ISSN: 2716-9189 Category B E-ISSN: 2676-1750
Journal of Studies in Language, Culture, and Society (JSLCS). (09) 03, 2026. (PP. 194-211)
Received: 25/12/2025. Accepted: 23/06/2026. Published: 30/09/2026

INTERCULTURAL COMPETENCE AMONG INTERNATIONAL STUDENTS IN NYSA, POLAND: AN EXPLORATORY STUDY

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Abstract: International student adjustment has been extensively studied in Anglophone destination countries, yet considerably less is known about how adjustment processes unfold in small-city, non-Anglophone contexts where internationalization is relatively recent. This study contributes to international student research by examining adjustment processes in such underexplored settings. This exploratory study investigates how intercultural competence (IC), conceptualized as both individual intercultural capabilities and perceived host-environment responsiveness, is associated with academic adjustment, social integration, sense of belonging, and well-being among international students in Nysa, Poland. The study adopts an exploratory, cross-sectional design and draws on data from twenty-two international students enrolled at a university of applied sciences in Nysa, Poland. Data were collected via an online questionnaire composed of open-ended questions addressing academic experiences, intercultural communication, social participation, inclusion and exclusion, and psychological adjustment. Participants' narrative responses were transformed into construct-specific indices using a theory-driven, manually curated lexicon-based coding procedure. Associations between intercultural competence and adjustment outcomes were examined using Spearman rank-order correlations and Mann–Whitney U tests, with an emphasis on effect direction and magnitude. Intercultural competence was positively associated with all examined adjustment outcomes. The strongest and most consistent patterns were observed for social integration and sense of belonging, followed by moderate associations with well-being and confidence. The relationship between intercultural competence and academic adjustment was positive but weaker and less precise. Group comparisons indicated that students with higher intercultural competence reported greater social integration and stronger feelings of belonging than their lower-competence peers. Given the exploratory design and small sample size, the findings are interpreted as indicative patterns rather than inferential conclusions. Overall, the findings suggest that intercultural competence aligns more strongly with relational and psychosocial dimensions of adjustment than with academic adjustment in small-city, non-Anglophone higher education contexts. These results provide a foundation for future longitudinal and comparative research examining how institutional and community-level intercultural responsiveness shapes international student belonging and well-being.

Keywords: Intercultural competence, international students, lexicon-based analysis, Poland, sense of belonging, social integration

How to cite the article:
Benghalem, B., & Kamińska, M. (2026). Intercultural competence among international students in Nysa, Poland: An exploratory study. *Journal of Studies in Language, Culture, and Society (JSLCS), 9*(3), 194-211

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1. Introduction

Internationalization has become a defining feature of contemporary higher education, with a sustained increase in the number of students pursuing tertiary education outside their countries of origin (OECD, 2023). Governments and institutions increasingly frame international student mobility as a driver of academic excellence, cultural exchange, and economic growth. At the same time, research consistently shows that cross-border study involves substantial academic, social, and psychological challenges, particularly during the initial phases of transition into a new educational and sociocultural environment (Smith & Khawaja, 2011). As international enrollments expand into a wider range of destinations, understanding the conditions that support or hinder successful adjustment has become an important scholarly and practical concern.

Adjustment is widely understood as a dynamic, interactional process rather than a fixed individual trait. International students must navigate unfamiliar academic norms, communication styles, and social expectations while renegotiating identity, autonomy, and belonging. These processes unfold within institutional and community contexts that vary in inclusivity, support structures, and intercultural responsiveness. Consequently, student outcomes are shaped not only by individual characteristics but also by the quality of everyday interactions with peers, faculty, staff, and the surrounding community.

A central concept for understanding these interactional processes is intercultural competence (IC). IC refers to the attitudes, skills, and behaviours that enable individuals to communicate and interact effectively and appropriately across cultural differences (Byram, 1997; Deardorff, 2006). In this study, intercultural competence is conceptualized as both an individual capability and a relational construct reflecting the perceived responsiveness of the host environment. Through this dual lens, IC is understood as shaping how students engage in intercultural encounters and how those encounters are experienced.

Existing research on international student adjustment is geographically uneven. Most empirical studies focus on English-speaking destination countries such as the United States, the United Kingdom, Canada, and Australia. While these contexts provide valuable insights, they do not fully capture the diversity of international student experiences globally. Central and Eastern Europe (CEE), including Poland, has experienced rapid growth in international student enrolments, yet remains comparatively underexamined. Within this region, small-city, non-metropolitan settings represent a particularly underexplored context, where internationalization is relatively recent and institutional support structures may be less established.

In such environments, international students may encounter fewer co-ethnic networks, limited anonymity, and more frequent interaction with the same peers, faculty, and community members. As a result, everyday intercultural encounters may play a more prominent role in shaping access to resources, social participation, and feelings of belonging. These conditions suggest that intercultural competence, both individual and contextual, may be especially important for understanding adjustment processes in small-city, non-Anglophone higher education settings.

However, existing research has rarely examined how intercultural competence relates simultaneously to academic adjustment, social integration, sense of belonging, and well-being in these contexts. Moreover, many studies implicitly treat adjustment as an individual responsibility, with less attention to the intercultural capacities embedded in the host environment. Addressing these gaps requires context-sensitive, exploratory research that foregrounds relational and interactional processes.

