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Ethnic minority students' attitudes and experiences with Mobile English Learning Resources in Qinghai: an activity theory analysis

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ABSTRACT

This qualitative study explores how ethnic minority university students in Qinghai, China, engage with Mobile English Learning Resources (MELRs) amid linguistic, cultural, and institutional constraints. Guided by Activity Theory (AT) and analysed using reflexive thematic analysis (RTA), the study drew on interviews and reflective journals. The participants were eight first-year non-English-major undergraduates, all Tibetan L1 speakers, from Tibetan, Mongolian, and Tu ethnic backgrounds. Two interconnected themes were developed: Empowerment within Frustration and Unequal Foundations and Missing Scaffolds. While students appreciated the flexibility and authentic exposure offered by MELRs, their engagement was often constrained by curriculum misalignment, limited digital experience, and a lack of sustained instructional and peer support. Through the lens of AT, the study identified four secondary contradictions within the activity system: between tools and subjects, rules and tools, community and tools, and division of labour and tools. Rather than attributing difficulties to individual shortcomings, the findings foreground systemic tensions shaping mobile learning experiences. The study highlights the importance of responsive, scaffolded, and contextually aligned mobile learning practices in supporting students from multilingual and under-resourced regions.

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1. Introduction

English proficiency is widely positioned in language education as a core academic skill linked to students' future opportunities (Ali & Hamid, 2024). In response, China has promoted digital innovation in higher education through policies, such as the Ten-Year Development Plan for Educational Informatization (Ministry of Education of the People's Republic of China, 2012) and the 2024 Blueprint for Education Reform (Hou, 2025), both of which stress equitable access and technology-enhanced pedagogy. The ubiquity of smartphones has meanwhile enabled widespread Mobile-Assisted Language Learning (MALL), and studies report that Chinese university students increasingly rely on mobile and digital tools to support flexible English learning, contributing to improved engagement and learning outcomes (An et al., 2020).

Despite increased digital access, ethnic minority students in western China continue to face structural barriers, including a scarcity of qualified English teachers, limited implementation of supportive language policies, shortages of authentic input, continued reliance on traditional pedagogy and uneven digital infrastructure, which shape their English learning opportunities and outcomes (Cheng, 2022; Feng, 2012; Sude et al., 2020; Tsung, 2009). In ethnic minority regions across China, English learning frequently occurs in complex multilingual environments, where many students' mothers' tongues is a minority

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language that varies by ethnic minority group (e.g. Tibetan, Mongolian, or Uyghur). In Qinghai Province, for example, many Tibetan-speaking students learn English as a third language after Tibetan and Mandarin (Ma, 2019), and limited academic Mandarin proficiency can further constrain participation (Shi et al., 2022). For students from under-resourced or rural areas, uneven digital conditions complicate independent navigation of Mobile English Learning Resources (MELRs) at university (Cheng, 2022; Jiang et al., 2020; Ma et al., 2024; Ping, 2018; Sude et al., 2020; Zhang et al., 2024).

While some studies report empowering effects for ethnic minority learners through well-designed multimodal tasks (Yang & Reynolds, 2022), existing MALL research has focused largely on urban Han undergraduates, leaving limited evidence on how ethnic minority students engage with MELRs in multilingual, under-resourced settings (Chen, 2020). To address this research gap, the current study explores the attitudes and experiences of ethnic minority university students in Qinghai Province towards MELRs. Specifically, it aims to answer:

RQ 1. How do ethnic minority university students in Qinghai perceive and experience Mobile English Learning Resources (MELRs) for English language learning?

RQ 2. Which sociocultural–institutional factors shape these attitudes and experiences, and what contradictions emerge?

2. Literature review

2.1. Mobile learning in English language education

Mobile-Assisted Language Learning (MALL) refers to the use of mobile technologies in language learning and has evolved from content delivery toward learner-centred, participatory designs that foreground autonomy and interaction (Kukulska-Hulme, 2021; Stockwell, 2022; Stockwell & Hubbard, 2013). In this study, MALL is considered through Mobile English Learning Resources (MELRs)—digital English-language materials (e.g. language apps, websites, e-books, online courses, discussion platforms) accessed on hand-held devices (Zhang & Pérez-Paredes, 2021).

