Article

Journal of International Students
Volume 16, Issue 17 (2026), pp. 283-312
ISSN: 2162-3104 (Print), 2166-3750 (Online)
jistudents.org
https://doi.org/10.32674/ada85240

Peer Networks as Epistemic Infrastructure: Rethinking Social Support among Turkish Students in Russian–Medium Higher Education

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ABSTRACT

This study reports a secondary analysis of phenomenologically informed, semistructured interviews with 15 Turkish undergraduate and graduate students at three universities in Moscow and examines how peer networks function beyond emotional buffering to support academic engagement and institutional navigation in Russian–medium higher education. Drawing on social support theory, communities of practice, and community cultural wealth perspectives, reflexive thematic analysis was used to develop three themes: emotional buffering, through which peer networks provided psychological protection and cultural continuity; epistemic infrastructure, through which peers mediated access to disciplinary knowledge, institutional expectations, and academic survival strategies; and cumulative institutional literacy, through which students moved from reactive coping to proactive navigation and transmitted navigational capital across cohorts. The findings extend the dominant social support literature by developing the concept of epistemic infrastructure— peer networks in linguistically demanding academic environments operating not only as psychological buffers but also as structured channels through which institutional knowledge is generated, distributed, and transmitted across student cohorts.

Keywords: peer networks, social support, epistemic infrastructure, international students, Russian–medium higher education, institutional navigation, communities of practice

Received: April 6, 2026 | **Revised**: June 27, 2026 | **Accepted:** July 10, 2026

INTRODUCTION

For international students navigating linguistically demanding and institutionally opaque academic environments, peer networks often provide the knowledge needed to participate, persist, and succeed. However, the dominant framing of social support in international student research remains largely psychological, emphasizing emotional comfort and stress reduction. While some studies have focused on informational and instrumental dimensions of peer support, including peer tutoring and academic guidance, the role of peer networks in mediating access to institutional knowledge, disciplinary practices, and academic survival strategies remains comparatively undertheorized. This limitation is particularly consequential in non-Anglophone higher education contexts, where linguistic distance and bureaucratic complexity intensify students' dependence on peer-mediated guidance (Cohen & Wills, 1985; Glass & Westmont, 2014; Poyrazli & Lopez, 2007; Smith & Khawaja, 2011).

Russia provides a theoretically productive context for examining these dynamics. Its combination of expanding international enrollment, dense academic Russian, opaque bureaucratic procedures, and formal institutional norms creates conditions in which peer-mediated knowledge may be not merely helpful but constitutive of students' capacity to participate (Rostovskaya et al., 2025; President of the Russian Federation, 2024). Within this context, Turkish students occupy a particularly informative position: their combination of partial cultural familiarity with the post-Soviet space and substantial linguistic distance from academic Russian makes them especially sensitive to the conditions under which peer networks perform epistemic rather than merely emotional functions. The structural conditions of Russian–medium higher education are examined in detail in the context section.

Drawing on phenomenologically informed, semistructured interviews with 15 Turkish undergraduate and graduate students at three universities in Moscow, this study examines how peer networks function in supporting academic engagement and institutional navigation. The study addresses the following research question:

> *How do peer networks function beyond emotional buffering to support Turkish students' academic engagement and institutional navigation in Russian–medium higher education?*

This article makes three contributions. First, it extends the dominant social support literature by showing that peer networks function not only as psychological buffers but also as channels of epistemic access. Second, it uses communities of practice and community cultural wealth perspectives to explain how peer-mediated knowledge, academic strategies, and navigational capital are generated and transmitted across student cohorts. Third, by focusing on Russian–medium higher education, it contributes empirical evidence from a non-Anglophone context that remains underrepresented in research on international students.

LITERATURE REVIEW

Social Support and International Student Adjustment: An Established but Incomplete Account

Social support has long been recognized as a key determinant of international students' psychological well-being, academic engagement, and persistence. Building on Cohen and Wills's (1985) distinction between the direct and buffering effects of social support, a substantial body of research shows that peer relationships, conational networks, family ties, and institutional support reduce acculturative stress and strengthen belonging and academic confidence (Glass & Westmont, 2014; Poyrazli & Lopez, 2007; Smith & Khawaja, 2011; Yeh & Inose, 2003). Peer relationships, in particular, have been identified as a proximal and readily available source of support, with conational networks providing emotional comfort and cultural familiarity and mixed peer relationships supporting language development and academic integration (Akanwa, 2015; Arslan & Polat, 2023). Recent systematic evidence confirms that social support remains a robust predictor of international students' academic adjustment across diverse national contexts, although the mechanisms through which support operates vary considerably by institutional setting and student background (Sari et al., 2026).

However, this literature has largely conceptualized peer networks in psychological terms. Most studies focus on perceived support, loneliness, and acculturative stress, making them well suited to capturing buffering functions but less able to explain how peers mediate access to knowledge, institutional expectations, and academic strategies.

Social Support in Non-Anglophone Higher Education Contexts

This limitation is particularly consequential in non-Anglophone higher education contexts, where linguistic distance, bureaucratic complexity, and institutional opacity intensify students' dependence on peer-mediated guidance. Research on international students in non-Anglophone systems, including Russia, has documented the distinctive pressures associated with studying through a nonnative language while navigating formal and often opaque institutional environments (Beregovaya & Kudashov, 2019; Fedotova, 2021; Makeeva et al., 2021; Volkova & Kolesov, 2022; Vershinina et al., 2016).

However, even in this literature, peer networks are usually analyzed as sources of comfort and stress reduction rather than as epistemic resources. The specific ways in which peers transmit institutional knowledge, model academic survival strategies, and generate navigational capital remain underexplored.

The Epistemic Functions of Peer Networks: A Gap in the Literature

Beyond the international student literature, research on organizational learning and knowledge management has examined how tacit knowledge is generated and transmitted through social interaction. Nonaka's (1994) theory of organizational knowledge creation, for instance, distinguishes between explicit and tacit knowledge and argues that tacit knowledge—practical, experiential, and difficult to formalize—is most effectively transmitted through socialization and

shared practice rather than documentation or formal instruction. Applied to peer networks in higher education, this perspective suggests that the procedural, evaluative, and strategic knowledge that experienced students possess is precisely the kind of tacit knowledge that formal institutional channels are structurally ill equipped to transmit. However, this body of work has not been systematically brought into dialog with international student research, leaving the knowledge-generating functions of peer networks theoretically underspecified.

The epistemic functions of peer networks remain undertheorized in international student research. Adjacent scholarship offers useful resources. Research on academic socialization and communities of practice shows how knowledge is distributed through social participation rather than formal instruction alone (Lave & Wenger, 1991; Wenger, 1998). Studies drawing on Yosso's (2005) community cultural wealth framework have similarly examined how marginalized students use peer and community networks to navigate institutional demands (Deil-Amen, 2011). However, these perspectives have not been systematically applied to international student peer networks in non-Anglophone contexts.