This study contributes to the literature by examining intercultural competence as a relational construct and by focusing on an underexplored small-city context in Central and Eastern Europe. Specifically, it investigates international students at the University of Applied Sciences in Nysa, Poland. Rather than seeking definitive causal claims, the study adopts an exploratory design aimed at identifying plausible associations and patterns that can inform future research.

Accordingly, the study addresses the following research question:

- How is intercultural competence associated with academic adjustment, social integration, sense of belonging, and well-being among international students at the University of Applied Sciences in Nysa, Poland?

Based on existing theoretical frameworks and prior empirical findings, the study advances the following hypothesis:

- Higher levels of intercultural competence are associated with stronger social integration, a greater sense of belonging, and higher well-being and confidence among international students.

By examining these relationships in a small-city, non-Anglophone context, the study aims to contribute to a more context-sensitive understanding of international student adjustment and to highlight the role of intercultural competence as a relational mechanism within higher education.

2. Literature Review

International student mobility has expanded alongside broader processes of higher education internationalization, yet research consistently demonstrates that studying abroad does not uniformly translate into successful academic, social, or psychological adjustment (Smith & Khawaja, 2011; Ward & Kennedy, 2001). Adjustment is increasingly understood as a dynamic and relational process, shaped by interactions between students' individual capacities and the intercultural characteristics of host institutions and communities. Within this framework, intercultural competence (IC) has emerged as a central construct for explaining variability in international students' experiences across contexts.

This review synthesizes conceptual and empirical scholarship on intercultural competence and international student adjustment, with particular attention to (a) how IC is defined and operationalized; (b) the multidimensional nature of adjustment; (c) IC as a mechanism shaping social integration, belonging, and well-being; and (d) the relevance of these processes in non-Anglophone, Central and Eastern European contexts such as Poland.

2.1 Defining Intercultural Competence

Intercultural competence (IC) is widely understood as a multidimensional capacity that enables individuals to communicate and interact effectively and appropriately across cultural differences. Rather than being a fixed trait or an automatic outcome of exposure to diversity, IC is generally conceptualized as a developmental process shaped through experience and reflection.

This developmental perspective has been reinforced by a systematic review of intercultural competence in higher education, which concludes that the development of IC depends not only on students' personal attributes but also on educational environments that intentionally promote intercultural learning through curriculum design, institutional practices, and meaningful intercultural engagement (André-Das Dores et al., 2025). This broader

perspective supports understanding intercultural competence as a dynamic capability that develops through reciprocal interactions between individuals and their educational context.

Byram's (1997) model of intercultural communicative competence identifies several interrelated components, including attitudes of openness and curiosity, knowledge of social groups and practices, skills of interpretation and interaction, and critical cultural awareness. Similarly, Deardorff's (2006) process-oriented model emphasizes attitudes (e.g., respect, openness), skills (e.g., observing, listening, evaluating), and internal outcomes (e.g., adaptability, empathy) that together support effective intercultural behaviour.

Empirical research highlights that intercultural competence develops unevenly and depends on the quality of intercultural engagement rather than exposure alone. Studies in European study-abroad contexts show that students may demonstrate increased awareness or openness while still relying on simplified or stereotypical interpretations of cultural difference (Sobkowiak, 2019). This suggests that meaningful development requires sustained, reflective interaction rather than passive immersion.

Importantly, intercultural competence is distinct from language proficiency. While linguistic ability facilitates communication, it does not necessarily lead to intercultural understanding or relational depth. Research indicates that immersion alone does not guarantee the development of IC; instead, factors such as motivation, willingness to engage, and opportunities for meaningful interaction play a central role (Róg et al., 2020). In non-Anglophone contexts, competence in the host-country language may further shape access to social networks and everyday interactions, functioning as a component of intercultural competence rather than a substitute for it (Wąsikiewicz-Firlej et al., 2022).

Recent perspectives also emphasize that intercultural competence is not solely an individual attribute. It is shaped by the broader interactional environment, including the attitudes, behaviours, and practices of host-community members. This relational perspective suggests that effective intercultural engagement depends not only on students' capabilities but also on the responsiveness of the institutional and social context in which interactions occur.

Similarly, Elmechta and Guerniche (2026) argue that intercultural competence extends beyond communicative effectiveness to include critical thinking, reflective judgment, and the capacity to negotiate cultural differences constructively. Their findings further support viewing intercultural competence as a multidimensional process that develops through sustained intercultural engagement rather than through exposure alone.

Taken together, these perspectives support an understanding of intercultural competence as a processual capacity, integrating attitudes, skills, and behaviours that are enacted and reshaped through interaction. This conceptualization underpins its relevance as a mechanism influencing international students' adjustment outcomes.

2.2 Dimensions of International Student Adjustment

International student adjustment is a multifaceted construct encompassing academic, social, and psychological domains, which are analytically distinct but empirically interrelated (Smith & Khawaja, 2011). Difficulties in one domain often spill over into others, producing cumulative effects over time.