Studies report improvements in language performance in higher-education contexts when MELRs are used (Ali et al., 2024). Reported gains span key subskills, including vocabulary (Sato et al., 2020), listening and speaking (Bai, 2024), and pronunciation (Metruk, 2024). Empirical work also shows that MELRs support learning beyond the classroom (Karakaya & Bozkurt, 2022), and favourable perceptions and affect towards mobile-based learning are positively associated with higher engagement (Bai, 2024). These associations are often attributed to widely noted affordances—flexibility and continuity of use, opportunities for socialisation and personalisation, links to real-world contexts, and support for self-evaluation (Kukulska-Hulme, 2021; Stockwell, 2022; Viberg & Kukulska-Hulme, 2022). In practice, translating these affordances into sustained engagement requires both institutional alignment and pedagogical scaffolding; when conditions are ambiguous or scaffolding is lacking, meaningful integration is undermined (Hu & Webb, 2009; Marwan & Sweeney, 2019; Tondeur et al., 2007).

In the Chinese university context, MELRs often remain peripheral within formal curricula, as textbook-dominant, transmission-oriented pedagogy and assessment pressures shape students' attention and study habits (Zhang & Pérez-Paredes, 2021). Engagement is also conditioned by format preferences: students who favour traditional classroom settings report lower engagement in mobile-assisted environments (Yang & Hu, 2023). When MELRs are not perceived as assessment-relevant or culturally meaningful, learners tend to disengage, even while recognising these affordances (Jiang et al., 2020; Li & Hafner, 2022). Moreover, some learners view phones primarily as social rather than study tools, widening the gap between personal and academic uses (Hsu, 2013; Lai & Zheng, 2018).

2.2. Ethnic minority bilingual learners in China

China is home to 55 officially recognized ethnic minority groups, accounting for ~8.89% of the national population (The State Council of the People's Republic of China, 2021). Many of these communities speak a first language other than Mandarin, creating a multilingual environment in which students learn

English on top of an already bilingual foundation (Feng & Adamson, 2018). In Qinghai Province, bilingual education has often followed a ‘one ethnicity, one language’ model—particularly in Tibetan-speaking regions where Tibetan communities constitute the majority (Zhou, 2020). However, top-down bilingual policies often diverge from home-language practices, creating tensions in minority schooling (Zhang & Tsung, 2019). Compounding these policy–home mismatches, parental support is important for language development, but families in underprivileged or remote areas may lack the resources for sustained assistance (Ke, 2023). Taken together, these dynamics suggest that ethnic-minority students’ language learning unfolds through interactions across policy, school, and home language practices.

These constraints manifest in universities as persistent shortages of qualified teachers and Han-centric materials restrict meaningful English practice in rural minority areas, contributing to reduced participation and a sense of disconnection for ethnic-minority students in university classrooms (Feng, 2012; Ke, 2023). English instruction in universities remains largely exam-oriented, emphasising grammatical accuracy and test preparation over communicative competence (Ke, 2023; Liu & Edwards, 2017); within such arrangements, university curricula often do not accommodate earlier educational disparities or unique linguistic backgrounds—a long-standing issue (Zhang & Adamson, 2023). As a result, minority students frequently repeat basic English courses without receiving targeted linguistic support, limiting their access to more advanced or elective English-medium learning opportunities (Ke, 2023).

Another significant challenge lies in the widespread use of Mandarin as the medium of instruction. For many ethnic-minority students, this means processing English through a not-yet-fully-mastered L2 (Mandarin), which can increase cognitive load and reduce participation (Feng, 2012; Shi et al., 2022). When English learning resources lack cultural relevance, students often view them as disconnected from their lived experiences, which in turn reduces engagement and reinforces a sense of alienation (Ye, 2025). This aligns with broader EFL evidence that perceived relevance of materials and classroom ecology shape learners’ attitudes (Getie, 2020). In programmes where teacher-led and assessment-oriented routines predominate, students are accustomed to explicit guidance and tightly sequenced tasks (Feng, 2012; Gu, 2018; Liu & Edwards, 2017). Such disconnection may be intensified when culturally rooted, teacher-led learning norms sit uneasily with more self-directed, exploratory uses of MELRs (Ma, 2017). By contrast, when digital learning is scaffolded and linked to students’ identities and community knowledge—such as creative writing or digital multimodal composition—minority learners report greater investment, participation, and agency (Jiang et al., 2020; Yang & Reynolds, 2022; Ye, 2025).

