



## COMPARISON OF BOARDING AND DAY SCHOOLING ON SOCIAL EMOTIONAL LEARNING, SCHOOL BELONGING, AND ACADEMIC SELF-EFFICACY

COMPARACIÓN ENTRE INTERNADO Y ESCOLARIZACIÓN DIURNA EN APRENDIZAJE SOCIOEMOCIONAL, PERTENENCIA ESCOLAR Y AUTOEFICACIA ACADÉMICA

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### ABSTRACT:

This mixed-methods study examines how boarding versus day schooling relates to Social and Emotional Learning among ethnic Mongolian secondary students in Inner Mongolia under a post-2020 Mandarin-medium policy. Quantitative survey data from 482 students compared key SEL dimensions and tested a mediation model, while Interpretative Phenomenological Analysis interviews illuminated mechanisms. Day students reported higher school belonging and lower anxiety/distress than boarders; differences in academic self-efficacy were small. Peer support frequency did not differ significantly. Mediation analysis showed boarding's association with lower ASE operated primarily via diminished belonging: the indirect effect through belonging accounted for about 85% of the total effect, and the direct effect became nonsignificant when belonging was included. IPA surfaced four mechanisms explaining the pattern: (1) peer density as a double-edged resource (proximity with surveillance); (2) heightened Mandarin-related participation anxiety and the protective role of low-risk "expression ladders"; (3) evening study and pre-sleep rumination concentrating stress; and (4) variable quality of adult relationships (teachers/dorm supervisors) as conditional buffers. Policy and practice implications include intentionally scaffolding peer ecologies in dorms, aligning classroom talk structures with SEL to

reduce linguistic threat, and training dorm supervisors as emotion coaches rather than rule enforcers. Limitations include cross-sectional design, single-prefecture sampling, and SES measurement constraints.

**Keywords:** Social and Emotional Learning, School Belonging, Academic Self-Efficacy, Boarding School, Bilingual Education.

### RESUMEN:

Este estudio de métodos mixtos examina cómo el internado versus la escuela diurna se relaciona con el aprendizaje social y emocional entre estudiantes de secundaria de etnia mongola en Mongolia Interior bajo una política de mandarín medio posterior a 2020. Los datos de una encuesta cuantitativa de 482 estudiantes compararon dimensiones clave del SEL y probaron un modelo de mediación, mientras que las entrevistas de Análisis Fenomenológico Interpretativo iluminaron los mecanismos. Los estudiantes diurnos reportaron una mayor pertenencia a la escuela y menor ansiedad/angustia que los internos; las diferencias en la autoeficacia académica fueron pequeñas. La frecuencia del apoyo de pares no difirió significativamente. El análisis de mediación mostró que la asociación del internado con un ASE más bajo operaba principalmente a través de una disminución de la pertenencia: el efecto



indirecto a través de la pertenencia representó alrededor del 85% del efecto total, y el efecto directo se volvió no significativo cuando se incluyó la pertenencia. IPA sacó a la luz cuatro mecanismos que explican el patrón: (1) la densidad de pares como un recurso de doble filo (proximidad con la vigilancia); (2) una mayor ansiedad por la participación relacionada con el mandarín y el papel protector de las “escaleras de expresión” de bajo riesgo; (3) el estudio nocturno y la rumia antes de dormir concentran el estrés; y (4) calidad variable de las relaciones con los adultos (maestros/supervisores de dormitorios) como amortiguadores condicionales. Las implicaciones de políticas y prácticas incluyen reforzar intencionalmente las ecologías de pares en los dormitorios, alinear las estructuras de conversación en el aula con SEL para reducir la amenaza lingüística y capacitar a los supervisores de los dormitorios como entrenadores emocionales en lugar de ejecutores de reglas. Las limitaciones incluyen el diseño transversal, el muestreo de una sola prefectura y las limitaciones de medición del NSE.

**Palabras clave:** Aprendizaje Social y Emocional, Pertenencia a la escuela, Autoeficacia académica, Internado, Educación bilingüe.

