Mandarin immersion programs. Selection criteria considered demographic variables such as age, gender, region of origin, and educational background to ensure representation across different social strata. Ethical Considerations

This research was conducted after obtaining ethical approval from the Research Ethics Committee of Qinghai Normal University (Approval No. QHNU-ERB-2024-015, approved on March 12, 2024). All participants provided informed consent prior to their involvement in the study. For student participants under 18 years of age, parental consent was obtained in addition to the students' assent. To ensure confidentiality, all participant data was anonymized, with pseudonyms used throughout the reporting of findings. Participants were informed of their right to withdraw from the study at any time without consequence.

### 4.2. Data Collection

Three primary data collection methods were employed to ensure methodological triangulation:

**Semi-structured interviews:** A total of 24 interviews were conducted—15 with Tibetan students (8 female, 7 male, aged 10 – 13) and 9 with teachers (5 Tibetan bilingual teachers, 4 Han Chinese teachers). Interviews lasted 45 – 60 minutes and explored participants' experiences with language learning, cultural barriers, and effective teaching strategies. Interview protocols were developed based on preliminary field observations and adapted throughout the research process.

Classroom observations: Systematic observations were conducted in 12 classrooms over four months (September – December 2023), with 4 – 6 observations per classroom (total: 62 observations). Each observation session lasted approximately 40 minutes. Observations focused on teacher-student interactions, cultural references in teaching, student engagement patterns, instances of linguistic difficulty, and teaching strategies.

Document analysis: This component involved examination of 8 officially approved Mandarin textbooks (grades 3 – 6), 15 samples of student written work, 6 school-level policy documents, 4 provincial-level policy directives, and 20 teacher-created supplementary materials. Document analysis focused on cultural representation, linguistic appropriateness, and alignment with students' lived experiences.

All data collection procedures adhered to ethical guide-

lines approved by the Research Ethics Committee of Qinghai Normal University (Approval No. QHNU-ERB-2024-015).

The detailed interview protocols can be found in **Appendix A** (for students) and **Appendix B** (for teachers).

Classroom observations were conducted in 12 different classrooms over a four-month period (September – December 2023), with each classroom observed 4 – 6 times for a total of 62 classroom observations. Each observation session lasted approximately 40 minutes (one class period).

Observations were guided by a structured observation protocol focusing on six key areas including teacher-student interactions, cultural references, and teaching strategies (**Table 1**; see **Appendix C** for details). Document analysis examined various types of materials including official textbooks, student work, policy documents, and teacher-created resources (**Table 2**; see **Appendix D** for complete protocol).

**Table 1.** Classroom Observation Protocol Framework.

Focus Area	Description
Teacher-student language interactions	Patterns of language use, code-switching instances, and communication strategies
Cultural references	Integration of cultural elements in teaching materials and instruction
Student engagement	Levels of participation, attentiveness, and responsiveness to content
Linguistic challenges	Identification of specific linguistic difficulties encountered
Teaching strategies	Methods employed and their apparent effectiveness
Tibetan language scaffolding	Instances and methods of L1 support in L2 acquisition

**Table 2.** Document Analysis Framework.

Document Type	Quantity	Analysis Focus
Mandarin textbooks (grades 3 – 6)	8	Cultural representation, linguistic appropriateness, contextual relevance
Student written work samples	15	Error patterns, cultural influences, language development indicators
School-level policy documents	6	Implementation guidelines, cultural sensitivity, pedagogical approaches
Provincial-level policy directives	4	Policy framework, cultural recognition, educational objectives
Teacher-created supplementary materials	20	Cultural adaptations, linguistic scaffolding, pedagogical innovations

This comprehensive data collection approach provided rich, multifaceted insights into the linguistic and cultural barriers affecting Mandarin acquisition among Tibetan learners and the effectiveness of various teaching strategies.

### 4.3. Data Analysis

This analysis was conducted using a systematic method that included both within-case and cross-case analysis to answer the research questions outlined in the problem statement. Along with the relevant factors characterising each individual case, the analysis paid attention to the underly-

ing complexities involved within each case while noticing patterns throughout the data set, using Braun and Clarke's six-step thematic analysis.

In the first stage, all the interviews that were conducted were transcribed verbatim with attention paid to the underlying meanings that accompany the explicit language such as intonations and non-verbal gestures. In the following stage, the researcher read the transcripts multiple times together with the filed notes and the document analysis summary in order to amass a clear understanding of the data set.