Academic adjustment involves adapting to unfamiliar instructional norms, assessment practices, expectations for participation, and communication styles. Linguistic demands, implicit academic conventions, and differences in student–teacher relationships frequently generate early challenges for international students (Wu et al., 2015). Supportive teaching

practices, transparent expectations, and culturally responsive pedagogy have been shown to mitigate these challenges by reducing cognitive load and role ambiguity.

Social integration refers to participation in formal and informal networks that provide access to information, resources, and opportunities (Glass & Gesing, 2018). Integration, however, is not synonymous with belonging. Students may participate in campus activities while still experiencing social marginalization. Sense of belonging reflects the subjective experience of being accepted, valued, and included within a community (Baumeister & Leary, 1995). Belonging has been identified as a robust predictor of engagement, persistence, and well-being, yet it remains particularly fragile for international students navigating unfamiliar cultural norms and social expectations.

Psychological well-being encompasses emotional stability, confidence, and the ability to cope with acculturative stressors such as homesickness, uncertainty, and perceived discrimination (Ward & Kennedy, 2001; Mori, 2000). While stress is common during early stages of transition, successful adjustment may foster resilience, self-efficacy, and confidence that reinforce academic and social functioning over time.

Although these domains are conceptually separable, they are rarely independent in practice. Social isolation may undermine academic confidence, academic struggles may intensify stress, and supportive social relationships may buffer psychological strain. These interdependencies complicate linear models of adjustment and highlight the need for integrative perspectives. Intercultural competence has been proposed as a cross-cutting capability that shapes how students navigate these overlapping demands rather than as a domain-specific outcome in its own right.

2.3 Intercultural Competence as a Mechanism of Adjustment

A consistent finding across adjustment research is that intercultural contact alone does not guarantee positive outcomes. Drawing on the contact hypothesis, scholars have long emphasized that the effects of intergroup contact depend on conditions such as equal status, cooperation, shared goals, and institutional support (Allport, 1954; Pettigrew & Tropp, 2005). Intercultural competence is central to translating contact into meaningful engagement under these conditions.

Qualitative research on European study-abroad experiences indicates that international students often remain embedded within international or co-national "bubbles," limiting opportunities for sustained engagement with host communities (Sobkowiak, 2019). Even when contact occurs, it may remain superficial unless participants possess the skills and dispositions required to interpret difference, tolerate ambiguity, and reflect on their own assumptions. Róg et al. (2020) similarly demonstrate that immersion does not automatically foster IC; instead, students' motivation, willingness to engage, and reflective orientation shape whether contact leads to intercultural learning.

This interpretation is consistent with the synthesis by Gebregergis and Csukonyi (2025), who found that international student adaptation is shaped by the interaction between individual resources, such as communication competence and openness, and contextual conditions, including institutional support, opportunities for social participation, and inclusive learning environments. Their review suggests that intercultural competence functions less as an isolated personal attribute than as a mechanism through which students navigate and benefit from intercultural environments.

These findings underscore the distinction between contact quantity and contact quality. Intercultural competence functions as a facilitating mechanism by enabling individuals to negotiate meaning, manage miscommunication, and sustain interaction across difference.

Rather than guaranteeing integration, IC supports the conditions under which intercultural encounters may develop into relationships that foster social integration and, potentially, a sense of belonging.

2.4 Intercultural Competence, Language, and Contextual Access

Language occupies a complex position within intercultural competence. While English frequently functions as a lingua franca in internationalized programs, reliance on English alone may restrict access to informal interactions and culturally embedded practices in non-Anglophone contexts. Narrative research with international residents in Poland suggests that engagement with the host-country language becomes increasingly salient over time for developing deeper relationships and a sense of social positioning (Wąsikiewicz-Firlej et al., 2022).

This indicates that language proficiency operates as a contextual access mechanism within IC, shaping the range and depth of intercultural encounters available to students. English proficiency may facilitate initial academic participation and functional communication, whereas host-language competence may enable entry into informal social domains, local networks, and everyday cultural practices. In smaller cities with fewer international enclaves, these dynamics may be especially pronounced, amplifying the role of intercultural competence in mediating access to social environments (Gareis, 2012; Wu et al., 2015).

2.5 Intercultural Competence, Reflection, and Psychosocial Resources

Intercultural competence is also linked to psychosocial resources that support well-being and confidence. Qualitative accounts of study-abroad experiences highlight that intercultural encounters often prompt self-reflection, heightened self-awareness, and reconsideration of previously held assumptions (Sobkowiak, 2019). Through reflective engagement, students may develop more adaptive coping strategies and flexible appraisals of intercultural stressors.

Empirical evidence from structured mobility programs further suggests that participation may enhance intercultural attitudes (e.g., openness, tolerance) and skills (e.g., adaptability, conflict management), even over relatively short periods (Sylwia et al., 2023). Although such studies do not directly assess psychological well-being, the competencies identified align with established models linking adaptive coping and social support to adjustment outcomes (Ward & Kennedy, 2001; Zhang & Goodson, 2011).

Accordingly, intercultural competence may contribute indirectly to well-being by enabling supportive relationships, reducing perceived threat in intercultural interactions, and fostering mastery experiences that enhance confidence. These pathways remain underexplored empirically but are theoretically consistent with broader acculturation and stress–adaptation frameworks.