## INTRODUCTION

Social and Emotional Learning (SEL) is widely defined through five interrelated competencies: self-awareness, self-management, social awareness, relationship skills, and responsible decision-making, as codified by the Collaborative for Academic, Social, and Emotional Learning (2020). The framework of this institution has been taken up internationally by ministries, state agencies, and school systems to guide policy, curriculum, and classroom routines.

A large body of evidence links SEL to better student outcomes. In a landmark meta-analysis of 213 universal school-based SEL programs involving about 270,000 students, Durlak et al. (2011) found significant improvements in students' social-emotional skills, behavior, and an average about 11 percentile point gain in academic achievement relative to controls, suggesting that SEL can shift both process and performance at scale. Subsequent replications and policy briefs have reinforced these conclusions for mainstream K–12 contexts.

Globally, the intersection of bilingual education policies and boarding school systems presents a critical challenge for educational equity and socio-emotional development. In many international contexts—ranging from Indigenous communities in the Americas to rural populations in Europe and Asia—students from linguistic minorities are frequently required to transition to dominant-language instructional models, often necessitating relocation to boarding schools. This transition inherently reconfigures classroom talk, language status, and identity work,

conditions that plausibly shape students' sense of belonging and anxiety. Inner Mongolia serves as an analytically rich, yet universally relevant, case study for this dynamic. Since 2020, regional policy shifts have emphasized a Mandarin-medium model where minority languages are taught primarily as subjects. By examining how this bilingual boarding context impacts ethnic Mongolian students, this study provides broader insights into how educational systems worldwide can better support the Social and Emotional Learning (SEL) of minority students facing structural and linguistic transitions.

The consequences of boarding versus day attendance remain actively debated. A recent meta-analysis reported that, overall, boarding shows no general effect on student development, but exhibits a positive effect on cognition and a negative effect on affect/attitudes, with heterogeneity by school stage and rural/urban setting (Zhong et al., 2024). Studies in China similarly find circumscribed cognitive benefits (e.g., memory, attention) but limited or null effects on non-cognitive outcomes; others document elevated risks for mental-health strain or victimization when relational climates are weak (e.g., alienation from parents as a mediator) (Chang et al., 2023; Xing et al., 2021). Together, these findings imply that contextual mechanisms (peer networks, social comparison, and adult support) likely condition boarding's effects on students' social-emotional development.

Two constructs are especially relevant to the present study. First, school belonging, defined as students' felt membership in and connection to the school community, has long been linked to motivation and engagement and is commonly measured with Goodenow's Psychological Sense of School Membership (PSSM) scale (Goodenow, 1993). Second, academic self-efficacy (ASE), students' beliefs about their capability to organize and execute the actions required for learning, is foundational in social-cognitive theory and predicts persistence and achievement (Bandura, 1997). In systems that emphasize high-stakes examinations and public recitation, both belonging and ASE are sensitive to everyday relational and linguistic dynamics.

Against this backdrop, Inner Mongolia offers an analytically rich setting to examine how bilingual policy and schooling form (boarding/day) jointly shape SEL-relevant ecologies. Building on the evidence summarized above, we test the proposition that, compared to day students, boarding students show lower academic self-efficacy indirectly through diminished school belonging, rather than through a direct effect of residential status. Specifically, we investigate a contextual mediation model in which Boarding → Belonging → Academic Self-Efficacy (ASE), while accounting for emotion regulation, peer support, and anxiety/distress.

Research questions.

RQ1. Do day and boarding students differ on key SEL dimensions (belonging, peer support, emotion regulation, anxiety/distress, academic self-efficacy)?

RQ2. What relational mechanisms and processes characterize boarding and day contexts, and how do students experience and interpret these differences?

RQ3. Does a contextual mediation pathway—Boarding → Belonging → ASE—fit the data?

Boarding is not a uniform treatment; it bundles co-residence with peers, dormitory governance, evening study, and reduced daily family contact. Synthesizing primary and secondary schooling studies, a recent meta-analysis reported no overall effect on student development, positive effects on cognition in the small-to-moderate range, and negative effects on affect and attitudes of similar magnitude. Effects varied by context, with more negative affective outcomes in rural settings and junior middle school cohorts (Zhong et al., 2024). This pattern suggests that boarding's influence depends on how local schools structure relationships, workload, and support systems.