Within this national picture, the Qinghai context illustrates these dynamics more concretely. Autonomous prefectures, such as Hainan, Haibei, Huangnan, Guoluo, Yushu, and Haixi are primarily inhabited by Tibetan-speaking communities, where Tibetan is widely used as the main home and community language. Many students in these areas grow up speaking Tibetan at home and encounter formal mandarin instruction only upon entering school, thus becoming bilingual before they begin learning English (Ma & Renzeng, 2015). Recent studies indicate that these students often struggle with academic Mandarin, which significantly impedes their comprehension and participation in higher education (Shi et al., 2022).

In Tibetan-populated areas of Qinghai, mobile network infrastructure and device accessibility remain inadequate (Zhao, 2021). Students from rural backgrounds frequently contend with unstable connectivity and older or shared devices, alongside uneven prior digital literacies (Xue et al., 2022). Broader evidence from Northwest China indicates that household digital literacies are patterned by socioeconomic conditions, implying that some incoming students had fewer pre-university opportunities to develop academic uses of mobile technologies (Ma et al., 2024; Zhang et al., 2024). In language-learning contexts, limited prior exposure is associated with difficulties in independently navigating MELRs; conversely, guided or scaffolded mobile and multimodal tasks have been reported to enhance participation and strategic engagement among these students (Jiang et al., 2020; Ping, 2018).

2.3. Activity Theory as an analytical lens

Originating from Vygotsky’s (1978) emphasis on social mediation in cognitive development, Activity Theory conceptualizes human activity as a dynamic system wherein subjects act upon objects that embody the motive of the activity through culturally mediated tools and signs. Leont’ev (1978)

expanded this framework by emphasizing the object-oriented and hierarchical nature of activity, differentiating it into activities, actions, and operations, and asserting that activities are embedded within specific social environments. Building upon these foundations, Engeström (1987) further developed the model into a comprehensive structure comprising six interconnected components: subject, object, tools, rules, community, and division of labour (see Figure 1). In this model, tools mediate the relationship between subjects and their objects, while rules—both explicit and implicit—govern interactions within the community. The community encompasses all participants sharing a common object, and the division of labour delineates the distribution of tasks and responsibilities among them. Through the interplay of these components, the object is transformed into an outcome, reflecting the collective endeavour of the activity system.

In technology-assisted language learning, theoretical models, such as the Unified Theory of Acceptance and Use of Technology (UTAUT) and the Technology Acceptance Model (TAM) have frequently been employed to explain how learners adopt digital tools across diverse contexts (Stockwell, 2022). While these frameworks effectively capture individual-level factors, such as motivation and perceived ease of use, they tend to emphasize personal cognition and behaviour and may overlook socio-cultural and institutional structures that shape engagement. Critiques further note that they are often interpreted in ways that presume learner readiness, thereby underplaying frictions when digital adoption is mandated without adequate preparation (Greener, 2022; Wang & Vásquez, 2012).

By contrast, Activity Theory (AT) provides a systemic lens on engagement with MELRs as mediated activity, foregrounding how tools, rules, community, and the division of labour orient action toward the object within institutional contexts (Engeström, 1987; Lim, 2002). A central tenet of AT is the concept of contradiction, defined as historically accumulated structural tensions within or between components of an activity system (Engeström, 2001). Specifically, contradictions may occur within individual components (primary), between components (secondary), between different developmental phases of a single activity (tertiary), or between different activities (quaternary) (Engeström, 1987). These tensions are not viewed as failures, but as the generative force of change, leading to what Engeström and Miettinen (1999) calls expansive learning, wherein participants reconceptualize the object of activity and reorganize the system to pursue new goals.

Empirical studies have shown how AT can be used to identify such contradictions in practice. For example, Gedera (2016) applies AT to analyse contradictions in a university blended learning course, exploring the structural tensions within the activity system and emphasizing the complex interactions between technology, teaching methods, and course objectives. Marwan and Sweeney (2019) observed misalignments between teachers' conventional pedagogies and administrative expectations during the implementation of digital tools in EFL classrooms. In China, Hu and Webb (2009) highlighted tensions between teacher-centred methods and ICT-enhanced approaches in English for Business Purposes courses. Similarly, Xue et al. (2023) documented how institutional constraints shaped university instructors' engagement with mobile social media for teaching.