Coding was split into three distinct actions: the first part involved recognising words and phrases with meanings;

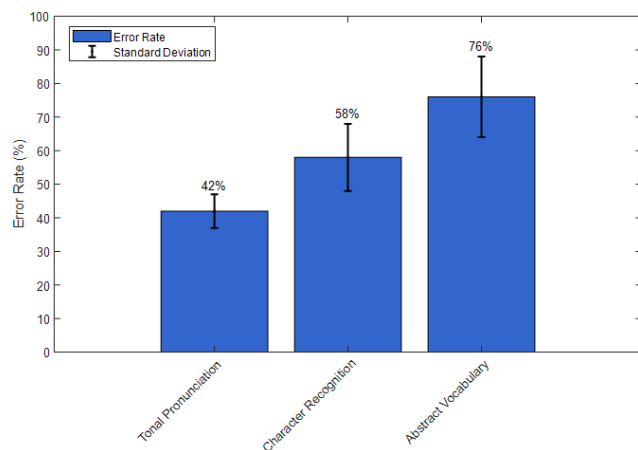
during the second part, codes were developed and sorted into classes, while during the third part, more complex themes were developed from the predefined codes. This process made it possible to recognise the expected and unexpected sociocultural obstacles to learning a language, instruction that works, and experiences of the learners. The researcher used analytical memos to note emerging concepts and their interrelations, thus further embedding the analysis with meaning and interpretation.

To bolster the credibility of the data, a systematic triangulation approach was used where themes were compared across multiple sources. More specifically, the teaching methods reported by the teachers were verified with observational data collected from their respective classrooms to determine whether they were actually executed and what effects they had, while the issues reported by students were checked against the textbooks to ascertain whether they could be relevant explanations for the students' difficulties. This method of triangulation increased the credibility and validity of the research findings through capturing the supported conclusions constructed from multiple lines of evidence as opposed to singular data points. The within-case analysis of unique contextual details of each participant's experience, when combined with cross-case analysis, which focused on overarching themes across cases, facilitated the understanding of the intricate relationship between cultural context and language learning in bilingual education.

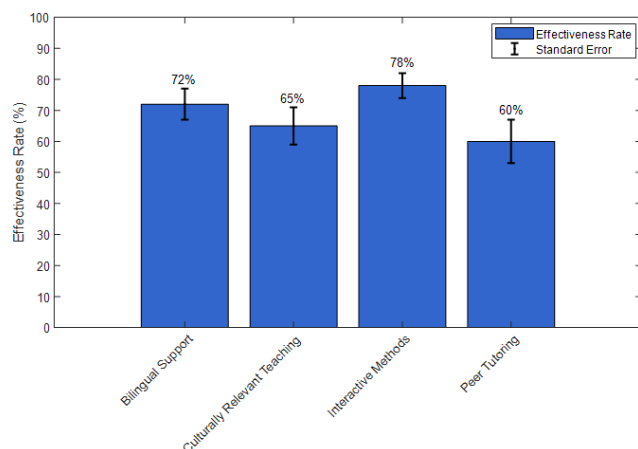
## Mixed Methods Element: Quantification of Qualitative Data

While this research primarily employed a qualitative approach, a mixed methods element was incorporated to quantify certain patterns observed in the qualitative data.

The quantitative representations in **Figures 2 and 3** were derived through systematic coding and frequency analysis of the qualitative data (**Table 3**).



**Figure 2.** Error Rates Across Linguistic Barriers for Tibetan Students Learning Mandarin.



**Figure 3.** Effective Teaching Strategies in Bilingual Tibetan-Mandarin Education.

**Table 3.** Mixed Methods Quantification Approach.

Data Type	Quantification Method	Reliability Measure
Error Rates Analysis ( <b>Figure 2</b> )	Systematic coding of errors in standardized reading exercises (30), writing samples (45), and classroom interactions (20)	Inter-rater reliability: Cohen's Kappa = 0.88
Teaching Strategy Effectiveness ( <b>Figure 3</b> )	Triangulation of classroom observations (62), student interviews (15), and learning outcome assessments	Effectiveness percentage based on predefined engagement and performance criteria



## 5. Research Findings

### 5.1. Linguistic Barriers to Mandarin Learning Among Tibetan Students

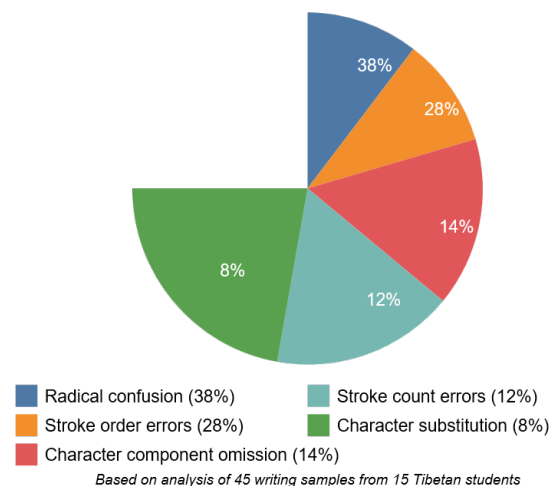
This study is based on an interview with teachers, classroom observations, and evaluation of students' assignments. It reveals problematic linguistic issues which impede learning of the Mandarin language by Tibetan learners. A common problem identified was the learner's perception and production of the Mandarin tones. Most learners had serious difficulties with the production and perception of the four Mandarin tones, particularly the second (rising) and third (falling-rising) tones. These difficulties negatively impacted listening comprehension as well as speech production. One student, Pema Baima, said, “我感觉和电视上的普通话比起来，我的发音可能老是带着藏语口音” [I feel my pronunciation always carries a Tibetan accent compared to Mandarin on TV]. There were some discrepancies noted when elementary phonemic distinctions, such as the difference between aspirated and unaspirated sounds like “p” and “b”, were voiced and made children passive observers rather than active participants in most classroom interactions.