In Chinese samples, quantitative studies frequently observe modest gains in specific cognitive domains such as attention and memory, alongside limited or null effects on broader noncognitive outcomes (Chang et al., 2023). On the other hand, threats also cluster in areas of weak relational climate. Multivariable analysis suggests a mediating role of parental alienation in the link between boarding and poor mental health, aligning with the assumption that infrequent parent-child interactions hamper perceived support, particularly when academic support at school is inadequate. Certain studies also highlight increased vulnerability to victimization under irregular supervision and a norm of competition, reiterating the value of dormitory culture and supervision (Xing et al., 2021).

In non-Chinese contexts, results also depend on context. Under conditions in which peer support infrastructure is deliberately created, such as peer mentoring programs, inclusive supervision, and collaborative activities, boarding students have been found to report greater psychological wellbeing than day students, suggesting that a high concentration of shared residence may be an asset when grounded in relationship building infrastructure rather than serendipity. This is consistent with meta-analytic moderation reported by Zhong et al. (2024), indicating that their findings turn on implementation and school climate.

This research identifies a set of mechanisms linking boarding, social and emotional learning, and academic self-efficacy. Dorm peer networks can provide support, collaborative study opportunities, and promote a sense of school belonging, which strongly predicts engagement and efficacy (Chang et al., 2023; Li et al., 2023; Zhong et al., 2024). Conversely, rigid schedules, public ranking, and reduced parental contact may heighten social

comparison, performance anxiety, and parental alienation, undermining emotion regulation and mental health. The quality of supervision and inclusive norms determines whether concentrated peer interaction acts as a protective or risk factor for belonging.

Rather than expecting direct effects of boarding on academic beliefs, research supports examining indirect, climate-dependent pathways: boarding shapes peer ecologies and adult contact, which influence belonging and anxiety, and these processes, in turn, affect academic self-efficacy (Xing et al., 2021; Zhong et al., 2024). Mandarin-medium instruction since 2020 has reconfigured classroom participation and identity expression, with linguistic anxiety limiting student engagement (Botes et al., 2020; Horwitz et al., 1986; MacIntyre et al., 1998). Classroom talk structures that prioritize rapid, high-stakes responses can exacerbate anxiety, while low-risk expression ladders, supportive feedback, emotion labeling, and translanguaging reduce threat, foster mastery experiences, and strengthen both self-efficacy and belonging (Goodenow, 1993; Young, 1991).

Interpretative Phenomenological Analysis (IPA) frames the qualitative exploration of how students navigate support, risk, and belonging in bilingual boarding contexts (Smith et al., 2012). Overall, prior evidence supports a pathway in which peer support enhances belonging, which then boosts academic self-efficacy, with boarding primarily exerting its influence indirectly through these relational and emotional mechanisms rather than directly.

## MATERIALS AND METHODS

This study employed a convergent mixed-methods design to investigate social and emotional learning outcomes among ethnic Mongolian secondary students in Inner Mongolia. Quantitative surveys were used to examine group differences between boarding and day students and to test hypothesized mediation pathways, while qualitative semi-structured interviews provided insight into the relational and contextual mechanisms underlying these differences. Participants included 482 students in grades 7–9 across four schools, with 251 boarding students living in dormitories from Sunday evening to Friday afternoon, and 231 day students commuting from home. All schools followed a Mandarin-medium curriculum for core subjects, with Mongolian taught as a language course, reflecting the bilingual education context. Demographic data such as gender, grade, and parental education were collected to account for socioeconomic variation.

A purposive subset of 24 students (balanced by boarding/day status, gender, and grade) participated in in-depth interviews exploring daily routines, classroom participation, peer interactions, sources of support, and perceptions of fitting in at school. These interviews followed Interpretative Phenomenological Analysis methods, capturing students'

experiences, meaning-making, and emotional responses. Quantitative measures included validated scales for school belonging, academic self-efficacy, peer support, emotion regulation, and anxiety, ensuring reliable assessment of key social-emotional outcomes.