Building on this body of work, the present study applies AT to examine how ethnic-minority undergraduates in Qinghai engage with MELRs under intersecting linguistic, institutional, and technological

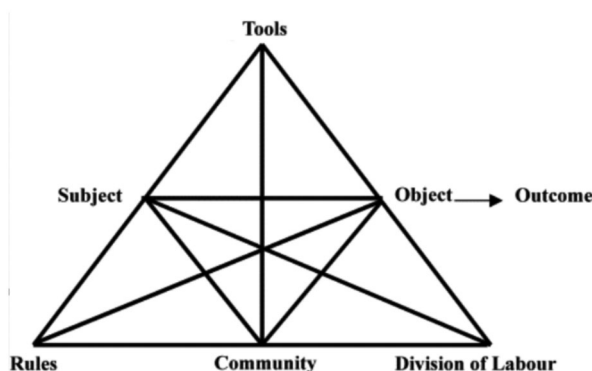


Figure 1. Activity system model (adapted from Engeström, 1987).

conditions. In this setting, the activity system comprises the subject (ethnic-minority undergraduates), object (improving English proficiency in university College English courses), tools (MELRs), rules (classroom norms, assessment regimes, institutional policies), community (peers, teachers, families), and division of labour (role distribution between learners and educators). The analysis centres on secondary contradictions (Engeström, 1987, 2001).

3. Methods

3.1. Research design

In this study, a qualitative, exploratory research design was employed, underpinned by a constructionist epistemology. This approach assumes that realities are socially constructed and meanings are co-created between researchers and participants. Reflexive thematic analysis (RTA; Braun & Clarke, 2023) was employed as the method of data analysis. RTA offers interpretative flexibility, allowing close examination not only of what was said but also of how participants constructed meaning around their experiences with MELRs. This design enabled an in-depth exploration of first-year ethnic minority students' attitudes and experiences using MELRs in Qinghai Province, China. Data were collected from March to May 2024.

3.2. Participants and setting

A purposive sample of eight first-year students of ethnic-minority background was recruited to enhance data richness by including diversity in ethnicity and gender; participants were aged 18–20. Although not all were officially registered as ethnically Tibetan, all had grown up within Qinghai's six autonomous prefectures (Huangnan, Guoluo, Yushu, Hainan, Haibei, and Haixi), where Tibetan served as the primary language of home and community life. The sample included students from Tibetan, Mongolian, and Tu ethnic backgrounds, all of whom had grown up in Tibetan-speaking communities. This reflects the complex linguistic ecology of Qinghai, where home language practices do not always align with official ethnic classifications.

All participants were enrolled in College English (CE) course and had experience using MELRs. The primary objective of CE is to develop general communicative competence in English for non-English majors. Students sit a placement test on entry and those in this study were enrolled in the basic-level (level C) CE stream. Course requirements included accessing video modules for extended listening and reading (compulsory but ungraded); submitting essay drafts to an automated feedback platform; and completing in-class polls and quizzes delivered through a learning-management system (LMS). Free campus Wi-Fi and students' smartphones enabled additional access to MELRs.

The first author's positionality as an outsider to the local minority communities was acknowledged: the researcher is a Mandarin-speaking Han Chinese English instructor with limited familiarity with the minority languages in Qinghai. This positionality was considered throughout the research process to remain sensitive to cultural context and power dynamics. Throughout coding and theme development, the first author kept reflexive memos that documented evolving assumptions and their potential impact on interpretation. Although the study does not encompass all minority groups in Qinghai (e.g. Hui, Salar), the selected participants reflect a significant and policy-relevant subgroup within the region's ethnic minority university population. Pseudonyms were used to protect participant identities. Table 1 presents an overview of participant demographics.

Table 1. Overview of participant demographics.

Pseudonym	Gender	Ethnicity	Age
Joy	F	Tibetan	18
Lily	F	Tibetan	18
Pema	F	Tu	18
Tom	M	Mongolian	19
Ben	M	Mongolian	20
Anna	F	Tibetan	20
Andy	M	Tibetan	19
Rita	F	Tibetan	18

3.3. Data collection

Data were collected through semi-structured interviews and reflective journals. The two sources were treated as complementary for deepening understanding of participants' experiences rather than to triangulate findings. All interviews and journal entries were conducted or written in Mandarin, which all participants understood as the language of instruction. Although participants' first language was Tibetan, all reported being comfortable expressing their ideas in Mandarin, facilitating clear and meaningful communication.