The processes of recognising and categorising characters pose major challenges at secondary level. Because Chinese is logographic, Tibetan learners bear substantial cognitive burdens because they must transition from an alphabetic to a logographic system that requires the rote memorisation of numerous complex characters. In classroom context, it was noted that learners often confused characters that were visually similar, especially those that had the same radicals. In interviews, students spoke about the strains of memorising characters and one of them said, “比如‘树’、‘森’、‘林’这些字，看起来都有木字旁，但意思不一样。我常常分不清” [For instance, the characters ‘tree’, ‘forest’, and ‘woods’ all have the same radical but different meanings so I often mix them up]. Analysing students' written work showed that there were frequent errors relating to the order in which strokes were made as well as the placement of radicals which indicated the existence of fundamental issues pertaining to the visual-spatial processing of Mandarin characters.

The comprehension of abstract vocabulary was the last primary obstacle. The hurdles Tibetan pupils faced in comprehending abstract words is highly broad and is not connected to their routine life. This difficulty showed up

especially in science and mathematics, where most of the technical vocabulary comes out of metaphorical concepts completely alien to a Tibetan learner. It has been noted that in relation to disengagement, there was a notable proportion of student disaffection in lessons where abstract vocabulary was used for communication. However, understanding these illustrations improved greatly when teachers used concrete diagrams grounded in the students' actual living conditions. Figure 2 shows that the error rates for these three linguistic problems suggest that the understanding of abstract vocabulary was the most grievous followed by the identification of graphemes and the procedures of tonal language phonetics. An important portion of difference was attributed to the learners' experience with Mandarin.

**Figure 4** illustrates the distribution of error types in Mandarin character writing among Tibetan students (n=15) based on analysis of 45 writing samples. Radical confusion represents the most common error type (38%), reflecting students' difficulty distinguishing between visually similar components. Stroke order errors (28%) indicate challenges in internalizing the sequential rules of character formation, while component omission (14%), stroke count errors (12%), and character substitution (8%) represent decreasing proportions of the overall error pattern. This error distribution provides insight into potential focus areas for pedagogical intervention in character writing instruction.



**Figure 4.** Distribution of Character Writing Error Types Among Tibetan Students.

The error rate for abstract word usage is the highest at 76%, while the other rates are: character recognition at 58%, and tonal pronunciation at 42%. In addition to the in-

interviews and classroom observations, these findings qualitatively validate the claim which portrays an intricate ordering of challenges induced by linguistics that these students have to concurrently face.

Moreover, the insufficient provision of practice time exacerbated non-constructive linguistic barriers. Almost all students stated that they spoke Tibetan within their families and communities most of the time, which meant they were not exposed to much Mandarin. This lack of exposure leads to a self-reinforcing cycle of poor linguistic skills where every linguistic problem worsens another. For example, poor tonal pronunciation hinders vocabulary learning, poor character recognition hinders reading and comprehension, and all these problems lead to stunted growth in language development. These results highlight Tibetan learners overcoming particular challenges when acquiring Mandarin as a second language.

## Linguistic Barriers: Classroom Evidence

Classroom observations revealed specific manifestations of the linguistic barriers identified. In one Grade 4 class focusing on scientific vocabulary, students demonstrated high engagement when concrete examples from their environment were used but disengaged when abstract terminology was presented without contextual support. For example, during a lesson on plant biology, the teacher initially struggled when introducing terms like “光合作用” (photosynthesis) and “蒸腾作用” (transpiration). However, when she brought in local plants and demonstrated the concepts using Tibetan-Mandarin bilingual explanations, student comprehension improved markedly.

Interview data provided further insights into students’ experiences with these linguistic challenges. Eleven-year-old Tenzin explained: “我总是把‘zh’和‘z’的发音混淆，因

为藏语里没有这样的区别” [I always confuse the pronunciation of ‘zh’ and ‘z’ because we don’t have this distinction in Tibetan]. This phonological challenge was observed in 37 out of 62 classroom observations.

Document analysis of student writing samples revealed that character errors clustered around specific types of characters. Among the 15 students whose work was analyzed, characters with similar radicals were confused in 76% of cases, while stroke order errors occurred in 58% of cases. One student, Drolma (12), described her frustration: “有时候我记得这个字的意思，但就是想不起来怎么写” [Sometimes I remember what the character means but can’t remember how to write it].