Data integration occurred at the interpretation stage, allowing qualitative findings to contextualize quantitative patterns and illuminate mediating processes. Quantitative analyses identified “what” differences existed between boarding and day students, while qualitative insights explained “how” and “why” these differences arose, highlighting factors such as peer relational climates, language-related anxiety, and the impact of dormitory routines. Overall, the study provided a comprehensive view of the interactions between boarding arrangements, classroom practices, and social-emotional learning, emphasizing the critical role of relational and contextual dynamics in shaping students’ school belonging and academic self-efficacy.

### Ethical Considerations

Given the involvement of minor students and the administration of clinical psychological instruments (GAD-7), strict ethical protocols were observed. The study protocol was reviewed and approved by the Institutional Review Board (IRB) of Universiti Putra Malaysia. Prior to data collection, written informed consent was obtained from the parents or legal guardians of all participating students. Additionally, age-appropriate written assent was collected from the students themselves. Participants were explicitly informed that their participation was strictly voluntary, that their responses would remain anonymous, and that they could withdraw from the study at any time without academic or personal penalty. School counselors were made available to provide support to any student who experienced distress during the survey or interview process.

### RESULTS AND DISCUSSION

Table 1 presents means, standard deviations, and zero-order correlations for all study variables. Boarding and day students showed similar distributions of gender ( $\chi^2 = 0.52$ ,  $p = 0.47$ ) and grade ( $\chi^2 = 1.84$ ,  $p = 0.40$ ), but boarding students’ parents had slightly lower educational attainment ( $M = 1.68$  vs.  $1.89$ ,  $t = 2.41$ ,  $p = 0.016$ ), consistent with broader rural-urban enrollment patterns.

Among SEL constructs, school belonging correlated positively with peer support ( $r = 0.58$ ,  $p < 0.001$ ), emotion regulation ( $r = 0.34$ ,  $p < 0.001$ ), and academic self-efficacy ( $r = 0.52$ ,  $p < 0.001$ ), and negatively with anxiety/distress ( $r = -0.47$ ,  $p < 0.001$ ). Academic self-efficacy showed moderate positive associations with peer support ( $r = 0.41$ ,  $p < 0.001$ ) and emotion regulation ( $r = 0.38$ ,  $p < 0.001$ ), and a moderate negative association with anxiety ( $r = -0.43$ ,  $p < 0.001$ ). These correlational patterns are consistent with theoretical expectations from the SEL literature and support the inclusion of these variables in subsequent mediation analyses.

Table 1. Descriptive Statistics and Zero-Order Correlations Among Study Variables.

Variable	M	SD	1	2	3	4	5	6	7	8	9
1.Boarding status	0.52	0.50	1								
2.Gender (female)	0.51	0.50	0.03	1							
3. Grade level	8.02	0.82	0.09	-0.04	1						
4. Parent education	1.78	0.68	-0.11*	0.08	-0.02	1					
5.School belonging	3.60	0.71	-0.20***	0.12**	-0.08	0.16***	1				
6. Peer support	3.52	0.78	-0.06	0.14**	-0.05	0.13**	0.58***	1			
7.Emotion regulation	3.38	0.82	-0.04	0.18***	0.02	0.11*	0.34***	0.28***	1		

Variable	M	SD	1	2	3	4	5	6	7	8	9
8. Anxiety/distress	8.48	5.01	0.17***	0.22***	0.14**	-0.19***	-0.47***	-0.32***	-0.29***	1	
9. Academic self-efficacy	3.61	0.67	-0.10*	0.09	-0.06	0.15**	0.52***	0.41***	0.38***	-0.43***	1
10. GAD-7 $\geq$ 10 (clinical)	0.32	0.47	0.13**	0.19***	0.11*	-0.17***	-0.42***	-0.28***	-0.24***	0.89***	-0.38***

Note. N = 482. Boarding status coded as 0 = day, 1 = boarding; Gender coded as 0 = male, 1 = female; Parent education: 1 = middle school or below, 2 = high school/vocational, 3 = college or above; GAD-7  $\geq$  10 indicates clinically meaningful anxiety (binary variable). \* $p < 0.05$ . \*\* $p < 0.01$ . \*\*\* $p < 0.001$ .