An interview guide with open-ended questions was used (e.g. 'Can you describe how you use mobile apps or online resources to learn English?'), but the interview format remained flexible so that participants could foreground what they found meaningful. Interviews lasted ~30–60 min ($M \approx 45$), were audio-recorded with consent, and later transcribed verbatim. In addition, participants were asked to keep reflective journals over a 12-week period. This method provided space for reflection beyond the interview setting, aligning with the temporal and reflexive emphases in RTA. Participants were instructed to write brief entries (in Chinese) about their thoughts, feelings, and experiences each time they engaged with MELRs. These journals provided insight into day-to-day interactions with MELRs and allowed participants to reflect on experiences that might not surface in interviews. All interview quotations and journal excerpts were translated into English by the first author and checked by a Tibetan English instructor proficient in Mandarin to ensure accuracy and naturalness. As participants consistently used Mandarin, no Tibetan lexical items were present in the data. Field notes were written after each interview to capture contextual observations and researcher's initial reflections.

3.4. Data analysis

Data were analysed using reflexive thematic analysis (RTA) (Braun & Clarke, 2006, 2023). Familiarisation involved repeated reading of interview transcripts and reflective journals, during which initial analytic comments were added to elicit early reflexive engagement with possible meanings (Braun & Clarke, 2006, 2023). To enhance credibility, a concise audit trail was kept to document analytic moves (Shenton, 2004).

Coding proceeded inductively and at a semantic level, remaining close to participants' wording and situated experiences with MELRs. Coding was undertaken by the first author on English translations of all materials. Codes were iteratively collated into candidate themes across interviews and journals, reviewed against the full dataset, and refined through recursive movement between data and analysis until clear theme definitions were established. In keeping with RTA, themes were treated as analytic constructions rather than pre-existing entities, and no a priori codebook or inter-coder reliability statistics were employed (Braun & Clarke, 2023). Table 2 presents the thematic matrix with sub-themes, illustrative quotes, and interpretive summaries.

Activity Theory (AT) was introduced only at the stage of theme refinement and interpretation. This sequencing was adopted to preserve the inductive, data-led character of RTA during coding and to avoid constraining the analysis by a priori categories (Braun & Clarke, 2006, 2023). Accordingly, the Findings section reports data-driven themes in participants' terms without AT terminology, whereas the Discussion mobilises AT to interpret the themes systemically—considering how elements, such as tools, rules, community, and division of labour orient action toward the object, and articulating secondary contradictions where relevant (Engeström, 1987, 2001). The ordering of analytic steps and key decisions was recorded through reflexive memos and a brief audit trail to maintain transparency (Braun & Clarke, 2023; Shenton, 2004).

3.5. Ethical considerations

The study received ethics approval from the authors' institution. Participation was voluntary and informed consent was obtained before data collection. Pseudonyms were used in all reporting, and identifying details were removed or generalized. Interview audio recordings, transcripts, and journal entries were securely stored and accessible only to the research team. Participants were informed of their right

Table 2. Thematic matrix for themes 1 and 2.

Theme	Sub-theme	Illustrative quote(s)	Interpretation
Theme 1: Empowerment within frustration	Accessibility and autonomy	'Whenever I encounter a new word ... I can immediately look it up.'	Students appreciated the ease and immediacy of using mobile tools to support their studies in real time. (Comment 1)
	Authenticity and real-life exposure	'I pick up how real people talk ... It makes me feel like English is part of real life.'	Mobile content felt authentic and engaging, helping students connect English to everyday life. (Comment 2)
	Curriculum misalignment and exam pressure	'Many exercises were not emphasized in our exams.; 'Sometimes the app ... feels like entertainment ... I go back to my textbooks.'	When MELR activities felt disconnected from exam content, students were less motivated to engage. (Comment 3)
	Cultural and linguistic disconnect	'I have to translate in my head twice.; 'I'd rather learn how to talk about Tibetan butter tea.'	Even when technically accessible, culturally distant content made learning harder to connect with. (Comment 4)
Theme 2: Unequal foundations and missing scaffolds	Early learning deficits	'We didn't have much focus on English ... I felt behind.'	Limited prior instruction left students feeling underprepared for autonomous learning. (Comment 5)
	Digital challenges	'We only used computers in the lab.; 'I couldn't really tell what was actually helpful.'	Without prior experience using digital resources, mobile learning felt confusing and overwhelming. (Comment 6)
	Preference for teacher-led learning	'Learning belongs in books.; '... use an app ... I didn't know what to do.'	In the absence of structured teacher guidance, students—accustomed to more directive learning—found mobile learning ambiguous and struggled to regard it as legitimate. (Comment 7)
	Support vacuum	'It's mostly individual work ... isolating.; 'It's just me and the screen.'	Students missed the interactive and collaborative dimensions of learning, leading to a sense of isolation in their mobile engagement. (Comment 8)