These observations are also consistent with evidence reported by Tang et al. (2024), who found that cultural intelligence contributes to international students' cross-cultural adaptation and, indirectly, to their academic performance. Their findings suggest that the psychosocial benefits associated with intercultural competence extend beyond social interaction and may support broader educational adjustment through enhanced confidence and adaptive engagement.

2.6 The Central and Eastern European and Polish Context

Despite extensive scholarship on international student adjustment, studies remain heavily concentrated in Anglophone destination countries. Central and Eastern Europe (CEE),

including Poland, has experienced substantial growth in international student enrolments over the past decade, yet adjustment dynamics in these contexts remain comparatively underexamined (OECD, 2023). This gap is consequential not only in terms of geographic coverage, but also because the structural and sociocultural conditions of internationalization in CEE differ in important ways from those of long-established international education systems.

In many CEE countries, internationalization is a relatively recent and uneven process, often concentrated within specific programs, institutions, or degree tracks rather than embedded uniformly across the higher education system. While English-medium instruction has expanded rapidly, the broader institutional infrastructure supporting international students, such as intercultural training for staff, routinized support services, and well-established norms for culturally responsive teaching, may still be emergent. As a result, international students' adjustment may depend less on formalized support structures and more on the quality of everyday interactions with faculty, administrative staff, domestic students, and the surrounding community.

The linguistic ecology of non-Anglophone CEE contexts further shapes these dynamics. Although English frequently functions as the primary language of instruction, it often operates as an academic enclave rather than a pervasive medium of social life. Outside the classroom, administrative communication, informal peer interaction, and engagement with the local community typically occur in the host-country language. This creates asymmetrical access to participation, particularly for students with limited host-language proficiency, and places greater emphasis on intercultural negotiation, tolerance of ambiguity, and adaptive communication strategies. In such settings, language proficiency functions less as a standalone skill and more as an enabling or constraining component of intercultural competence.

These dynamics may be especially pronounced in smaller, non-metropolitan cities. Compared with large urban centres, small-city environments tend to offer fewer established international enclaves, less anonymity, and more tightly interconnected social networks. International students are therefore more likely to encounter the same peers, instructors, and staff across multiple settings, increasing the visibility and cumulative impact of both positive and negative interactions. Under these conditions, access to social participation and a sense of belonging may be particularly sensitive to micro-level interactional climates, including perceived openness, respect, and inclusion in everyday encounters.

Existing research conducted in Poland suggests that these contextual features shape international students' experiences in distinctive ways. Studies highlight the salience of host-community attitudes, the limits of English-only participation, and the gradual importance of host-language engagement for deeper social integration over time (Sobkowiak, 2019; Wąsikiewicz-Firlej et al., 2022). At the same time, the relative novelty of internationalization in many institutions means that intercultural competence cannot be assumed to be evenly distributed across faculty, staff, or domestic students. Consequently, international students' adjustment is likely influenced not only by their own intercultural capacities but also by the responsiveness of the institutional and social environment in which they are embedded.

This perspective is consistent with Mohamad and Manning's (2023) conceptualization of belonging as a process co-constructed through institutional engagement rather than solely through students' individual efforts. Their work emphasizes that inclusive institutional practices and meaningful opportunities for interaction play a central role in shaping international students' sense of belonging, reinforcing the view that adjustment is embedded within the quality of the educational environment.

Taken together, these characteristics underscore the importance of examining intercultural competence as a relational and context-dependent phenomenon in CEE settings. Models of adjustment developed primarily in Anglophone contexts, where English is dominant, internationalization is mature, and international students are numerically and socially visible, may not fully capture the mechanisms operating in smaller, non-Anglophone environments. Exploratory, context-sensitive research is therefore necessary to identify how intercultural competence relates to social integration, belonging, and well-being under these conditions and to avoid uncritical transfer of assumptions across educational systems.

2.7 Synthesis and Implications for the Present Study

Across conceptual and empirical literatures, intercultural competence emerges as a cross-cutting capacity that shapes how international students engage academically, socially, and psychologically with their host environments. Research consistently shows that intercultural competence is developmental, depends on the quality of interaction rather than exposure alone, and is influenced by both individual dispositions and contextual conditions.

A key insight from this literature is that intercultural competence operates as a facilitating mechanism rather than a direct outcome. It supports the conditions under which intercultural encounters may lead to meaningful relationships, social participation, and psychological adjustment. At the same time, language proficiency and institutional context shape access to these interactions, particularly in non-Anglophone environments where participation often extends beyond English-mediated academic settings.

Despite these advances, important gaps remain. Existing research has predominantly focused on Anglophone countries, large metropolitan institutions, or short-term mobility programs. As a result, less is known about how intercultural competence relates simultaneously to social integration, sense of belonging, and well-being in small-city, non-Anglophone contexts where internationalization is relatively recent and less institutionalized.

In such settings, everyday interactions may carry greater weight, as students encounter more limited social networks and fewer alternative spaces for participation. This suggests that intercultural competence, both as an individual capacity and as a feature of the interactional environment, may play a particularly salient role in shaping adjustment outcomes.

The present study responds to this gap by examining associations between intercultural competence and multiple dimensions of adjustment among international students at the University of Applied Sciences in Nysa, Poland. By adopting an exploratory and context-sensitive approach, the study aims to identify patterns that can inform future research on international student adjustment in underexamined higher education environments.