While the term "epistemic infrastructure" has appeared in science and technology studies to describe the shared technical and organizational resources that enable knowledge production within research communities (Edwards et al., 2013), it has not been applied to peer networks in international student contexts. Transposing this concept to a different register requires acknowledging what changes in translation: in STS, epistemic infrastructures are typically formal, institutionally maintained, and technologically mediated — research databases, shared instrumentation, standardized protocols. The peer networks examined in this study are informal, relationally maintained, and experientially mediated. What is preserved in the translation is the core structural logic: a collectively maintained channel through which knowledge is generated, stored, and transmitted in ways that enable participation in a given epistemic community. What is lost — or rather, deliberately set aside — is the assumption of formal institutional recognition. It is precisely this absence of recognition that makes peer-generated epistemic infrastructure theoretically significant in the present context.

Theoretical Framework

This study draws on three interrelated theoretical perspectives to examine how peer networks function in Russian–medium higher education: Cohen and Wills's (1985) buffering hypothesis, Lave and Wenger's (1991) communities of practice framework, and Yosso's (2005) community cultural wealth model. Together, these perspectives illuminate how peer networks operate not only as sources of emotional support but also as channels of epistemic access and cumulative navigational learning in non-Anglophone academic contexts.

Social Support and the Limits of the Buffering Hypothesis

Cohen and Wills' (1985) buffering hypothesis remains among the most influential frameworks in the literature on international student social support. It

distinguishes between the direct benefits of social support and its buffering effects under conditions of stress. When applied to international students, the model predicts that peer relationships and other support networks reduce the psychological effects of linguistic, cultural, and institutional adjustment demands (Poyrazli & Lopez, 2007; Smith & Khawaja, 2011; Yeh & Inose, 2003). Empirical research has consistently shown that students with stronger support networks report lower acculturative stress, greater academic engagement, and stronger persistence (Glass & Westmont, 2014).

However, the buffering hypothesis is limited in that it conceptualizes social support primarily as a moderator of stress rather than as a producer of knowledge. In this view, peer networks protect students from the effects of adjustment pressures without altering their access to the institutional and academic knowledge needed to navigate those pressures. The present study argues that this framing is incomplete. In contexts characterized by linguistic distance, bureaucratic opacity, and institutional formality, peer networks do more than buffer stress: they mediate access to the knowledge required for participation and navigation.

Communities of Practice and Legitimate Peripheral Participation

Lave and Wenger's (1991) communities of practice framework provides a more productive account of how knowledge is acquired through social participation. In this model, learning is a process of increasing participation in shared practices rather than simply an individual's cognitive achievement. Newcomers enter communities as legitimate peripheral participants and, over time, move toward fuller participation through interaction with more experienced members.

Applied to the present study, this framework helps explain how Turkish students in Russian-medium programs gain access to academic and institutional practices through peer networks. More experienced Turkish students function as community members who have already navigated the demands of Russian-medium study. Newly arrived students draw on this accumulated experience to interpret institutional expectations, decode bureaucratic procedures, and develop academic survival strategies. In this sense, peer-mediated learning is not merely supplementary to formal education; it is a key mechanism through which tacit institutional knowledge becomes accessible.

This application of legitimate peripheral participation to a student peer community requires a conceptual qualification. In Lave and Wenger's original formulation, newcomers are peripheral because they lack the expertise that full participants possess—a distinction typically grounded in professional apprenticeship contexts. In the present study, senior Turkish students are not formal experts; they are colearners who have accumulated experiential knowledge through prior navigation in the same institutional environment. What distinguishes them from newcomers is not disciplinary mastery but temporal position: they have already encountered the bureaucratic demands, assessment formats, and disciplinary conventions that newer students are only beginning to face. The peripheral participation of newer students is therefore not a matter of

professional novicehood but of institutional unfamiliarity—and the movement toward fuller participation consists not of acquiring professional expertise but of developing the institutional literacy required to navigate Russian-medium higher education with increasing confidence and strategic awareness.

Community Cultural Wealth and the Productive Resources of Peer Networks

Yosso's (2005) community cultural wealth framework offers a complementary perspective by challenging deficit-oriented accounts of students' social capital. Rather than focusing on what students lack, the framework directs attention to the resources they generate and mobilize within their communities. These include forms of navigational, social, familial, linguistic, and aspirational capital that dominant institutions often fail to recognize.

Applied to Turkish students in Russian–medium programs, this framework reframes peer networks not as compensatory substitutes for missing institutional support but as productive epistemic infrastructures generated through students' own collective experience—a form of navigational capital that is rarely formalized by universities but is often essential to students' academic participation and persistence.

Yosso's framework also highlights the cultural and motivational dimensions of peer support. Peer networks provide not only information but also affirmation, resilience, and shared purpose—functions that complement the epistemic perspective developed through communities of practice and deepen the buffering account offered by Cohen and Wills.

Table 1

Theoretical Frameworks: Explanatory Scope and Limitations in the Present Study

Framework	Core Concept	What It Explains	What It Does Not Explain
Cohen & Wills (1985) Buffering Hypothesis	Social support moderates stress	Emotional protection, psychological well-being, stress reduction through peer relationships	How peer networks produce knowledge, alter institutional access, or generate navigational capital
Lave & Wenger (1991) Communities of Practice	Learning through social participation	How tacit institutional knowledge is transmitted through peer interaction and legitimate peripheral participation	The accumulation of knowledge across cohorts; cultural and motivational dimensions of peer support

Framework	Core Concept	What It Explains	What It Does Not Explain
Yosso (2005) Community Cultural Wealth	Marginalized communities generate productive capital	How peer networks function as generative rather than compensatory resources; navigational and social capital	The epistemic mechanisms through which knowledge is distributed; temporal progression of peer network function

Note. The three frameworks are used as complementary analytic resources rather than as competing theories. Together, they illuminate the emotional, epistemic, and capital-generating dimensions of peer network function that no single framework captures alone.

Taken together, these three perspectives provide complementary analytic resources for examining how peer networks operate simultaneously as emotional buffers, epistemic channels, and generators of navigational capital—functions that no single framework captures alone.

Context: Russian–Medium Higher Education and Turkish Students

Russia has become one of the most significant non-Anglophone destinations for international students, with approximately 389,000 students enrolled in 2024 and a national target of 500,000 by 2030 (President of the Russian Federation, 2024; Rostovskaya et al., 2025). This expansion has been driven by relatively affordable tuition, state-sponsored scholarships, and geographic proximity to sending countries across Central Asia, the Middle East, and Eastern Europe (Beregovaya & Kudashov, 2019). However, the structural conditions of Russian–medium higher education present distinctive challenges that set it apart from more studied Anglophone contexts.