to withdraw at any time without penalty. These ethical safeguards were considered particularly important given participants' status as ethnic minority students, whose educational experiences are shaped by distinct cultural, linguistic, and regional contexts (Braun & Clarke, 2023; Gay, 2010).

4. Findings

Two interconnected, meaning-based themes were generated through the analysis of the interviews and reflective journals. Themes and sub-themes are summarized in Table 2 (see end of document) with illustrative participant quotes and analytical interpretations.

4.1. Theme 1: Empowerment within frustration

Participants consistently praised the empowering aspects of mobile learning, particularly its flexibility and integration into daily life. Joy shared that she used her phone spontaneously to support her studies: 'Whenever I encounter a new word or phrase, I can immediately look it up'. This convenience enabled her to respond to English learning opportunities as they arose in daily life. Pema echoed this view, noting that she could: 'fit learning into [my] daily schedule', suggesting that mobile tools allowed her to blend English practice into everyday routines. These accounts show how MELRs allowed learners to realize self-directed engagement, extending learning beyond formal classroom structures and reinforcing a sense of autonomy and control.

Participants also appreciated the real-world exposure that MELRs offered, especially when compared to textbook-based materials. Ben explained that mobile platforms allowed him to go beyond rigid curricula: 'Using mobile apps to listen to English songs and watch English movies ... makes it happen'. Tom highlighted the social authenticity of content accessed via digital platforms: 'I can easily watch English videos from international creators on Rednote, I pick up how real people talk—not just textbook grammar. It makes me feel like English is part of real life, not just a subject'. These comments reflect how MELRs provided exposure to authentic, real-life content, which helped students relate English to their informal interests. That is, these tools not only increased input but also encouraged a re-imagining of English as a lived language rather than an academic requirement.

At the same time, however, participants expressed concern about the misalignment between what MELRs offered and what their academic context required. Anna remarked: 'Many exercises were not emphasised in our exams', prompting her to question the value of mobile learning when time and energy were limited. Pema similarly shared: 'Sometimes the app has interesting gamification elements, but they feel like entertainment... In the end, I go back to my textbooks'. Here, students negotiated between personal engagement and institutional expectations, often reverting to conventional study modes even when they found mobile content more appealing. This tension reflects how unfamiliar or unsupported learning tools may be deprioritized under exam pressure.

Cultural and linguistic mismatches in MELRs design further exacerbated students' frustrations. Ben found the content to be: 'too generic', noting that it failed to reflect the experiences of minority students. Andy described an additional cognitive burden: 'I have to translate in my head twice—once from Mandarin to Tibetan, then to English'. Tom also felt disconnected from the scenarios presented in learning materials: 'The examples on the apps feel kind of distant from our real lives... I saw one like "Jake buys coffee at a café"—but before college, I'd barely even been to the county town. I'd rather learn how to talk about Tibetan butter tea (po cha), but I've never seen content like that'. In this study, the participants were Tibetan L1 speakers who acquired Mandarin as an L2 through schooling and came from rural or pastoral counties in Qinghai. As a result, Mandarin-only interfaces and urban, middle-class scenarios common in mainstream MELR content (e.g. cafés, metro commutes, overseas travel) felt remote from everyday county-level realities and often required 'double translation'. In other words, the lack of cultural relevance and multilingual support made MELRs cognitively demanding and emotionally alienating, diminishing the accessibility that mobile learning was meant to enhance.