## 5.2. Learning Barriers Caused by Cultural Differences

The study identifies a number of cultural obstacles that impede the process of learning Mandarin by Tibetan students. These arise from a mismatch in educational materials between urban settings and the realities experienced by students in rural Tibetan regions. The textbooks from which lessons are taught, primarily compiled from the perspective of the Urban Han Chinese, do not align with the cultural context, language environment and daily activities of Tibetan learners.

Cultural barriers identified in the study are often more complex than mere language differences, as evident in **Table 4**. The teaching materials, which aim to serve urban populations, lack proper local integration of Tibetan culture and alienate the students through their teaching methodology. This alienation is especially noticeable when attempting to define metaphors, idioms, and classical references because there is not enough background provided for the Tibetan students.

**Table 4.** The Cultural Barriers Manifest in Multiple Dimensions.

Cultural Barrier	Characteristics	Learning Impact
Textbook Irrelevance	Urban-centric narratives and examples	Reduced student engagement and comprehension
Language Background Mismatch	Limited cultural context for idioms and literary references	Difficulty understanding nuanced linguistic expressions
Epistemological Differences	Contrasting learning styles and knowledge construction	Cognitive dissonance and diminished learning motivation

The results of the research show that these ethnocentric barriers are more complex than simply linguistic; it is a more profound epistemological divergence. The educational dynamics are convoluted with vast ethnocentric differences in the processes of knowledge construction, their means of communication and cultural signification between urban Han Chinese education system and Tibetan students' culture.

Through these ethnocentric barriers, the research captures the essence of relatively deep level of globalisation needed in bilingual education to satisfy needs of Tibetan students by appreciating their culture.

### 5.3. Effective Teaching Strategies

The research suggests an integrated approach focused on transcending the linguistic and cultural barriers encountered by Tibetan learners during the process of learning Mandarin. Such strategies comprise a multifaceted integrated approach designed to mitigate the effects of complex cultural and linguistic environments on learning.

In terms of Figure 3 detailing the findings, the study recorded four key pedagogical methods, all of which could greatly improve the learners' language learning outcomes. Out of all the methods, interactive pedagogy was by far the most effective at 78% effectiveness, followed by bilingual support strategies at 72%. Although more culturally responsive pedagogy and peer tutoring strategies were less effective overall, their ability to address the unique needs of Tibetan learners was commendable.

This approach refers to the support given to bilingual students, which is complex and involves the students' first language, Tibetan, being employed as a mental tool while learning Mandarin. The technique reframes the first language of the students from being a hindrance to being a resource that can be utilised. Teachers can make learning less challenging for students by purposefully integrating certain features of Tibetan language into teaching.

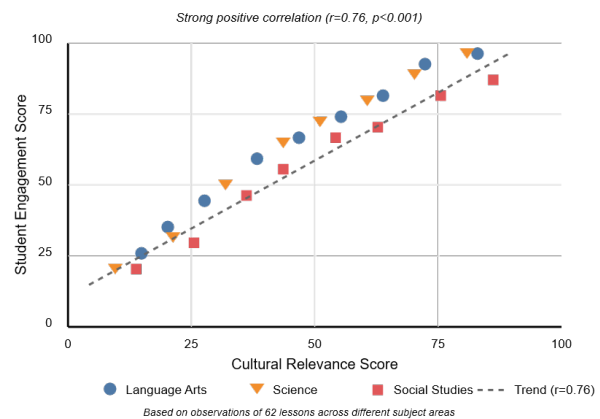
Culturally responsive pedagogy as a culturally advanced teaching technique adopts an integrative strategy by bridging the abstract elements of Mandarin language with the lived experiences of the learners. This method goes beyond the routine language instruction whereby learning is placed in the context of the students' culture to promote active participation and facilitate thorough comprehension. Moreover, this approach helps to mitigate the gap resulting

from urban-oriented educational resources and the rural life of Tibetan students noted earlier.

The use of graphic and other multimedia instructional materials, which goes hand in hand with group work, is far more useful. Those methods actively involve learners in learning by doing, which meets many different cultural and cognitive learning styles. Teachers can assist in developing a more inclusive and motivating context for teaching languages by using graphic instruments, technological tools, and group work.

The model of peer tutoring is one best illustrative of one of the many inventive approaches that utilise linguistic and ethnographic likenesses among learners. It takes an affordably collaborative approach to learning which involves helping each other learn a language using common ethnic and linguistic resources.

The results highlight the importance of having a structured, culturally appropriate model in bilingual education, especially since effective language learning goes beyond standard teaching methods.