3. Methodology

3.1 Context

This study employed an exploratory cross-sectional design combining open-ended qualitative data collection with a systematic quantitative transformation of textual responses. The design was selected to examine preliminary associations between intercultural competence (IC) and adjustment outcomes in a small-sample, under-researched context where standardized survey instruments may insufficiently capture locally situated experiences.

A lexicon-based coding approach was adopted to enable systematic analysis of open-ended narrative data in a small-sample, exploratory research context. This method was selected deliberately to balance qualitative sensitivity with analytic transparency and replicability, particularly in a setting where standardized survey instruments may

insufficiently capture locally situated and interactional aspects of international student adjustment.

Unlike generic sentiment analysis techniques that rely on pre-trained or domain-agnostic dictionaries, the present study employed a theory-driven, manually curated lexicon grounded in established literature on intercultural competence and international student adjustment. Lexical indicators were selected to reflect conceptually relevant dimensions of intercultural attitudes, interactional experiences, and adjustment outcomes, rather than general emotional valence. This distinction is critical, as the aim was not to infer sentiment per se, but to identify patterned evaluative orientations and experiential emphases within participants' narratives.

The lexicon-based approach is particularly suited to exploratory studies with small samples and multilingual participants. Open-ended responses allow participants to frame experiences in their own terms, while lexical aggregation across multiple prompts mitigates the influence of isolated word choices or idiosyncratic phrasing. At the same time, the use of explicit keyword stems and a pre-specified codebook enhances methodological transparency and reduces interpretive opacity often associated with purely inductive qualitative coding.

Importantly, the resulting indices are not treated as precise measurements of intercultural competence or adjustment, but as relative indicators of experiential orientation within the sample. This approach aligns with the exploratory aim of identifying plausible associations and effect directions rather than producing confirmatory or population-level estimates. Limitations associated with language proficiency, response length, and contextual nuance are acknowledged and discussed, and the findings are interpreted accordingly.

By combining open-ended data collection with a transparent, theory-informed lexicon-based transformation, the study offers a replicable and context-sensitive strategy for exploratory research in underexamined higher education settings. The lexicon-based approach was selected not to replace qualitative interpretation, but to provide a transparent and replicable structure for identifying patterns across short, multilingual responses in a small-sample exploratory context.

The study was conducted at the University of Applied Sciences Nysa, Poland. Although several programs are delivered in English, the broader institutional and community environment operates primarily in Polish. This context informed both the focus on intercultural competence as an interactional construct and the decision to adopt an exploratory methodological strategy.

3.2 Participants and Sampling

Participants were international students enrolled at the university. Recruitment occurred through a single email invitation distributed by the International Office, which included a direct link to the questionnaire. Participation was voluntary and uncompensated.

A total of 22 complete responses were received between 16 and 22 September 2025. No incomplete responses were included in the analysis. To preserve anonymity and comply with European data protection requirements, the questionnaire did not collect demographic variables such as age, gender, nationality, language background, program of study, or length of residence. While this limits sample characterization and subgroup analysis, it reduced identification risk in a small institutional context.

Given the exploratory aims and small sample size, the study does not seek population representativeness. Instead, the sample is treated as an information-rich group suitable for

identifying plausible associations and generating hypotheses for subsequent confirmatory research.

3.3 Instrument and Lexicon-Based Coding Procedure

The questionnaire comprised 19 open-ended questions addressing academic adjustment, communication with faculty and peers, social connectedness, experiences of inclusion or exclusion, language-related challenges, intercultural encounters, and well-being/confidence. Questions were researcher-developed and informed by prior literature on international student adjustment and intercultural competence. Responses were typically brief to moderate in length (one to four sentences), reflecting the linguistic demands of completing an English-language questionnaire as non-native speakers.

To enable systematic analysis, participants' narratives were transformed into construct-specific lexical indices using a theory-driven, manually curated lexicon-based coding approach. A codebook was developed prior to analysis and refined iteratively. The lexicon was developed through a theory-driven process informed by prior research on intercultural competence and student adjustment. Keyword stems were iteratively refined to ensure conceptual relevance and to minimize ambiguous or spurious matches. The aim was not to capture general sentiment, but to identify theoretically meaningful evaluative orientations within participants' responses.

For each construct (intercultural competence, academic adjustment, social integration, sense of belonging, and well-being/confidence), the codebook specified:

- an operational definition grounded in prior research,
- a set of positive keyword stems (e.g., open-minded, welcoming, support, confident),
- a set of negative keyword stems (e.g., isolated, excluded, confused, anxious),
- and the questionnaire prompts in which those indicators were theoretically relevant.

Keyword stems were selected to capture common inflectional variants (e.g., adapt, belong, support) while minimizing spurious matches. All lexicons were English-language and manually curated rather than derived from generic sentiment dictionaries.

Responses were processed using a case-insensitive string-matching procedure. For each participant and construct, a net lexical score was calculated as:

Net score = (number of positive indicators) − (number of negative indicators)

Scores were aggregated across all questions mapped to the construct. These indices are interpreted as relative indicators of experiential emphasis rather than as precise measurements of psychological constructs.