4.2. Theme 2: Unequal foundations and missing scaffolds

Participants' engagement with MELRs was significantly shaped and in many ways constrained by enduring educational and digital inequalities. Rather than levelling the playing field, MELRs often surfaced hidden disadvantages and institutional blind spots that limited their transformative potential. Many participants pointed to the lack of consistent English instruction during primary and secondary schooling as a key reason for their struggles with university-level English learning. Andy recalled, 'We didn't have much focus on English... I felt behind'. Joy described the transition as 'overwhelming', and Lily added, 'We didn't even have a proper English teacher for some terms'. These reflections point to structural disparities in this rural minority area, where English is often deprioritised in favour of Mandarin or heritage languages. The academic demands of mobile English learning, including independent comprehension and self-paced engagement, were layered onto a foundation that many students felt had not been securely established.

Digital exposure followed a similar pattern. Some students had only minimal contact with technology before university. 'We only used computers in the lab sometimes', Lily said, while Tom noted, 'Back home, the internet signal is really unstable, it can be worse if we move to high grasslands for herding... I only started downloading these [learning] apps after I got here'. Even after gaining access to smartphones, students struggled to develop digital literacies. Rita explained, 'Some learning apps kept pushing ads or irrelevant content. I couldn't really tell what was actually helpful'. Tom echoed, 'I assumed videos with more views were more reliable... some were misleading'. These accounts illustrate how digital inequality extended beyond material access to include unfamiliarity with filtering and evaluating digital content—a gap not automatically bridged by app availability alone.

Cultural expectations and past learning habits also influenced how students approached MELRs. Anna shared a vivid memory from her upbringing: 'In our village, we can always see lamas reading and copying scriptures. That left a deep impression on me. I think learning belongs in books'. This association between learning and sacred textual practices highlights how culturally ingrained notions of 'serious' learning remain reliant on physical books and teacher-led routines. Pema echoed a similar sentiment from her school experience: 'We're used to learning by following the teacher—they say a sentence; we write it down'. These quotes reveal a deep-rooted trust in structured, guided learning. MELRs, by contrast, were experienced as ambiguous and lacking authority. When a teacher once suggested using an app to preview a lesson, Pema admitted, 'I honestly didn't know what to do. It felt like the app expected me to find my own way, but I needed someone to guide me'. Rather than serving as tools for self-

directed exploration, mobile platforms became spaces of uncertainty when disconnected from established pedagogical routines.

The absence of scaffolding and social support further deepened the challenge. Students frequently described MELR use as an isolating, solitary activity. 'It's mostly individual work', said Rita. 'It's just me and the screen', echoed Ben. While participants were willing to experiment with mobile learning, the lack of interactive feedback and peer collaboration made it difficult to remain engaged. Students noted that MELRs did not support the kinds of dialogic or shared learning they were accustomed to in face-to-face settings. 'In class, you can just turn to your classmate and ask something', said Pema. 'But on the app, you're on your own. No one is there'. Several participants mentioned that group work, discussion, or any kind of mutual exchange was largely missing from MELR contexts. 'Some apps have discussion boards, but no one replies', said Tom. 'Sometimes you post a question and it just sits there for days—or forever. It doesn't feel like real communication'. Despite the inclusion of interactive features in some mobile resources, students felt that MELRs as a whole lacked the immediacy and responsiveness that characterize meaningful peer support in face-to-face settings.

This sense of disconnection contributed to a perception of mobile learning as fragmented and peripheral, rather than integrated into their academic experience. Rita recalled how teachers introduced mobile learning platforms, but with little follow-up or structured guidance. 'Our teacher told us to use the WeLearn platform after class, but that's all', she explained. 'There was no demo, no explanation of what to focus on—we were just told 'go try it''. Pema mentioned similar experiences, noting that mobile apps were often 'recommended' as supplementary tools, yet never meaningfully incorporated into classroom tasks or assessments. Ben reflected, 'It felt like they just mentioned it to tick a box. I downloaded the app, opened it a few times, but had no idea how it related to what we were doing in class'.

5. Discussion

The two themes reveal how MELRs served as both empowering tools and sources of frustration for ethnic minority university students. Drawing on Activity Theory (Engeström, 2001), these ambivalences are interpreted as four interconnected secondary contradictions within the activity system.