**Figure 5.** Relationship Between Cultural Relevance of Teaching Materials and Student Engagement.

**Figure 5** demonstrates the relationship between the cultural relevance of teaching materials and student engagement levels across 62 observed lessons. The cultural relevance score (x-axis) represents a composite metric derived from document analysis of teaching materials, measuring the degree of Tibetan cultural representation, contextual alignment with student experiences, and use of culturally familiar examples. The engagement score (y-axis) combines observational

data on student participation, attention, and task completion. The strong positive correlation ( $r = 0.76$ ,  $p < 0.001$ ) suggests that culturally relevant materials significantly enhance student engagement in Mandarin learning. Data points are color-coded by subject area, revealing particularly strong effects in language arts (circles) and science (triangles) lessons.

**Table 5** compares learning outcomes across four teaching approaches implemented during the study period. Assessments were conducted using standardized measures for

each competency area across comparable student groups ( $n = 12$  per group). The interactive approach demonstrated the highest effectiveness across all three competency areas, with notable improvements in vocabulary retention (75%), character recognition (70%), and oral communication proficiency (67%). These findings align with qualitative observations that interactive teaching strategies foster greater student engagement and linguistic confidence among Tibetan learners of Mandarin.

**Table 5.** Comparison of Learning Outcomes Across Different Teaching Approaches.

Teaching Approach	Vocabulary Retention (%)	Character Recognition (%)	Oral Communication Proficiency (%)
Traditional Mandarin-only	42	38	35
Bilingual Scaffolding	64	57	53
Culturally Responsive	68	62	59
Interactive Approach	75	70	67

## 6. Discussion

### 6.1. Theoretical Contributions

This study attempts to address questions in the intricate area of bilingual education, particularly regarding language acquisition of Tibetan students as an ethnic minority group. It is hoped that this exploration of the relationship among identity, culture, and education at the intersection of pedagogy and linguistics might contribute to our collective understanding of language acquisition processes in culturally diverse contexts.

This research provides a rich account of the Mother Tongue Teaching Theory designed to address the particular challenges of bilingual education for ethnic minorities. This study departs from the conventional approach that regards the mother tongue as a simple linguistic instrument and treats it as an interactive cognitive model that engenders sophisticated processes of language learning. From the perspective of bilingualism, the native language is not a single and indivisible substrate, but rather a complex, strategic resource in the development of second language competence.

The theme of cultural identity and language learning has been examined throughout various studies. This examination places deeper emphasis on the psychological and sociological factors integrating with the use of language and understanding culture. From the perspective of cultural iden-

tity, this construct is not viewed as a social category but as a contested space at which intercultural communication competence and culture interact and mutually construct each other.

Moreover, this study is a strong example confirming the underlying claims of social constructivist theory within cross-cultural contexts. The results verify that there is a social, unity and diversity aspect in the process of knowledge construction especially for multilingual and multiethnic settings. This study contributes to the social constructivism idea by explaining how students design meanings through social, cultural and collaborative learning interactions and processes.

Theoretical implications go beyond the limits of any academic dispute as they claim to offer a totally new way of understanding language acquisition which is integrative and based on culture. This study contests any approach which is reductionist and devoid of context in language pedagogy, rather promotes a culturally responsive teaching approach which acknowledges the relationships between sociocultural situations, linguistic constellations, and individual educational trajectories.

M. Gonzalez's contemporary research seeks to capture the essence of educational multifacetedness by integrating Mother Tongue Teaching Theory, social constructivism, and cross-cultural communication theories [43]. The model built in this study enables a comprehensive understanding of lan-

guage acquisition as not merely a rote process but rather a sophisticated endeavour of cultural and identity integration.

## **6.2. Cross-Cultural Communication Strategies Against the Background of Cultural Differences**

The study proposes a novel method for fostering cross-cultural communication that bypasses the conventional language teaching techniques and addresses the complex issues Tibetan students encounter when trying to learn Mandarin. This method encompassing and complex intervention is designed to cope with substantial cultural and linguistic differences in the educational setting.

The most distinctive feature of these approaches to communication is bilateral flexibility which, as it is well known, modifies radically the way of teaching languages. Instead of enforcing a single Mandarin policy, this method promotes the careful and strategic use of the Tibetan language as a powerful and rich cognitive tool. This paradigm shifts the perspective of the native language from being viewed as an obstacle towards a more constructive view of being a powerful resource that aids understanding and enhances learning.

Cultural integration is a major pedagogical strategy that transforms the learning process from rote memorisation of linguistic facts to sharing and understanding cultural phenomena. By means of purposeful infusion of Tibetan cultural context into the teaching methodology, teachers strive to develop a learning atmosphere which matches pupils' experiences, cultural identity, and fundamental values. It helps to transform the conventional urban-centred education model to a more flexible and responsive contextual approach to teaching. Recent investigations have placed considerable emphasis on the affective factors associated with language acquisition. Taking into account the delicate nature of language learning, the suggested approaches put forward principles for providing emotional aid aimed at alleviating language apprehension and fostering student enthusiasm. This multi-lateral model understands the psychological challenges that come with learning a second language, especially in contexts of exceptional cultural and linguistic diversity.