Linguistically, academic Russian functions as an epistemic threshold: preparatory language courses typically develop conversational proficiency but leave students underprepared for discipline-specific registers, dense terminology, and rapid delivery of university lectures, seminars, and oral examinations (Beregovaya & Kudashov, 2019; Fedotova, 2021). Institutionally, Russian universities are characterized by formal, instructor-centered pedagogical norms, hierarchical classroom cultures, and opaque administrative procedures—including visa renewal, dormitory registration, and document verification—that generate chronic bureaucratic load alongside academic demands (Vershinina et al., 2016; Makeeva et al., 2021). International students navigate these conditions with limited formal guidance, making peer-mediated knowledge especially consequential for their capacity to participate and persist.

Within this context, Turkish students represent a growing and theoretically informative subgroup. Turkey is among the top sending countries to Russian universities, and Turkish students occupy a distinctive position: they bring a

historically and geographically grounded familiarity with parts of the post-Soviet space—rooted in Ottoman–Russian geopolitical entanglement and the presence of Turkic and Muslim communities across Russia and Central Asia—yet face substantial linguistic distance from academic Russian and encounter the same institutional opacity as other international students do (Fedotova, 2021; Vershinina et al., 2016). This combination of partial cultural familiarity and significant linguistic distance makes Turkish students especially sensitive to the conditions under which peer networks perform epistemic rather than merely emotional functions—and therefore a strategically productive group through which to examine how peer-mediated knowledge operates in Russian–medium higher education.

METHODOLOGY

Research Approach

This study employs a phenomenological qualitative design to examine how Turkish students experience and make use of peer networks in Russian–medium higher education. This study is interpretive in orientation and seeks to understand how students make sense of peer relationships in terms of their academic engagement and institutional navigation rather than measuring the prevalence of social support. Reflexive thematic analysis (RTA) was used to generate patterned meanings from rich qualitative data (Braun & Clarke, 2006, 2019).

Secondary Analysis and Ethical Transparency

The dataset analyzed in this study was originally collected as part of a broader phenomenological inquiry into Turkish students' academic adjustment in Russian–medium higher education (Ülgen, 2026). That study examined how academic Russian proficiency, bureaucratic load, and social support jointly shape adjustment trajectories, interpreting findings through a study-specific 4A framework developed inductively from the data: Access, referring to language- and information-mediated entry into disciplinary knowledge and institutional expectations; Amplification, capturing how bureaucratic and pedagogical arrangements intensify or mitigate barriers to participation; Authentication, concerning students' perceived recognition and academic legitimacy within institutional environments; and Awareness, denoting the evolving coping repertoire and social support mobilization students develop over time. Peer networks appeared within that analysis as one component of the Awareness theme—specifically as practical and emotional support structures—but their internal epistemic architecture, knowledge-generating mechanisms, and intergenerational transmission functions were not examined as a primary analytic focus.

The present study constitutes a theoretically focused secondary analysis of the same dataset, addressing a research question that the original study neither posed nor answered: How do peer networks function as epistemic infrastructures that generate, distribute, and transmit institutional knowledge across student cohorts? This question requires a different theoretical apparatus — Cohen and

Wills's (1985) buffering hypothesis as a point of critical departure, Lave and Wenger's (1991) communities of practice framework as the primary analytic lens, and Yosso's (2005) community cultural wealth model as a complementary perspective — none of which were employed in the original analysis. The concept of epistemic infrastructure developed in this study is similarly absent from prior work on this dataset: it represents a new analytic contribution produced through the application of these frameworks to data that contained the relevant patterns but had not been analyzed through this lens.

Secondary analysis of qualitative data is a methodologically productive practice when existing material is examined through a genuinely distinct theoretical framework to address a genuinely distinct research question (Heaton, 2004; Irwin & Winterton, 2011). Both conditions are met here. This study does not revisit adjustment broadly; it examines a specific and previously untheorized dimension of the dataset: the ways in which peer networks operate not merely as emotional support structures but as epistemic communities through which institutional knowledge is produced and circulated. This analytic focus is substantively new, theoretically independent, and empirically grounded in data segments that the original coding structure identified but did not develop.

Ethical approval for the original data collection was obtained from the Institutional Review Board of the National Research University Higher School of Economics (HSE), which explicitly permitted use of the data across related academic outputs, including subsequent analyses and manuscript submissions. All the participants provided written informed consent, were informed that their data might be used in related academic work, and were assigned anonymized codes (S1–S15). The secondary analysis was conducted in full accordance with these consent terms and the original ethical approval.

Participants and Sampling

Fifteen Turkish students enrolled in Russian-medium degree programs at three major state universities in Moscow—the National Research University Higher School of Economics (HSE), Peoples' Friendship University of Russia (RUDN), and Lomonosov Moscow State University (MGU)—participated in the study during the 2024–2025 academic year. Purposive sampling was used to recruit information-rich cases with diverse experiences of academic adjustment (Patton, 2002). The inclusion criteria were (1) Turkish citizenship, (2) enrollment in an undergraduate or graduate degree program conducted primarily in Russia, and (3) completion of at least one full academic year in Russia. The third criterion was established to ensure that participants had sufficient experience with the institutional environment to speak meaningfully about peer network function and navigational knowledge—students in their first weeks or months of arrival would lack the accumulated experience necessary to reflect on how peer networks operate over time. Doctoral students were excluded because their institutional position, degree of academic socialization, and relationships with peer networks differ substantially from those of undergraduate and master's students; including them would have introduced a level of heterogeneity that could obscure the

patterns most relevant to the study's focus on course-based academic adjustment and peer-mediated institutional navigation.

The sample varied in age (19–33), sex (8 male, 7 female), level of study, academic field, and duration of residence in Russia (2–3 years). This variation supports a nuanced account of how peer-mediated support is experienced across disciplinary, academic, and biographical contexts. The sample size was sufficient to reach thematic saturation, as established patterns recurred across later interviews, and no substantially new thematic categories emerged during the final stages of coding. The demographic characteristics of the participants are presented in Table 2.