### Group Differences in SEL Dimensions (RQ1)

Independent samples t-tests (Table 2) showed that there were significant differences between boarding and day students in three of the five dimensions:

**School Belonging:** Non-boarding students (M = 3.74, SD = 0.68) experienced significantly more belonging than boarding students (M = 3.46, SD = 0.71),  $t(480) = 4.51$ ,  $p < 0.001$ ,  $d = 0.41$ .

**Anxiety/Distress:** Boarders reported more anxiety than day students, M = 9.32, SD = 5.15,  $t(480) = -3.89$ ,  $p < 0.001$ ,  $d = 0.35$  (small effect). Moreover, significantly more boarders (38.2%) than day students (26.4%) had anxiety  $\geq 10$ , as indicated by a chi-square test,  $\chi^2 = 7.92$ ,  $p = 0.005$ .

**Academic Self-Efficacy:** Day students (M = 3.68, SD = 0.64) reported marginally higher ASE than boarding students (M = 3.55, SD = 0.69),  $t(480) = 2.15$ ,  $p = 0.032$ ,  $d = 0.20$  (small effect).

No significant differences emerged for Peer Support ( $t = 1.43$ ,  $p = 0.15$ ,  $d = 0.13$ ) or Emotion Regulation ( $t = 0.87$ ,  $p = 0.38$ ,  $d = 0.08$ ). At face value, these statistics could be interpreted to mean that there is no discernible difference between boarding and day schooling experiences as far as the perceived availability of peer support is concerned. However, this kind of quantitative result must be interpreted while keeping in mind the qualitative observations made earlier.

This divergence is more a matter of measurement than of counterindication, as the items of the CASSS focus on the frequency and availability of support from peers (for example, "My classmates help me when I need it") but do not address the conditions and emotional investment of seeking that support, or the monitoring that may be involved when peers are close by. Qualitative analysis suggests that while boarding students have access to peers (high frequency, captured by the scale), the quality of those interactions is often conditional, performative, or experienced as threatening, dimensions the CASSS was not designed to measure.

In mixed-methods terms, this represents complementarity rather than discordance: The survey establishes what is available (peer proximity), while interviews clarify how it is experienced (compulsory vs. chosen, supportive vs. surveilling). This pattern, equivalent peer availability but divergent peer quality, and divergent belonging, is theoretically significant, as it suggests that boarders have access to peers but may not experience the relational climate or inclusive norms that foster a sense of membership.

Table 2. Group Differences Between Boarding and Day Students on SEL Dimensions.

Variable	Boarding (n = 251)	Day (n = 231)			
	M (SD)	M (SD)	t	p	Cohen's d
School belonging	3.46 (0.71)	3.74 (0.68)	-4.51	<.001	0.41
Peer support	3.48 (0.81)	3.57 (0.75)	-1.43	0.154	0.13
Emotion regulation	3.35 (0.84)	3.42 (0.80)	-0.87	0.383	0.08

Variable	Boarding (n = 251)	Day (n = 231)			
Anxiety/distress (GAD-7)	9.32 (5.15)	7.58 (4.72)	3.89	<0.001	0.35
Academic self-efficacy	3.55 (0.69)	3.68 (0.64)	-2.15	0.032	0.20
GAD-7 ≥ 10, n (%)	96 (38.2%)	61 (26.4%)	$\chi^2 = 7.92$	0.005	= .13

### Relational Mechanisms from Qualitative Analysis (RQ2)

IPA revealed four superordinate themes explaining how boarding and day contexts shape SEL processes. We report themes in order of salience, integrating boarding and day experiences within each.

#### Theme 1: Peer Density as Double-Edged Resource

Both boarding and day students recognized dense peer networks, but their experiences of those networks diverged sharply by context.

Boarding students: Compulsory intimacy, contingent support. Boarders described dormitory life as inescapable closeness, with six to eight roommates sharing meals, evening study, and leisure. This density generated frequent help-seeking opportunities, particularly during evening homework sessions:

“If I don’t understand math, I can ask right away, even at 9 p.m. We all sit together in the study room. Someone always knows.” (Bataar, Grade 8 boarder, high belonging)

Yet the same proximity enabled social surveillance and exclusion. Several boarders described feeling “watched” or judged by dorm peers, particularly when struggling academically or appearing anxious:

“People can tell that you’re not catching up. They talk about it, like, ‘Why is she always asking questions?’ You feel embarrassed.” (Narantsetseg, Grade 9 boarding student, low belonging)

In dormitories, peer support could be conditionally offered—for example, within one’s group or as a means of getting reciprocal help—but denied to students of low status or linguistic incompetence.