Community participation represents an important direction in teaching that, as Epstein and Nieto have demonstrated, shifts the focus away from institutional boundaries to a wider pedagogical scope<sup>[44, 45]</sup>. Building on Moll's con-

cept of 'funds of knowledge'<sup>[46]</sup>, this approach recognizes that effective language education extends beyond classroom environments and draws upon the rich linguistic and cultural resources present in students' communities. By stressing the collaboration of families and schools, the study underscores the integration of wider context sociolinguistics into language education. It demonstrates that active participation in language learning processes does not only take place in the classroom, but rather, in a broader context, where parents and community members play an essential role.

The mentioned strategies on cross-cultural communication move away from simplistic pedagogical methods; they engender a fundamental rethinking of the way language is taught in culturally diverse settings. Through a focus on adaptability, cultural relevance, emotional assistance, and community participation, the study builds a paradigm that is not only ethnocentric but also provides a deep counter-narrative to traditional, monocultural language teaching methodologies.

The educational implications proposed state that effective cross-cultural communication within the educational context calls for an inclusivity and empathy-driven pedagogy that honours language, culture, and the rich psychological life of the student. The findings reported offer a model of pedagogical practice which is language proficient, culturally identity supportive, and psychologically positive.

## **6.3. Policy and Practice Recommendations**

This set of recommendations is directed towards policy-makers and suggests that ethnic minority children in bilingual education programmes are provided with a more culturally responsive education framework that goes beyond superficial changes. Systemic educational change implies that it is not just an issue of cosmetic changes.

Teaching materials were identified as the first area of intervention that required the most dramatic change. The existing textbooks are found to be deeply urban and hence, inadequate. The gap between the derived educational content and the existing realities from which the students are coming is rather wide. The proposed approach strives to design pedagogical aids that are not merely fitted into format but are completely reconstituted in terms of culture, language, and experience relevant to Tibetan students. Such an instructional design approach calls for the integration of local

cultural stories, local settings, and traditional knowledge into the teaching materials.

Preparing teachers for their roles is perhaps the most important factor in the functioning and change within schools. There is a need for comprehensive self-development that goes deeper than the basic models of professional training, and these models seek to achieve that. The suggested training programmes give emphasis on bilingual pedagogy, cultural appreciation, and ethnolinguistic attitudes along with other forms of sophisticated awareness. The aim is to produce teachers who, rather than just function as language teachers, take the role of cultural brokers who work within and between diverse linguistic and cultural contexts.

Assessment reform represents a critical, yet previously underexplored area of intervention in bilingual education for Tibetan students. Traditional assessment methods in this context have predominantly focused on standardized Mandarin proficiency tests that evaluate students primarily on grammar, vocabulary, and character recognition, often neglecting cultural competence and communicative skills. This assessment reform proposal seeks to address the tendency to focus on one type of assessment and one type only. The proposed integrated assessment framework approaches language competence as an integrated construct, which is much more than simply speaking the language. The model aims at measuring not only linguistic proficiency but also intercultural communicative competence, incorporating authentic assessment methods such as project-based assessments, portfolios, and performance tasks that reflect real-world language use in culturally relevant contexts. Such comprehensive assessment practices would provide a more accurate and fair evaluation of Tibetan students' language development while acknowledging their unique cultural backgrounds and learning processes.

Community engagement is suggested as an emerging approach that moves teaching and learning activities outside the school. This approach understands that effective language learning tends to occur during social interactions, which are profoundly situated in the community. By encouraging higher levels of collaboration between the school and the home, and by creating extracurricular activities that involve the use of the language, the programmes aim to foster an environment conducive to language learning through different social contexts.

The recommendations given are more than just simplistic technicist changes; they entail far more in-depth shifts in how one thinks about bilingual education. The approaches proposed here seek to displace traditional, deficit-centred models of language pedagogy with one that values linguistic and cultural plurality, and sophisticated forms of learning and teaching.

The integrated policy framework proposed in this study provides a highly adaptable, substantive, and creative educational policy model. The recommendations in this article seek to deal with the complicated phenomenon of bilingual education in multicultural contexts by focusing on curriculum development, teacher training, methods of evaluation, and community participation.

Lastly, these suggestions extend beyond the realm of Tibetan and Mandarin bilingual education to provide universal perspectives that facilitate the construction of culturally sensitive educational paradigms that respect language pluralism and foster profound learning experiences.

## 7. Conclusion

This research serves as an in-depth analysis of the multilingual cultural factors in bilingual education and provides useful explanations about the problem of learning Mandarin by Tibetan students. The most significant conclusions from this research highlight several cultural and linguistic factors that, in most cases, obstruct an ethnically diverse group's chances of receiving adequate second language instruction. This research has contributed to advancing our understanding of the interrelationship between language and culture and policy and education, and has, therefore, demonstrated the need for more flexible and ethnically responsive bilingual education policies for minority students.