First, students valued the flexibility and authenticity of MELRs (Comments 1–2; Shen et al., 2023; Stockwell & Hubbard, 2013), yet their engagement diminished when the content misaligned with exam-driven academic goals (Comment 3) or felt culturally distant (Comment 4). This tension reflects a contradiction between tools and subjects, as MELRs, despite offering novel affordances, failed to align with learners' institutional and sociocultural contexts (Gao & Zhang, 2020; Li & Hafner, 2022). Similar patterns have been noted in broader Chinese higher education, where mobile learning adoption remains uneven, often limited by students' preferences for structured, classroom-based learning (Yang & Hu, 2023). For ethnic minority students, whose educational trajectories are shaped by linguistic marginalization and systemic gaps in exam preparedness (Shi et al., 2022), MELRs were often perceived as 'useful but not usable' (Ping, 2018), reinforcing alienation rather than empowerment when poorly integrated (Kukulskahulme & Viberg, 2018; Lai & Zheng, 2018).

Second, the institutional assumption of students' digital readiness conflicted with their actual experiences. Participants reported being 'left behind' due to inadequate English instruction (Comment 5) and limited prior digital exposure, resulting in confusion and detachment when using MELRs (Comment 6). This contradiction between rules and tools highlights how digital initiatives often overlook foundational gaps of learners from undeveloped areas (Ping, 2018; Wang & Vásquez, 2012; Xue et al., 2022). Without critical digital literacies, MELRs became less an opportunity for equitable learning and more a mirror reflecting structural inequalities carried into higher education. The findings reinforce calls for explicit digital literacy interventions to achieve technology-driven educational equity (Jiang et al., 2020).

Third, a mismatch emerged between students' culturally rooted expectations of learning and the self-directed architecture of MELRs. Accustomed to teacher-led, authoritative instruction, participants struggled with the autonomy demanded by mobile platforms (Comment 7). This contradiction between community and tools echoes research highlighting Tibetan learners' reliance on structured, relational learning environments (Jiang, 2025; Shi et al., 2022; Zhang et al., 2012). While MELRs afford flexibility, they often lack the guided progression, relational support, and cultural resonance necessary for students

from collectivist, teacher-reliant backgrounds (Yang & Reynolds, 2022). Learning technologies must thus be adapted to local pedagogical traditions to ensure usability and relevance (Lim, 2002).

Finally, institutional endorsement of MELRs without adequate scaffolding led to fragmented, unsupported learning experiences. Students described a lack of clear instructions, integration into coursework, meaningful follow-up from teachers, and the absence of effective peer interaction (Comment 8), indicating a contradiction between division of labour and tools. This mirrors findings by Hu and Webb (2009) and Marwan and Sweeney (2019) showing how digital initiatives often fail when institutional actors are disengaged. Without sufficient task allocation, feedback, and collaborative structures, MELRs remained peripheral supplements rather than integrated pedagogical tools. Collaborative structures include not only teacher guidance but also peer support, both of which were largely absent in students' reported experiences. As Kurt and Bensen (2017) and Nami (2019) argue, active teacher guidance and social scaffolding are essential to sustain digital engagement, especially for students at risk of isolation. Embedding interactive, collaborative features and ensuring institutional support are thus crucial for the meaningful adoption of MELRs (Sato et al., 2020; Stockwell & Hubbard, 2013).

Together, these contradictions highlight the systemic challenges that ethnic minority students face in mobile-assisted language learning and point to the need for culturally responsive, pedagogically scaffolded, and socially supported mobile learning environments.

6. Conclusion

Drawing on Activity Theory, this study identified four secondary contradictions that limited the transformative potential of MELRs for ethnic minority undergraduates in Qinghai. These tensions revealed that while MELRs offered flexibility and authentic content, they often failed to align with students' exam-oriented goals, digital preparedness, culturally rooted learning expectations, and the need for structured pedagogical and peer support. The findings underscore the importance of designing mobile learning environments that are culturally responsive, pedagogically scaffolded, and socially supported. By foregrounding systemic contradictions rather than individual shortcomings, this study contributes to Activity Theory-informed research in Mobile-Assisted Language Learning (MALL), and calls for further inquiry into how mobile technologies can promote more equitable language education in multilingual, under-resourced settings.

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