Table 2

Demographic Characteristics of the Participants (S1–S15)

Participant	Gender	Age	Level	Field	Years in Russia
S1	Female	21	Undergraduate	Social Sciences	2
S2	Female	20	Undergraduate	Economics	2
S3	Male	22	Undergraduate	Engineering	2
S4	Male	24	Undergraduate	Medicine	3
S5	Female	23	Master's	International Relations	2
S6	Male	22	Undergraduate	Sports Sciences	2
S7	Female	21	Undergraduate	Engineering	2
S8	Male	26	Master's	Social Sciences	2
S9	Male	25	Undergraduate	Law	3
S10	Female	25	Master's	Economics	2
S11	Male	25	Master's	Journalism	2
S12	Male	23	Undergraduate	Law	2
S13	Female	19	Undergraduate	Social Sciences	2
S14	Female	22	Undergraduate	Engineering	2
S15	Male	33	Master's	Social Sciences	3

Note. Years in Russia indicate total academic years completed at the time of the interview. The current year of study within the program was not systematically recorded as part of the original data collection protocol; academic level (undergraduate/master's) and years in Russia are reported as proximate indicators of participants' stage of study. Institutional identifiers are omitted to preserve participant and study anonymity.

Recruitment Procedures

Participants were recruited for the original study through Turkish student communities in Moscow, including social media groups (WhatsApp, Telegram)

and university networks, as well as via snowball sampling. The full details of the recruitment procedure are reported in the original study (Ülgen, 2026).

Data collection

Data were collected in the summer of 2025 through semistructured interviews conducted face-to-face and via video call (Zoom, WhatsApp, Telegram). The interviews lasted approximately 45–60 minutes, were audio-recorded with participants' consent, and were transcribed verbatim. All the interviews were conducted in Turkish to preserve expressive nuance. Quotations were translated into English by the researcher using a meaning-based approach, with selected excerpts checked against the original Turkish transcripts and, where feasible, shared with participants to confirm their interpretability.

The original interview protocol addressed five thematic areas: academic adjustment, language and communication, cultural differences and daily life, social support, and coping strategies. For the present analysis, segments related to peer relationships, conational networks, study group practices, and institutional navigation were retrieved for focused reanalysis.

Data Analysis

The analysis followed a three-stage procedure. First, all the data segments relevant to peer network function were retrieved from the full dataset using the original NVivo 15 coding structure as a retrieval scaffold. This approach is efficient but carries the risk of anchoring: patterns not captured in the original coding structure might remain undetected. To mitigate this, a subset of five transcripts was selected for open recoding independent of the original structure, with attention to any peer-related segments that had not been previously coded. This process confirmed that the original coding captured the relevant patterns comprehensively and did not reveal substantively new categories, supporting confidence in the retrieval scaffold as an adequate starting point for the secondary analysis. This stage generated a focused subcorpus comprising instances of peer-mediated emotional support, knowledge sharing, academic strategy development, and institutional navigation across all participants.

Second, the subcorpus was subjected to reflexive thematic analysis following Braun and Clarke (2019). Line-by-line coding was conducted in the original Turkish transcripts to preserve participants' meanings, while theme labels and analytic interpretation were developed in English. Theoretical perspectives associated with social support, communities of practice, and community cultural wealth were used as sensitizing concepts to guide interpretation rather than as predefined coding categories.

Third, the candidate themes were reviewed across the dataset, refined through attention to variation and counterpatterns, and organized into a coherent thematic structure. This process resulted in three overarching themes capturing distinct dimensions of peer network function: emotional buffering, epistemic infrastructure, and cumulative institutional literacy.

Trustworthiness and Rigor

Trustworthiness was addressed through the criteria of credibility, dependability, transferability, and confirmability (Lincoln & Guba, 1985). Analytical rigor was supported through iterative engagement with the data, reflexive memoing, attention to variation and counterpatterns, and careful documentation of interpretive decisions across the analytic process. Credibility was further strengthened through repeated reading of transcripts, member checking of selected translated excerpts, and the use of verbatim quotations from the original Turkish. Dependability was supported through a documented audit trail, transferability through the contextual description of participants and the setting, and confirmability through sustained reflexive attention to interpretation and evidence.

Researcher Positionality and Reflexivity

The researcher is a Turkish national who conducted all the interviews in Turkish and has personal experience studying in Russian-medium programs in Moscow. This insider position supported rapport and facilitated nuanced interpretation of participants' accounts of peer relationships and institutional navigation. Moreover, reflexive attention to the risks of normalization and overidentification is needed. Reflexive memoing was maintained throughout both the original and secondary analyses to document interpretive decisions, potential biases, and moments of analytic uncertainty.

One specific moment of reflexive challenge arose during the analysis of digital peer networks. Drawing on my own experience as a Turkish student in Moscow, I initially assumed that Telegram and WhatsApp groups functioned as universally accessible resources—that all Turkish students were equally embedded in these networks and drew on them with equal confidence. As the analysis progressed, however, it became apparent that access was uneven: some newly arrived students had not yet been admitted to established groups, while others, although nominally members, described hesitating to post questions or engage actively, feeling uncertain about whether their contributions would be welcomed. Recognizing this assumption required me to reframe digital peer networks not as flat, open infrastructures but as socially stratified spaces with their own norms of entry and participation—a reframing that sharpened the analysis of epistemic infrastructure in Theme 2.

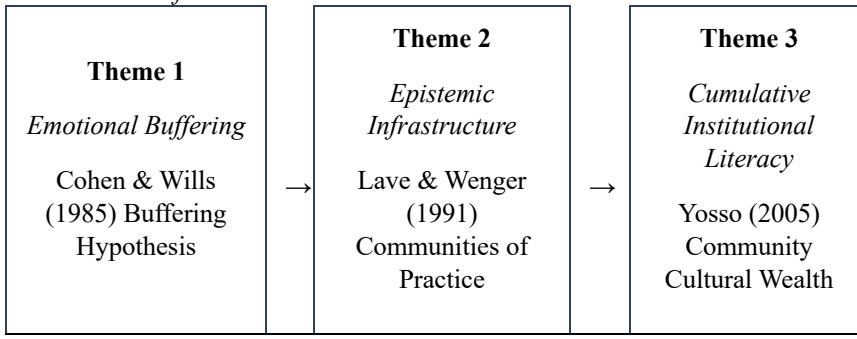
FINDINGS

Through reflexive thematic analysis of the secondary dataset, I developed three interrelated themes: emotional buffering, through which peer networks provided psychological protection and cultural continuity; epistemic infrastructure, through which peers mediated access to disciplinary knowledge, institutional expectations, and academic survival strategies; and cumulative institutional literacy, through which students moved from reactive coping to proactive navigation and transmitted navigational capital across cohorts.

Figure 1 illustrates how these three themes relate to one another and to the theoretical frameworks that inform their interpretation. The themes are analytically distinct but temporally overlapping: emotional buffering is most prominent in the early stages of adjustment, epistemic infrastructure develops as students gain familiarity with the institutional environment, and cumulative institutional literacy emerges through sustained peer engagement over time. Together, they constitute a progressive architecture of peer support that moves from psychological protection to structured epistemic access to intergenerational knowledge accumulation.