For example, a response such as "I feel supported by classmates but sometimes isolated" would yield both positive (support) and negative (isolated) indicators within the social integration construct, resulting in a balanced or near-zero net score.

Given the exploratory design, formal inter-coder reliability was not calculated. Instead, consistency was ensured through the use of a pre-specified codebook, standardized keyword stems, and uniform application of case-insensitive string-matching procedures across all responses.

Because responses were provided in English by non-native speakers, lexical scores may also reflect differences in language proficiency and expressive range, in addition to underlying experiences.

The intercultural competence (IC) index intentionally integrated language referring both to students' self-reported intercultural attitudes and skills and to their perceptions of intercultural responsiveness among faculty, staff, and peers. This reflects a relational conceptualization of IC as an interactional capacity embedded within a specific institutional environment.

Compared with fully qualitative coding or standardized survey instruments, this approach offers a balance between contextual sensitivity and analytic transparency in small-sample exploratory research.

3.4 Analytic Strategy

Given the small sample size and non-normal score distributions, associations between continuous IC scores and adjustment outcomes were explored using Spearman rank-order correlations (two-tailed). For complementary group-based contrasts, IC scores were divided into tertiles (Low, Mid, High) to preserve score variability while avoiding dichotomization. Differences between High-IC and Low-IC groups were examined using Mann–Whitney U tests with exact permutation p-values, with effect sizes reported as *r*.

Given the small sample size, these analyses are interpreted descriptively and are intended to identify patterns rather than to support inferential conclusions.

3.5 Ethics Statement

Recruitment was conducted via the university's International Office because the researchers were not authorized to access international students' email addresses under European data protection requirements. Participation was voluntary and uncompensated. Informed consent was presented at the beginning of the online questionnaire, and only students who indicated consent proceeded to the survey. Responses were collected anonymously; participants were instructed not to include identifying information in open-text fields.

4. Results

Given the exploratory design and small sample size, results are interpreted as indicative patterns rather than as inferential findings.

4.1 Descriptive Patterns

Across outcomes, mean scores were higher in the High-IC group than in the Low-IC group, with the largest differences observed for social integration and well-being/confidence. Mid-IC values generally fell between Low and High.

Table 1.

Means of Outcome Measures by Intercultural Competence (IC) Tertile

Outcome Measure	Low-IC (n = 9)	Mid-IC (n = 5)	High-IC (n = 8)
Academic Adjustment	0.67	1.00	1.75
Social Integration	0.67	1.60	4.75
Sense of Belonging	−0.11	0.60	1.00
Well-being/Confidence	0.78	1.00	1.25

Note. Values are lexical net scores (positive minus negative stem counts) aggregated across mapped questions for each construct.

These patterns are reflected in participants' descriptions of their experiences. For example, students reporting more positive experiences frequently described supportive interactions, such as "my classmates help me and include me in activities," whereas others

expressed more limited engagement, noting that "it is sometimes hard to connect with people."

4.2 Associations Between IC and Outcomes

Intercultural competence showed positive associations with all examined outcomes. The strongest and most consistent patterns were observed for social integration, followed by sense of belonging and well-being/confidence. The association with academic adjustment was positive but less pronounced and less consistent.

Table 2.

Spearman Correlations Between IC and Outcomes (N = 22)

Outcome Measure	ρ	p
Social Integration	.62	.002
Sense of Belonging	.48	.024
Well-being/Confidence	.45	.035
Academic Adjustment	.39	.076

Note. Exact/permutation p-values reported where available; minor variation can occur across exact vs. asymptotic methods.

These patterns are also reflected in participants' narratives. For instance, some students described increased ease in interaction, noting that "I feel more comfortable talking to others and making friends," while others reported challenges such as "sometimes I feel left out in group activities."

4.3 High-IC vs Low-IC Comparisons

Comparisons between High-IC and Low-IC groups showed clear differences for social integration and sense of belonging, with higher-IC students reporting more positive experiences. Differences in well-being/confidence and academic adjustment also favoured the High-IC group, although these patterns were less pronounced.

Table 3.

Mann–Whitney U Tests: High-IC vs. Low-IC

Outcome Measure	U (min)	p (exact, permutation)	r
Social Integration	9.5	.009	.62
Sense of Belonging	16.5	.035	.46
Well-being/Confidence	21.0	.141	.35
Academic Adjustment	23.0	.210	.30

Note. U reported as **min (U_1, U_2)**. Effect size r computed as $|z|/\sqrt{N}$ using the normal approximation without tie correction to match manuscript reporting.

These group differences are consistent with participants' accounts. Students with higher IC more frequently described positive interactions, such as "people are welcoming and I feel included," whereas lower-IC responses included statements such as "it is difficult to connect with others" or "I feel isolated sometimes."

These patterns suggest that intercultural competence is more closely aligned with relational and psychosocial dimensions of adjustment, particularly social integration and sense of belonging, than with academic adjustment within this sample.

5. Discussion

This exploratory cross-sectional study examined associations between intercultural competence (IC), conceptualized as both individual intercultural capabilities and perceived host-environment responsiveness, and multiple dimensions of adjustment among international students in a small-city Polish university context. This study contributes to the literature in three ways. First, it examines intercultural competence in a small-city, non-Anglophone context that remains underrepresented in existing research. Second, it conceptualizes IC as a relational construct incorporating both individual capabilities and perceived responsiveness of the host environment. Third, it provides exploratory evidence that IC aligns more strongly with social and psychosocial dimensions of adjustment than with academic adjustment.