The New Ethnography paradigm is not sufficiently capable of accommodating variation in identity construction processes and shifts the focus of socialisation to identity formation through the lenses of culture, language, and power<sup>[47]</sup>. This research, integrating the Mother Tongue Teaching Theory and constructivist teaching approaches and cross-cultural communication theories, demonstrates the complex interplay between and the flow of power and identity that accounts for the dynamics of language acquisition in multicultural contexts. The model and methods devised in this study constitute

its primary contribution.

The research has called for critical pedagogical practices with an explicit set of objectives. Special teaching techniques like integrated class-setting activities, culturally responsive teaching, active participation, and buddy teaching make it possible to meet the needs of affected learners and promote their active participation in educational processes. These results challenge city-centred rigid structures of education and, instead, suggest a unique framework which encourages acceptance of both linguistic and cultural differences.

Even though this study's results serve a certain purpose, the study acknowledges some limitations. Qualitative methods, which provide a detailed account, are however not able to offer a broader scope of these results. Besides, this was a case study conducted in a particular culture and region which can be transferred to other cultures and regions, but may not be universally accepted. Finally, the results of the study must be viewed in the context of a small sample size.

This research sets the stage for future studies by sketching some possible avenues of investigation. Perhaps most significantly, extending the research to cover additional ethnic minority areas, developing more detailed longitudinal studies aimed at monitoring the progress of language acquisition over time, and exploring technology-enhanced bilingual teaching methods are warranted. The role that culturally relevant pedagogy employed with students from diverse linguistic backgrounds has on their linguistic and cultural identity and academic achievement is much clearer and needs further investigation.

This study has made its case for the ultimate transformation of bilingual education. It argues that successful language learning transcends speaking and writing; rather, it is a profound journey of cultural exploration, self-development, and interaction with people of different cultures. The study advocates for a paradigm shift in language teaching for multicultural contexts by contesting the established educational norms and adopting new teaching approaches that reflect a more humane and understanding attitude towards the teaching of languages.

This interdisciplinary research sheds light on the multifaceted problems of language acquisition and stresses the importance of acceptance and appreciation of linguistic diversity. It proposes a plan and sets goals for further action

with the aim of creating more applied ethnodidactic directions or methods of teaching and educational processes that correspond to the complexities of languages and cultures of minority societies, in order to avoid creating barriers to proper educational achievement.

## **Funding**

This work received no external funding.

## **Institutional Review Board Statement**

The study was conducted in accordance with the Declaration of Helsinki, and approved by the Institutional Review Board (or Ethics Committee) of Research Ethics Committee of Qinghai Normal University (protocol code QHNU-ERB-2024-015 and January 5, 2024 of approval).

## **Informed Consent Statement**

Not applicable.

## **Data Availability Statement**

The datasets generated and analyzed during the current study are not publicly available due to privacy and ethical considerations. The research involved sensitive interviews with Tibetan students and teachers, classroom observations in ethnic minority educational settings, and analysis of documents that may contain identifying information about participants and institutions. The data contain personal information and culturally sensitive content that could potentially compromise participant anonymity and confidentiality, even with de-identification measures.

In accordance with the ethical approval obtained from the Research Ethics Committee of Qinghai Normal University (Approval No. QHNU-ERB-2024-015) and informed consent agreements with participants, the raw data will be retained securely by the research team for a period of five years following publication, after which it will be permanently destroyed.

Aggregated, anonymized data summaries that support the conclusions of this article may be made available from the corresponding author on reasonable request, subject to ethical review and approval from the institutional review board.

Any data sharing would be conducted in accordance with applicable privacy laws and institutional policies protecting research participants in ethnic minority communities.

## Acknowledgments

The author extends sincere gratitude to all participants who generously shared their time and experiences to make this research possible. Special appreciation is given to the 15 Tibetan students who courageously shared their language learning journeys and the 9 teachers who provided invaluable insights into their pedagogical practices and challenges in bilingual education settings.

We are deeply grateful to the administration and staff of the primary school in the Amdo Tibetan Region of Qinghai Province for their warm welcome and unwavering support throughout the four-month data collection period. Their openness and cooperation were essential to the success of this study.

The author acknowledges the Research Ethics Committee of Qinghai Normal University for their thorough ethical review and guidance (Approval No. QHNU-ERB-2024-015), which ensured the protection of all participants while enabling meaningful research in this culturally sensitive context.

Heartfelt thanks are extended to the local Tibetan community leaders and parents who facilitated access to the research site and provided cultural guidance that enhanced the authenticity and sensitivity of this research. Their trust and support were instrumental in creating a respectful research environment.

The author is grateful to the bilingual research assistants who provided essential translation services and cultural interpretation during data collection, ensuring accurate communication between the researcher and participants. Their expertise in both Tibetan and Mandarin languages was invaluable.

Special recognition goes to colleagues at the Faculty of Education and Sport Studies, Universiti Malaysia Sabah, for their constructive feedback on research design and methodology. Additional thanks are extended to the librarians and administrative staff who provided technical support in accessing relevant literature and managing research documentation.