Figure 1

Three Themes of the Peer Network Function and Their Theoretical Frameworks



Note. The three themes are analytically distinct but temporally overlapping. The arrows indicate analytical progression rather than a strict temporal sequence—the themes coexist and mutually reinforce one another throughout the adjustment process. Each theme is grounded in a corresponding theoretical framework.

Theme 1: Emotional Buffering—Psychological Protection and Cultural Continuity

The first and most consistently documented function of peer networks was emotional buffering: the provision of psychological protection, cultural familiarity, and a sense of belonging that sustained students through cross-cultural academic adjustment. This theme aligns most directly with Cohen and Wills's (1985) buffering hypothesis and establishes the baseline against which the study's more novel contributions — epistemic infrastructure and cumulative institutional literacy — can be distinguished.

Participants described Turkish peer communities as their primary source of emotional stability, particularly in the early months of arrival. The shared language created spaces of cognitive and affective relief in which students could express vulnerability without the effort that Russian-medium settings demanded. S13, the youngest participant at 19, described the peer community in explicitly familial terms:

"They became like a second family to me. The older Turkish students—they understood what I was going through without having to explain it. They had been

there. They did not judge me. When I first arrived and cried, wanting to go home, they understood and said 'it passes.' That trust kept me going."

S6 described peer gatherings as restorative spaces following difficult weeks:

"Sometimes after a very hard week, we would just get together, cook Turkish food, speak Turkish, watch something from home. It sounds simple, but it completely reset me. I could face the next week."

The cultural continuity function was particularly salient for S4, a medical student who articulated why Turkish peer support offered something that Russian classmates could not:

"My Russian classmates were kind. However, they could not understand what it means to study medicine in a language that is not yours, in a system that is not yours. Only Turkish students understood that. That shared understanding—it was a kind of strength."

For S7, emotional buffering operated through recognition rather than advice—being heard in one's own language, without having to explain the full institutional context—was itself a form of support. S1 described the peer community as providing something beyond general comfort:

"They were like guardian angels in practical terms: which doctor to go to, where to buy things cheaply, how a particular professor's exams work. All of this 'hidden code' — they gave it to me. In addition, psychologically, getting together and speaking Turkish, drinking tea—it provided belonging. You felt you were not alone."

While emotional buffering was universal across the dataset, references to peers who 'decoded the system' and transmitted 'hidden codes' pointed toward functions extending well beyond comfort. The metaphor of a 'code' is analytically significant: it implies that the institutional environment operates according to rules that are real and consequential but neither written nor officially communicated — rules that must be learned through insider knowledge rather than formal instruction. This framing anticipates the epistemic infrastructure examined in Theme 2, where peer networks emerge as the primary channel through which such codes are stored, interpreted, and transmitted.

Theme 2: Epistemic Infrastructure—Peer-Mediated Access to Knowledge and Institutional Navigation

The second and analytically central theme concerns the epistemic functions of peer networks: the ways in which peers mediated students' access to disciplinary knowledge, institutional expectations, bureaucratic procedures, and the tacit rules of participation in Russian–medium higher education. By epistemic infrastructure, I mean the structured, collectively maintained channels through which institutional and disciplinary knowledge is generated, stored, and

transmitted across student cohorts—an informal but persistent architecture of shared knowing that enables participation in academically and bureaucratically demanding environments. Unlike individual strategies or one-off exchanges, epistemic infrastructure refers to the durable, community-level structures through which knowledge accumulates and circulates: Telegram and WhatsApp groups that persist across cohorts, mentoring norms that connect senior and junior students, and shared repertoires of institutional practice that outlast any individual member. This function is not adequately captured by the buffering hypothesis alone and requires Lave and Wenger's (1991) communities of practice framework to theorize adequately.

Participants consistently described a structural gap between what official university channels communicated and what students actually needed to know. Senior Turkish students functioned as the primary bridge across this gap—not as emotional supporters but as carriers of accumulated institutional knowledge that formal channels neither provided nor made accessible. S1 described this function with particular clarity:

"The older Turkish students gave us everything—which doctor to go to, where to buy things cheaply, how a particular professor's exams work, what the dormitory administration actually requires versus what they say they require. This is knowledge you cannot obtain from anywhere official. They decoded the system for us."

S3 identified the same structural dynamic from a different disciplinary position:

"Sometimes the rule changes, but only Russian students know it. We determine later—from them or from older Turkish students. The official channels are not reliable for us. The real information comes from the network."

Complementary Network Types: Conational and Mixed Peer Networks

A key analytical distinction emerged between two structurally distinct forms of peer networks. Conational Turkish networks functioned primarily as channels for emotional support and accumulated institutional knowledge specific to international student experience. Mixed networks involving Russian domestic students functioned primarily as channels for disciplinary knowledge and academic language acquisition, enabling access not only to information but also to disciplinary ways of thinking. These types were complementary rather than interchangeable, and the distinction has direct implications for institutional support design. This complementarity was described with particular clarity by S8:

"Turkish friends told me the practical things—what to do, where to go, what to expect. However, when I actually had to do those things, I thought about it and acted. In addition, Russian friends taught me how to behave and how to react when I encountered something—because they were citizens of this country. Turkish friends gave me the map. Russian friends showed me how to move through the territory."

The account of S8 illustrates that conational and mixed networks were not interchangeable but sequentially and functionally complementary: Turkish peer networks provided the anticipatory knowledge needed to prepare for institutional encounters, whereas Russian peer networks provided the embodied, citizenship-grounded knowledge needed to navigate those encounters in real time.

The epistemic infrastructure function extended directly into academic learning. S2 described how real learning in economics occurred through peer-mediated interaction rather than through lectures:

"Before university, I studied economics terms in English. Then, in class, I heard them in Russian. However, real learning occurred when I studied with Russian classmates and Turkish students together. They explained the concepts in context—how the professor uses them and what the exam expects. That is different from a dictionary."

S2's account points to a specific mechanism of peer-mediated learning that goes beyond information transfer: the contextual reactivation of prior knowledge. S2 had encountered economics terminology in English before arriving in Russia and had heard those terms again in Russian during lectures, but neither exposure alone produced functional understanding. It was the peer-mediated encounter, in which concepts were explained in context — how a specific professor uses a term, what an exam expects from a student who deploys it — that completed the learning. This is not translation, nor is it coconstruction of entirely new knowledge; it is the situated interpretation of existing knowledge through the lens of shared institutional experience. This mechanism is precisely what Lave and Wenger (1991) describe as learning through legitimate peripheral participation: knowledge becomes accessible not through formal instruction but through participation in a community that already knows how to use it.