Day students: chosen connections, limited exposure.\*\* Day students indicated that their peers’ social connections were more selective and activity-oriented. Support was tied to common interests (study groups, activities, and sports) and was time-limited (school time, weekend time arranged):

“I have three close friends. If we have problems doing homework, we chat on WeChat, or we go to the library on Saturdays.” But then, “I go home after school. It’s my space.” (Uyonzaya, Grade 8, boarding student, high belonging)

This selectivity limited one’s exposure to adverse peer interactions. There was a deliberate comparison by some of the day students between their own experiences and what they envisioned as life at boarding schools:

“I’m glad I don’t live there. You can’t escape if kids are mean. At least I can go home and reset.” (Temur, Grade 7, day student, medium belonging)

But day students who lacked feelings of belonging reported experiences of isolation, as they lacked access to both the intense networks available through the dormitories and enough friendships at school, and they lacked feelings of connection to both.

#### Theme 2: Linguistic Confidence and Participation Thresholds

Language emerged as a pervasive mediator of classroom participation and self-efficacy, particularly in whole-class recitation and teacher-led IRE (Initiation-Response-Evaluation) sequences.

“Can I say it correctly?” Mandarin anxiety as identity threat. Both groups described heightened self-monitoring when speaking Mandarin publicly, fearing accent exposure or lexical gaps. However, boarding students framed this anxiety as compounded by dorm-based social comparison:

“In my dorm, some kids grew up speaking Mandarin at home. They sound native. When we’re all in class together, I hear my accent next to theirs. The teacher can hear it too. I freeze up.” (Erdenesaikhan, Grade 9 boarder, low belonging). The absence of translanguaging routines (Mongolian-Mandarin code-switching) in formal instruction meant students perceived errors as failures of linguistic legitimacy, not simply communication breakdowns.

Low-risk ladders as lifelines. Students in classrooms employing structured pair-share or small-group rehearsal before whole-class discussion described these as critical supports:

“When the teacher lets us talk in pairs first, I can practice how to say it. I figure out the words I don’t know. Then when I share out, I’m ready. I don’t feel so scared.” (Sarnai, Grade 8 day student, medium belonging)

Conversely, students in classrooms dominated by rapid-fire cold-calling described chronic anxiety and withdrawal:

“The teacher asks a question, picks someone right away. If you hesitate, she moves on. I stopped raising my hand because I can’t think fast enough in Mandarin.” (Altantsetseg, Grade 8 boarder, low belonging)

Notably, explicit teacher validation of affective states. “It’s normal to feel nervous; take your time”, was recalled verbatim by multiple students as transformative moments that shifted participation trajectories.

### Theme 3: Evening Study and Pre-Sleep Rumination

Boarding students uniformly identified the evening study block (19:00–21:30) and the period before sleep as emotionally salient.

Structured time, unstructured emotion. Mandatory evening study sessions provided academic scaffolding (supervised homework, peer consultation) but also concentrated performance pressure. Students described cumulative exhaustion by 21:00, heightened social comparison (“Everyone else is finishing faster”), and limited opportunities for emotional decompression:

“After study hall, we go straight to the dorm. Everyone’s tired, but you’re also thinking about the test tomorrow, or what the teacher said in class. You lie there replaying it. Did I sound stupid?” (Byambadorj, Grade 9 boarder, medium belonging)

This pre-sleep rumination, particularly rehearsing classroom errors or social slights, was consistently linked to difficulty falling asleep, fatigue, and next-day anxiety.

Day students’ “reset” privilege. Day students described home environments as providing emotional buffering and routine breaks from school-based stress:

“When I get home, I talk to my mom about my day. Sometimes she just listens. Then I do homework, but I can take breaks, walk around, eat a snack. It’s my schedule.” (Khishigdelger, Grade 7 day student, high belonging)

Several explicitly linked this control over pace and environment to their ability to regulate emotion and approach the next school day with renewed motivation.