The author acknowledges the broader Tibetan educa-

tional community whose dedication to preserving cultural identity while navigating linguistic diversity continues to inspire research in multilingual education. This work is dedicated to advancing educational equity and cultural understanding in ethnically diverse learning environments.

## Conflict of Interest

The authors declare no conflict of interest.

## Appendix A

**Purpose:** To explore Tibetan students' experiences, challenges, and perspectives when learning Mandarin as a second language.

**Participant Profile:** 15 Tibetan students (8 female, 7 male), aged 10-13 years.

### Key Questions:

- What linguistic challenges do you observe among Tibetan students learning Mandarin? (Probes: most common errors, progression patterns, age-related factors)
- How do you adapt teaching materials to address cultural differences? (Probes: modification techniques, supplementary resources, contextual adjustments)
- What teaching strategies have you found effective for bridging linguistic and cultural gaps? (Probes: successful approaches, student response, assessment results)
- How do you incorporate students' Tibetan language knowledge in your teaching? (Probes: scaffolding techniques, translation strategies, cultural connections)
- What institutional or systemic barriers affect your implementation of bilingual education? (Probes: policy constraints, resource limitations, professional development needs)

### Follow-up Questions:

- Can you provide specific examples of difficulties you've encountered?
- How do you practice Mandarin outside of school?
- What resources or support would help you improve your Mandarin skills?



## Appendix B

**Purpose:** To investigate teachers' perspectives on linguistic and cultural barriers, pedagogical approaches, and institutional factors in Tibetan-Mandarin bilingual education.

**Participant Profile:** 9 teachers (5 Tibetan bilingual teachers, 4 Han Chinese teachers).

### Key Questions:

- What linguistic challenges do you observe among Tibetan students learning Mandarin? (Probes: most common errors, progression patterns, age-related factors)
- How do you adapt teaching materials to address cultural differences? (Probes: modification techniques, supplementary resources, contextual adjustments)
- What teaching strategies have you found effective for bridging linguistic and cultural gaps? (Probes: successful approaches, student response, assessment results)
- How do you incorporate students' Tibetan language knowledge in your teaching? (Probes: scaffolding techniques, translation strategies, cultural connections)
- What institutional or systemic barriers affect your implementation of bilingual education? (Probes: policy constraints, resource limitations, professional development needs)

### Follow-up Questions:

- How do you assess students' progress in Mandarin acquisition?
- What differences do you observe between urban and rural Tibetan students' learning patterns?
- How has your teaching approach evolved based on your experience with Tibetan students?

## Appendix C

The classroom observation protocol was designed to systematically document behaviors, interactions, and teaching practices relevant to the research questions. Observations focused on the following areas:

- Teacher-student language interactions: patterns, frequency, and quality of language exchanges; code-switching

behaviors; communication strategies; language of instruction; student responses in different languages

- Cultural references in teaching materials and instruction: presence and types of cultural elements; representation of Tibetan and Han Chinese cultural content; student reactions to cultural references; teacher elaboration on cultural contexts

- Student engagement patterns: participation levels; attention spans; question-asking behavior; response to different teaching methods; group dynamics; patterns of disengagement

- Instances of linguistic difficulty: specific challenges observed (tonal pronunciation, character recognition, abstract vocabulary); teacher recognition of difficulties; intervention strategies; student coping mechanisms

- Teaching strategies and their effectiveness: variation in instructional approaches; scaffolding techniques; use of visual aids and technology; student response to different strategies; differentiation practices

- Use of Tibetan language as scaffolding: frequency and context of L1 usage; teacher-initiated versus student-initiated L1 use; translation practices; metalinguistic discussions; L1-L2 comparison strategies

## Appendix D

The document analysis protocol was developed to systematically evaluate curricular materials, policy documents, and student work relevant to Tibetan-Mandarin bilingual education. The analysis examined:

- Cultural representation: balance between urban Han and rural Tibetan cultural elements; authenticity of cultural representations; integration of traditional and contemporary cultural content; cultural sensitivity; presence of stereotypes

- Linguistic appropriateness: vocabulary level relative to target student population; sentence complexity; scaffolding of new terminology; progression of linguistic difficulty; accommodation for dialectal variation

- Contextual relevance: connection to students' lived experiences; applicability to local environment; relevance to community practices; urban versus rural contexts; occupational relevance

- Pedagogical approach: teaching methods promoted; cultural assumptions embedded in instructional design; dif-

ferentiation strategies; assessment approaches; views of language acquisition

- Visual elements: cultural imagery and symbolism; representational diversity; balance of urban and rural scenes; pedagogical functionality of images; aesthetic considerations
- Assessment methods: types of evaluations prescribed; cultural bias in assessment; linguistic accessibility of assessment instructions; performance versus knowledge-based assessment; accommodations for linguistic diversity

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