S12 developed a systematic peer-dependent study practice that made the epistemic infrastructure function explicit:

"My senior Turkish friend guided me. Following his advice, I began keeping two sets of notes: one taken quickly in class and the other written at home using Turkish sources and conversations with Turkish students to fill in what I had missed. The second set was real learning. The first set alone was useless."

Peer networks were equally consequential in navigating bureaucratic demands. WhatsApp and Telegram groups functioned not only as communication tools but also as persistent knowledge repositories through which institutional information was stored and circulated across cohorts. S5 described their function as follows:

"The Telegram and WhatsApp groups were lifesavers. You could ask a question at any time and obtain three answers within ten minutes. Deadlines, document requirements, which office to go to, what to say when you get there—all of this lived in the group. For example, when I was looking for a source for an

assignment, I asked in the group and within ten minutes three different links had arrived."

The epistemic infrastructure function also extended to academic self-presentation strategies, although an important analytical distinction must be drawn here. The infrastructure itself consists of the collective, durable structures described above: Telegram groups, mentoring norms, and shared repertoires of institutional practice. What S10 and S14 describe below are individual-level uptakes of knowledge transmitted through that infrastructure—strategies learned from peers and adopted as personal practice. These are products of the epistemic infrastructure rather than constituents of it. This distinction matters because it clarifies what "infrastructure" means: not every peer-informed behavior but the community-level channels through which such behaviors become available to be learned in the first place. S10 described developing a systematic practice of written contribution:

"When I realized I could not compete in fast verbal exchanges, I changed my strategy. I focused on written contribution. After discussions, I sent the professor an email presenting my thoughts in a more organized written form. This gave me the chance to control my language and ensured that the professors saw my contribution."

S14 learned the same practice through peer observation rather than formal instruction:

"In project groups, I focused on written contributions. When I could not follow fast-paced talk during meetings, I later organized the meeting notes, completed the missing parts, and sent them by email. In this way, even though I stayed quiet, I could still demonstrate my contribution. I saw another Turkish student do this first — I thought: that is smart. That is how you show what you know when you cannot say it fast enough."

The knowledge transmitted through these networks — procedural, disciplinary, evaluative, and strategic — operates differently from emotional buffering, although the two functions are not mutually exclusive. Where emotional buffering moderates the psychological impact of institutional demands, epistemic knowledge changes what students know and can do within the institutional environment—altering their capacity for participation in ways that stress reduction alone cannot achieve. It is possible, and indeed likely, that successfully navigating an institutional procedure through peer-acquired knowledge also reduces the stress associated with that procedure; the relationship between epistemic access and psychological relief may be reciprocal rather than unidirectional. The analytical distinction drawn here is therefore not between stress-reducing and nonstress-reducing functions but between functions that operate primarily through psychological protection and those that operate primarily through the expansion of institutional knowledge and participatory

capacity—a distinction that the buffering hypothesis, focused on moderation rather than production, is not designed to capture.

Theme 3: Cumulative Institutional Literacy—From Reactive Coping to Proactive Navigation

The third theme concerns the temporal dimension of peer network function: the ways in which students transitioned from reactive coping to proactive navigation and the role that peer networks played in enabling this shift. This theme draws most directly on Yosso's (2005) community cultural wealth framework and illuminates a dimension that neither the buffering hypothesis nor the communities of practice framework fully captures: the accumulation of institutional knowledge not only within individual students but also across student cohorts over time.

Participants consistently described a developmental arc in their relationship to the institutional environment. In the early months, peer networks functioned as reactive resources—sources of emergency information and emotional stabilization. Over time, sustained peer interaction shifted this relationship toward anticipatory and strategic engagement. S8 described this transition as follows:

"In the first year, I was always reacting. Something happened—a document request, a rule change, a deadline—and I scrambled to address it. By the second year, I started to anticipate. I knew the patterns. I tracked deadlines before they arrived. I checked the group channels regularly instead of waiting for something to go wrong. That shift — from reacting to anticipating — happened because of what I learned from the network."

S12 described a parallel arc in academic participation—not simply growing language proficiency but accumulated strategic knowledge about when and how to engage:

"At first, I never raised my hand in class. Then, I learned from older students whose moments were safer—when the professor asked for written responses, when the group was smaller, when I had prepared the exact phrases in advance. I started choosing my moments instead of being chosen by them. That strategic awareness came from watching and listening to more experienced students."

This shift represents what Yosso (2005) terms navigational capital—the capacity to maneuver through institutional constraints. Crucially, this capital was not generated individually but rather collectively, as it accumulated within the peer community through the aggregated experience of multiple cohorts and was transmitted through deliberate mentoring and sustained participation. S5 described this intergenerational characteristic explicitly:

"The students who were here before me gave me everything. Now I try to do the same for students who arrive after me. It is a chain. Each generation of Turkish students learns and then passes it on. The knowledge about how this system works — it lives in the community, not in any document."

This cumulative dynamic transforms individual adaptation into collective resilience—a form of community cultural wealth that participants described as growing more comprehensive with each cohort. S15, the most experienced participant at 33, illuminated the bidirectional character of this exchange:

"My relationship with the Turkish community was different from that of younger students. While I gave them advice from my professional experience, they helped me with current student life and practical information here. For example, the students who had been in Russia longer knew things I did not—about how specific administrative offices worked and which procedures had recently changed. I learned from them. However, I also had things to contribute—professional knowledge, strategic thinking, and a different perspective on the bureaucracy. The exchange went both ways. That is what made the community genuinely useful rather than just a support group."

Peer communities are thus differentiated knowledge systems in which members at different stages contribute complementary forms of capital, making the collective epistemically richer than any individual member alone.

The theme also documents, with analytical honesty, the limits of peer-mediated knowledge. S9 described a situation in which general peer guidance proved insufficient for a highly specific legal dispute, ultimately requiring a Russian friend with specialist knowledge. Similarly, S4 acknowledged that conational peer networks, however well developed, could not substitute for the disciplinary knowledge accessible only through sustained engagement with Russian domestic students. These accounts clarify the scope of peer-mediated knowledge, which is essential for navigating standard institutional demands but requires supplementation for novel or highly context-dependent situations.