### Theme 4: Adult Relationships as Conditional Buffers

Experiences of adult support (teachers, dorm supervisors, parents) varied sharply and mediated how students interpreted challenges.

Teachers: Relational quality over contact quantity. Both groups distinguished teachers who “call on you to help you grow” from those who “call on you to catch you out.” The former were described as monitoring participation patterns, providing sentence stems, and checking in after perceived struggles; the latter as enforcing speed and correctness at the expense of understanding. Boarders particularly valued teachers who remained available during evening study for questions, describing such availability as compensating for parental absence.

Dorm supervisors: Rule enforcers or emotion coaches? Boarding students’ descriptions of dorm supervisors clustered into two types. “Rule-focused” supervisors enforced bedtimes, cleanliness, and noise restrictions but showed limited awareness of students’ emotional states. “Relational” supervisors noticed distress, initiated check-ins, and occasionally mediated peer conflicts. Students under relational supervisors reported higher dorm-specific belonging and used language like “she’s kind of like a parent here.”

Parents: Physical absence, imbalanced relationship. Boarding students’ relationships with parents varied on a continuum. Some had regular phone contact and reported parents as emotionally attuned, as when Kelly said, “My mom can tell from my voice if something’s wrong.” They typically had weekly calls just about grades, not feelings, or had limited contact because parents had busy work schedules:

“I talk to my dad on Sundays. He asks me about my test grades. But I don’t talk about other things he asks about because he is very far away and he can’t help me anyway.” (Munkhbayar, Grade 9, low belonging)

Perception of parental alienation, feelings of having unavailable or uninterested parents, was most strongly expressed by boarders who reported low feelings of belonging and was always associated with loneliness and lack of academic motivation.

### Integrated Findings: The Mediating Role of Belonging

To understand the relationship between boarding status, school belonging, and academic self-efficacy (ASE), a mediation model was tested (summarized in Table 3). Rather than presenting exhaustive statistical coefficients, we focus here on the practical implications of the data.

The initial quantitative analysis showed that boarding students had lower academic self-efficacy than day students.

However, when we factored “school belonging” into our model, the direct negative effect of boarding on academic self-efficacy disappeared. Instead, the data revealed a strong indirect pathway: boarding environments were significantly associated with a drop in students’ sense of school belonging, and it was this lack of belonging that subsequently lowered their academic self-efficacy. Statistically, approximately 85% of the negative impact of boarding on academic self-efficacy was explained by this loss of belonging.

These numbers are illuminated by the qualitative data. As noted in the IPA themes, the physical density of the boarding environment did not equate to emotional support. Boarding students experienced “compulsory intimacy” combined with high linguistic anxiety due to the Mandarin-medium policy. When dorm supervisors acted merely as rule enforcers (Theme 4) and evening study generated unchecked rumination (Theme 3), students felt alienated. Day students, conversely, were able to return to the safety of their homes to decompress and regulate their emotions, safeguarding their sense of belonging and, consequently, their confidence in their academic abilities.

For educators, this integrated finding is critical: boarding itself does not inherently damage student confidence. Rather, boarding schools that fail to actively cultivate a supportive, inclusive, and emotionally safe climate strip students of their sense of belonging, which is the actual driver of academic self-efficacy

**Table 3. Mediation Model: Boarding Status → School Belonging → Academic Self-Efficacy**

Predictor	School Belonging (Mediator)	Academic Self-Efficacy (DV)
	b (SE)	95% CI
Direct effects		
Boarding status	-0.28*** (0.06)	[-0.41, -0.16]
School belonging		
Covariates		
Gender (female)	0.17** (0.06)	[0.05, 0.29]
Grade level	-0.07 (0.04)	[-0.14, 0.01]
Parent education	0.16*** (0.04)	[0.07, 0.24]
Peer support	0.43*** (0.04)	[0.35, 0.51]
Emotion regulation	0.18*** (0.04)	[0.10, 0.26]
Anxiety/distress	-0.05*** (0.01)	[-0.06, -0.03]
Model summary		
R <sup>2</sup>	0.52	
F	79.43***	
Indirect and Total Effects	b (SE)	95% CI Boot
Indirect effect (a × b)	-0.11	[-0.15, -0.06]***
Direct effect (c')	-0.02	[-0.13, 0.09]
Total effect (c)	-0.13*	[-0.25, -0.01]
Proportion mediated	85%	

Note. N = 482. Unstandardized coefficients (b) and standardized coefficients ( $\beta$ ) reported. Bootstrap confidence intervals based on 5,000 resamples. Boarding status coded as 0 = day, 1 = boarding. \*p < 0.05. \*\*p < 0.01. \*\*\*p < 0.001.