The findings indicate that intercultural competence is most strongly and consistently associated with social integration and a sense of belonging, with more moderate associations observed for well-being and confidence, and a comparatively weaker and less consistent association with academic adjustment. These interpretations should be understood as exploratory and indicative rather than as evidence of causal relationships.

The strongest patterns were observed for social integration and a sense of belonging. Students with higher IC reported more extensive social connections and stronger feelings of acceptance within the university community. These findings align with prior research suggesting that intercultural skills and orientations facilitate the development of friendships, access to social capital, and sustained participation in campus networks (Gareis, 2012; Glass & Gesing, 2018). They also support theoretical perspectives that conceptualize belonging as a relational outcome grounded in repeated experiences of inclusion and recognition (Baumeister & Leary, 1995).

The present findings are also consistent with broader evidence indicating that international student adjustment emerges through the combined influence of individual and contextual factors rather than either dimension alone (Gebregergis & Csukonyi, 2025). By conceptualizing intercultural competence as encompassing both students' capabilities and perceived host-environment responsiveness, the present study extends this perspective by emphasizing the relational nature of intercultural competence within small-city, non-Anglophone higher education settings.

In small-city contexts, where social networks are more limited and interactions more recurrent, the quality of everyday encounters may have a disproportionate impact on students' experiences. For example, inclusive behaviours such as being invited to group activities, receiving informal support from classmates, or experiencing openness in classroom interactions may reinforce belonging. Conversely, exclusion from group work, limited engagement from peers, or difficulty participating in informal interactions may hinder integration. Intercultural competence may therefore function as an enabling resource that shapes whether initial contact develops into sustained and meaningful relationships.

Intercultural competence was also positively associated with well-being and confidence, consistent with acculturation and stress–adaptation models that emphasize the role of coping resources and social support in psychological adjustment (Ward & Kennedy, 2001; Zhang & Goodson, 2011). Students who are better able to navigate intercultural interactions may be more likely to interpret challenges as manageable, seek support, and build confidence through successful experiences. In smaller and less internationalized environments, these processes may be particularly salient due to reduced anonymity and more limited access to co-national networks.

The association between intercultural competence and academic adjustment was positive but weaker and less consistent than for social and psychological outcomes. This pattern suggests that academic adjustment may be influenced more strongly by proximal factors such as language proficiency, familiarity with academic conventions, and discipline-specific expectations. For example, students may experience challenges related to unfamiliar grading systems, expectations for participation, or academic writing norms even when they demonstrate strong intercultural openness. Intercultural competence may support academic functioning indirectly through improved communication and collaboration rather than exerting a strong direct influence.

A distinctive feature of this study is its relational conceptualization of intercultural competence. The findings suggest that adjustment is shaped not only by students' own intercultural capabilities but also by the interactional climate created by faculty, peers, and institutional practices. In contexts where internationalization is relatively recent, variability in everyday interactions may have heightened consequences for students' opportunities to participate and feel included. These results support perspectives that view intercultural competence as a shared responsibility rather than solely an individual attribute.

6. Limitations

Several limitations constrain the interpretation of the present findings and should be considered when evaluating their scope and implications.

First, the small sample size (N = 22) limits statistical power and precision. While effect sizes and directional patterns were consistent, particularly for social integration and sense of belonging, smaller associations, such as those involving academic adjustment, may be unstable or under-detected. The findings should therefore be interpreted as indicative rather than definitive, serving to identify plausible relationships rather than to estimate population parameters.

Second, the cross-sectional design precludes causal inference. Although higher intercultural competence was associated with more favourable adjustment outcomes, the direction of influence cannot be established. It is plausible that stronger adjustment facilitates the development or expression of intercultural competence, that intercultural competence supports adjustment, or that both processes operate reciprocally over time. Longitudinal designs are required to disentangle these dynamics and to model change trajectories.

Third, the study relied on a lexicon-based transformation of open-ended responses, which introduces specific measurement constraints. Lexical indices are sensitive to language proficiency, response length, and evaluative style; participants who write more extensively or use a broader range of affective language may receive higher net scores even when underlying experiences are comparable. Although aggregation across multiple prompts was used to mitigate the influence of isolated word choices, lexical indicators cannot fully capture implicit meanings, culturally patterned understatement, or contextual nuance. As such, the indices should be understood as relative indicators of experiential emphasis rather than as precise measures of competence or adjustment.

Fourth, the operationalization of intercultural competence intentionally integrates references to both students' own intercultural orientations and their perceptions of host-environment responsiveness. While this relational approach aligns with theoretical perspectives that locate adjustment within interactional and institutional contexts, it limits the ability to disentangle whether observed associations are driven primarily by student capabilities, by the intercultural climate of the host environment, or by their interaction.

Future research should employ distinct measures for student intercultural competence and host-community intercultural practices to examine their independent and joint contributions.