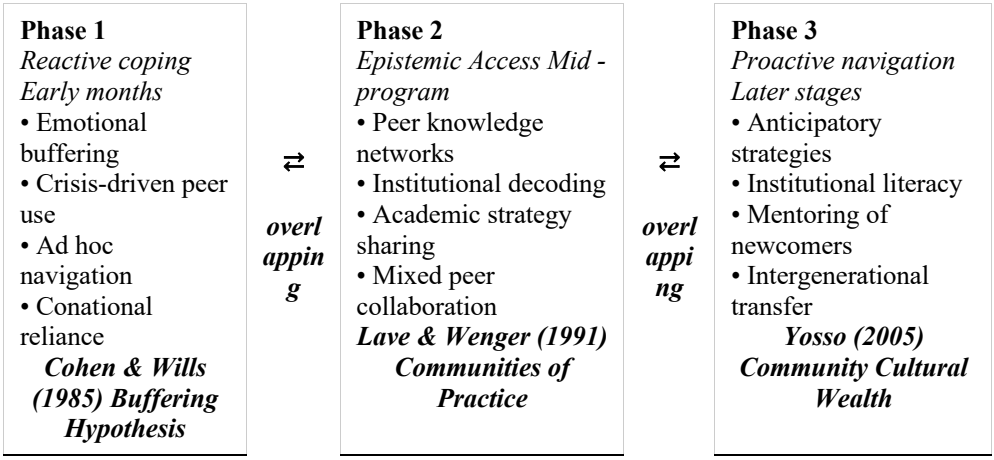
Taken together, the three themes illustrate a progression from immediate emotional stabilization to structured epistemic access to the intergenerational accumulation of navigational capital. This progression is not linear—the themes are analytically distinct but temporally overlapping—and participants consistently described it as extending beyond any individual student's tenure. The knowledge generated within Turkish student peer communities was perceived by participants as persisting and transmitting across cohorts: Senior students described deliberately passing on what they had learned, and newer students described receiving guidance that was accumulated rather than improvised. Whether this perceived accumulation corresponds to an objectively growing epistemic repertoire cannot be established from cross-sectional data; what the data do establish is that participants experienced their peer communities as epistemically cumulative and that this perception itself shaped how they engaged with, contributed to, and drew on those communities.

DISCUSSION

The findings demonstrate that peer networks among Turkish students in Russian–medium higher education perform functions that extend significantly beyond the emotional buffering emphasized in the dominant social support literature. The three themes — emotional buffering, epistemic infrastructure, and cumulative institutional literacy — reveal a progressive architecture of peer support: one that begins with psychological stabilization, moves through structured knowledge distribution, and culminates in the intergenerational accumulation of navigational capital. Each layer performs functions that the preceding layer cannot, and together, they constitute a form of peer-generated institutional infrastructure that formal universities neither recognize nor formally support. The temporal progression of these functions is illustrated in Figure 2.

Figure 2

Temporal Model of the Peer Network Function in Russian-Medium Higher Education.



Note. The figure presents three analytically distinct phases of the peer network function for purposes of conceptual clarity. The double-headed arrows (⇄) indicate analytical progression rather than a strict temporal sequence: In practice, the three phases are temporally overlapping and mutually reinforcing. Emotional buffering does not cease when epistemic access begins; epistemic infrastructure continues to develop as cumulative institutional literacy emerges. The phases are best understood as shifting emphases rather than discrete stages.

Extending the Buffering Hypothesis

The most significant theoretical contribution of this study concerns the extension of Cohen and Wills's (1985) buffering hypothesis. The buffering account explains what peer networks protect students from—the psychological costs of linguistic, cultural, and institutional adjustment. The present findings demonstrate that this account, while empirically robust, is analytically

incomplete: it captures the protective functions of peer networks but not their productive ones. These are not buffering events but epistemic events—moments in which peer interaction produced knowledge, skills, and capacities for institutional participation that were new to the student, even when the underlying information was not novel to the institutional system as a whole. A professor's assessment expectations, a dormitory's documentation requirements, and the unwritten norms of seminar participation—none of these represent knowledge that is new to the university. What peer networks produce is not novel institutional knowledge but newly accessible institutional knowledge: information and practices that exist within the system but remain opaque to newcomers until they are transmitted through peer interaction. This distinction clarifies the epistemic function of peer networks without overstating it: they are not knowledge creators in the strong sense but knowledge distributors and interpreters—and in contexts marked by institutional opacity, this distributive function is no less consequential for students' capacity to participate. This study argues that peer networks in non-Anglophone higher education operate not only as stress moderators but also as epistemic infrastructures—structured communities through which institutional knowledge is generated, distributed, and transmitted in ways that alter what students know and can do within their academic environments.

Peer Networks as Communities of Practice

Lave and Wenger's (1991) communities of practice framework provides the theoretical resources that the buffering hypothesis lacks. Applied to the present findings, the framework illuminates how Turkish student peer networks function as communities defined not by a shared discipline but by a shared institutional position and a shared project of navigating Russian-medium study. Within these communities, more experienced students function as carriers of tacit institutional knowledge that newcomers access through legitimate peripheral participation. This peer-mediated learning is not supplementary to formal education; for many students, it is the primary channel through which tacit institutional knowledge becomes accessible. Crucially, this knowledge does not reside in any individual but is distributed across the community and transmitted through the mentoring relationships that connect more and less experienced members—which Wenger (1998) describes as a shared repertoire that grows more comprehensive with each cohort that contributes to it. Institutions that disrupt this repertoire—through housing policies that separate students by year of study or orientation programs that treat each cohort as starting from zero—may inadvertently undermine the epistemic infrastructure that peer communities have built over time. The institutional implications are specific: mixed-year dormitory arrangements, in which senior and junior international students share living spaces, preserve the proximity through which mentoring relationships naturally form and through which navigational knowledge is informally transmitted. International student houses or themed residential communities organized around shared national or linguistic backgrounds could similarly sustain the intergenerational continuity that makes epistemic infrastructure cumulative rather than episodic. Conversely, policies that assign housing by academic year or that disperse international

students across facilities without regard to community continuity risk fragmenting the peer networks on which students depend—not as a welfare resource but as a primary epistemic infrastructure.

Community Cultural Wealth and the Reframing of Peer Capital

By challenging deficit-oriented accounts of peer communities as compensatory resources, Yosso's (2005) community cultural wealth framework provides a third and complementary lens. The present findings suggest a more productive framing: Turkish student peer networks are not compensatory but rather generative. The navigational capital that senior students possess—procedural knowledge about visa requirements, assessment formats, dormitory documentation, and academic genre conventions—represents the genuine epistemic value that formal institutions neither possess nor distribute. These networks are not passive social resources that students draw on when stressed; they are active epistemic communities that generate, store, and transmit knowledge in ways that formal institutions cannot replicate. The institutional implications are direct: if peer networks are understood as compensatory, the response is to improve formal services so that students rely less on peers. If they are understood as generative, the response is to recognize, support, and leverage their knowledge-producing functions.