The findings illuminate the “boarding paradox” frequently noted in broader literature (Zhong et al., 2024). While boarding students in our sample enjoyed equivalent proximity to peers as day students, they reported significantly lower school belonging. Our interpretative phenomenological analysis (IPA) revealed that this proximity often manifested as “compulsory intimacy” characterized by surveillance and social comparison, rather than genuine support. This lack of inclusive norms directly eroded students’ sense of belonging. Crucially, our mediation model demonstrated that boarding status alone does not inherently damage academic self-efficacy; rather, it is the boarding-induced erosion of school belonging that drives this decline.

Furthermore, the linguistic policy shift emphasizing Mandarin-medium instruction exacerbated academic anxiety. Boarding students, unable to decompress in the safety of their homes like their day-school peers, faced prolonged exposure to linguistic and academic pressures. However, adult relationships acted as significant modifiers. Dormitory supervisors who functioned as “emotion coaches” rather than mere rule enforcers, and teachers who utilized low-risk participation structures (e.g., small-group rehearsal), successfully buffered students against these stressors. Ultimately, these findings emphasize that the adverse effects of boarding are not structural inevitabilities, but relational deficits that can be addressed through intentional socio-emotional interventions (Xing et al., 2021; Li et al., 2023).

## CONCLUSIONS

This study demonstrates that in bilingual secondary education contexts, the structural reality of boarding does not directly diminish students' academic self-efficacy. Instead, the decline in academic confidence is overwhelmingly mediated by a loss of school belonging. For international educational systems managing minority-language students in dominant-language boarding schools, these findings offer critical insights. Mandatory proximity to peers does not automatically generate community; without intentional scaffolding, it can foster social comparison, heighten linguistic anxiety, and increase distress.

To transform these environments into spaces that nurture socio-emotional well-being and academic success, schools must implement concrete, systemic changes. Based on our findings, we propose the following actionable pedagogical and organizational shifts.

To mitigate the profound linguistic anxiety associated with dominant-language instruction, educators must abandon rapid-fire, high-stakes recitation. Schools should mandate low-risk "expression ladders" (e.g., think-pair-share, small group rehearsals) to provide minority-language students the opportunity to practice and make mistakes without public exposure, directly fostering mastery experiences.

Dormitory supervisors must be trained to transition from "rule enforcers" to "emotion coaches." Schools should provide professional development for residential staff on trauma-informed care and basic emotional regulation strategies, allowing them to act as relational buffers for students separated from their parents.

Schools must address the psychological toll of evening study and pre-sleep rumination. We recommend institutionalizing mandatory "decompression" periods before lights-out—such as guided journaling, peer-mentoring circles, or explicit emotion-labeling routines—to help boarding students process daily academic and linguistic stressors.

While this study is limited by its cross-sectional design and specific geographical sample, the core takeaway is universal: educational policies that require structural and linguistic transitions for minority students must be paired with robust, intentional socio-emotional infrastructure. Future research should focus on longitudinal interventions that track the efficacy of these proposed relational and pedagogical modifications.

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## CONFLICTS OF INTEREST

The authors declare no conflicts of interest.

### Authors' Contribution (CRediT Taxonomy)

Author	Roles
Mingqi Sun	Conceptualization, Data curation, Formal analysis, Investigation, Methodology, Visualization, Writing – original draft.
Siaw Leng Chan	Conceptualization, Funding acquisition, Methodology, Project administration, Supervision, Validation, Writing – review & editing.
Sharon Yong Yee ONG	Investigation, Resources, Validation, Writing – review & editing.
Karmilah Abdullah	Resources, Software, Validation, Writing – review & editing.