Fifth, the absence of demographic and contextual variables, including language background, length of stay, program type, or prior international experience, precludes analysis of moderation effects. Adjustment processes may differ systematically across these dimensions, and their omission limits explanatory depth. This design choice reflected ethical and practical constraints related to anonymity in a small institutional context but nonetheless restricts generalizability.

Finally, the study was conducted at a single institution in a small-city Polish context, which further limits external validity. Institutional culture, local community characteristics, and the maturity of internationalization efforts vary widely across Central and Eastern Europe. The findings should therefore be interpreted as context-sensitive rather than representative of international students' experiences in Nysa, Poland, or the region more broadly.

Taken together, these limitations underscore the exploratory nature of the study. Rather than diminishing the value of the findings, they clarify the conditions under which the results are informative and highlight specific directions for future research using larger samples, triangulated methods, and longitudinal designs.

7. Implications and Future Research

The present findings have several implications for international student adjustment in small-city, non-Anglophone higher education contexts. Although the study is exploratory and based on a relatively small sample, it offers insights that may inform how intercultural competence is conceptualized and supported in similar educational settings.

From a theoretical perspective, the study contributes to the literature by supporting a relational understanding of intercultural competence. Rather than viewing intercultural competence solely as an individual capability, the findings suggest that its influence on adjustment emerges through the interaction between students' own intercultural capacities and the responsiveness of the host environment. The stronger associations observed with social integration and sense of belonging than with academic adjustment indicate that intercultural competence may operate primarily as a mechanism that facilitates meaningful interpersonal relationships and inclusion within the university community. This perspective extends existing models of international student adjustment by emphasizing the reciprocal nature of intercultural adaptation in contexts where opportunities for intercultural interaction are relatively limited.

The findings also have practical implications for higher education institutions seeking to enhance international students' experiences. Universities may benefit from moving beyond academic support alone by creating environments that encourage meaningful interaction between domestic and international students. Initiatives such as peer mentoring, intercultural workshops, collaborative learning activities, and professional development for academic and administrative staff may strengthen students' sense of belonging and social integration. Because the present findings suggest that relational experiences are closely associated with adjustment, institutional efforts to foster inclusive campus communities may be as important as academic assistance in supporting international students.

At the policy level, the study suggests that institutional internationalization strategies should place greater emphasis on the quality of intercultural engagement rather than focusing exclusively on international student recruitment. Policies that promote intercultural competence among students, faculty, and university staff, together with mechanisms for monitoring students' social integration and sense of belonging, may contribute to more

inclusive learning environments. Such considerations may be particularly relevant for universities in Central and Eastern Europe and other emerging international education destinations where internationalization is still developing and support structures continue to evolve.

Finally, the study provides several directions for future research. Given the exploratory design and limited sample size, the findings should be interpreted as indicative rather than conclusive. Future studies should examine these relationships using larger and more diverse samples across different institutional and national contexts. Longitudinal and mixed-methods research would further enhance understanding of how intercultural competence develops over time and how institutional practices shape international students' academic, social, and psychological adjustment. Such research would help determine the extent to which the patterns identified in this study are transferable to other higher education settings.

8. Conclusion

This exploratory study examined the relationship between intercultural competence and international student adjustment in a small-city, non-Anglophone higher education context. The findings suggest that intercultural competence is more closely associated with social integration, sense of belonging, and well-being than with academic adjustment, highlighting the importance of everyday intercultural interactions in shaping students' experiences beyond the classroom.

By focusing on an underexplored Central and Eastern European context, the study contributes to a more context-sensitive understanding of international student adjustment. Rather than viewing intercultural competence solely as an individual capability, the findings are consistent with conceptualizing intercultural competence as a relational construct shaped through interactions between students and the institutional and social environments in which they are embedded. This perspective broadens existing discussions of adjustment by emphasizing that successful internationalization depends not only on students' capacities but also on the responsiveness of host institutions and communities.

Although the findings are exploratory and derived from a small sample, they provide a basis for further investigation of intercultural competence across diverse higher education settings. Future research employing longitudinal, comparative, and mixed-method designs could build on this work by examining how institutional practices and intercultural responsiveness interact with students' own capabilities to influence adjustment over time.

Declaration on Generative AI Use. The authors used a generative AI tool for language editing (e.g., grammar and clarity). All analytical decisions, interpretations, and final wording were reviewed and approved by the authors, who take full responsibility for the submitted manuscript**.**

Ethical Declaration. The study was conducted in accordance with the ethical principles applicable to research involving human participants. Participation was voluntary, and the participants were informed about the purpose and nature of the study. Informed consent was obtained from the participants prior to their participation. The data were collected anonymously and treated confidentially, and no personally identifiable information was disclosed. Ethical approval was not required according to the applicable institutional procedures.

Funding Statement. The authors received no financial support for the research, authorship, or publication of this article.

Conflict of Interest. The authors declare that they have no conflict of interest related to this article.

Data Availability. Data are available upon request.

Author Contribution. Boualem Benghalem: Conceptualization, methodology, investigation, data analysis, and writing of the original draft.

Małgorzata Kamińska: Conceptualization, methodology, data collection, interpretation of the findings, critical review, and editing of the manuscript.

Both authors contributed to the development of the article, approved the final version of the manuscript, and agreed to be accountable for all aspects of the work.

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