The Russian-Medium Context as a Theoretically Productive Case

The Russian-medium context is not merely an empirical setting for this study but also a theoretically productive one. The combination of linguistic distance, bureaucratic opacity, and institutional formality that characterizes Russian–medium higher education creates conditions in which the epistemic functions of peer networks become visible with particular clarity. In Anglophone systems where institutional communication is more accessible and expectations more transparent, peer networks may perform similar functions but with lower intensity and fewer consequences for students' capacity to participate. By examining these dynamics in a non-Anglophone context, this study reveals mechanisms of peer-mediated knowledge distribution that may remain less observable in more studied settings and, in doing so, extends the social support literature to a context that remains significantly underrepresented in international student research (Beregovaya & Kudashov, 2019; Fedotova, 2021; Volkova & Kolesov, 2022).

The Complementarity of Conational and Mixed Networks

The distinction between conational and mixed peer networks documented in Theme 2 has direct implications for institutional support design. Conational Turkish networks primarily supported emotional continuity and the circulation of navigational knowledge specific to international student experience. In contrast, mixed Turkish–Russian networks were especially important for disciplinary learning and academic language acquisition—functions that conational networks, however well developed, could not perform alone. These network types were complementary rather than interchangeable, and students who had access to both reported more comprehensive forms of epistemic support than those who relied

on one type alone did. These findings suggest that institutional programs designed to support international students should facilitate both conational community formation and cross-cultural academic collaboration rather than treat these as competing priorities.

The data also point toward a brokerage function that warrants theoretical attention. Several participants described Turkish students occupying an intermediary position between Russian domestic students and other international student communities—they translated not only language but also institutional logic, facilitating introductions and circulating knowledge across network boundaries that other students could not easily cross. In terms of communities of practice, this is the role of the broker: a participant who, by virtue of membership in multiple communities, can transfer practices, translate meanings, and connect otherwise separate epistemic worlds (Wenger, 1998). Turkish students in Russian-medium programs occupy this position structurally: their partial cultural familiarity with the post-Soviet space gives them greater access to Russian peer networks than many other international students do, while their shared experience of linguistic and institutional outsiderness keeps them embedded in international student communities. This dual membership makes them natural brokers and suggests that their epistemic contribution to the broader international student community may extend beyond their own conational network.

Limitations of Peer-Mediated Knowledge

The findings also point honestly to the limits of peer-mediated knowledge as an epistemic resource. Peer networks function most effectively as a first layer of institutional guidance, and their epistemic scope has identifiable limits that the present findings illuminate. First, peer-distributed knowledge is vulnerable to sudden institutional change: When rules, procedures, or administrative requirements shift without formal announcement, even well-established peer networks may circulate outdated information that misleads rather than guides. Second, peer knowledge is most reliable for recurrent and widely shared institutional demands—visa procedures, dormitory documentation, and standard assessment formats—and becomes less reliable for novel, highly specific, or discipline-dependent situations that fall outside the accumulated experience of the community. S9's account of a legal dispute that required specialist knowledge beyond what Turkish peer networks could provide clearly illustrates this boundary, as does S4's acknowledgment that disciplinary knowledge accessible only through sustained engagement with Russian domestic students could not be substituted by conational peer support alone. Third, the epistemic infrastructure examined in this study presupposes the existence of a prior cohort: students who arrived earlier and accumulated the navigational knowledge that newcomers draw on. For a genuinely first cohort—Turkish students enrolling in a program where no senior Turkish students have studied before—this infrastructure would be absent, and the adjustment demands would fall entirely on individual resourcefulness and formal institutional support. This condition represents both a theoretical limit of the epistemic infrastructure framework and a practical concern for universities expanding international recruitment into new national markets.

These limitations do not diminish the epistemic function of peer networks but clarify their scope: peer communities are primary but not exhaustive sources of institutional knowledge, and the most productive institutional response is to complement rather than replace the infrastructures that students have built.

Situating the Findings in the Broader Literature

Finally, the findings contribute to the literature on academic persistence and integration (Bean & Metzner, 1985; Tinto, 1993) by demonstrating that peer-mediated institutional literacy is a significant determinant of persistence that operates independently of—and in some cases substitutes for—formal institutional support. The uneven distribution of peer-mediated navigational capital may contribute to differential persistence outcomes within international student populations, suggesting that access to peer-generated epistemic infrastructure may be as consequential for persistence as access to formal academic resources.

CONCLUSION

This study examined how peer networks function beyond emotional buffering to support Turkish students' academic engagement and institutional navigation in Russian–medium higher education. The findings showed that peer networks performed three interrelated functions: emotional buffering, epistemic infrastructure, and cumulative institutional literacy. Together, these functions demonstrate that peer support operates not only as psychological protection but also as a means of accessing institutional knowledge, developing academic strategies, and accumulating navigational capital.

More broadly, the concept of epistemic infrastructure developed in this study invites a reorientation in how peer networks are theorized in international student research: not as compensatory responses to institutional inadequacy, not as informal supplements to formal support, but as productive knowledge structures that generate, store, and transmit the institutional literacy on which academic participation depends. In contexts marked by linguistic distance and institutional opacity, peer communities do not merely help students survive—they make participation possible. Formal institutions that fail to recognize this are not simply missing an opportunity to support students more effectively; they are overlooking a form of epistemic infrastructure that their own systems depend on, even as they neither fund it nor protect it nor acknowledge its existence.

Implications for Practice and Policy

At the programmatic level, universities should develop structured peer mentoring systems that connect newly arrived students with more experienced peers to facilitate not only emotional support but also the transmission of institutional knowledge—procedural guidance, assessment expectations, and discipline-specific practices. Orientation programs should create opportunities for peer-mediated knowledge sharing through peer-led sessions and digital platforms

and should explicitly address the gap between general language preparation and discipline-specific academic demands.

At the institutional level, administrative and logistical decisions should be evaluated in terms of their impact on peer community formation and continuity. Policies related to housing, scheduling, and program design can either support or disrupt the intergenerational transmission of knowledge within student communities. Peer-generated knowledge should be complemented rather than replaced by formal support structures. One concrete model for this integration would be cofacilitated workshops in which peer mentors and international office staff jointly address high-stakes procedural demands—visa renewal timelines, dormitory registration requirements, or academic genre conventions—with peer mentors contributing insider knowledge of how procedures actually unfold in practice and institutional staff providing authoritative guidance on formal requirements. Such a model would leverage the experiential knowledge that peer networks generate while anchoring it in reliable institutional information, reducing the risk of outdated or discipline-specific peer knowledge misleading students in high-stakes situations. At the programmatic level, universities could also formalize peer mentoring roles by providing training, recognition, and modest compensation to senior international students who already perform these epistemic functions informally — transforming an invisible infrastructure into a recognized and supported institutional resource.

Limitations

Several limitations should be noted. The study is based on a relatively small sample of Turkish students at three major universities in Moscow and may not represent the experiences of students from other national backgrounds, institution types, or regional contexts. The analysis relies on students' retrospective accounts and does not include the perspectives of Russian students, peer mentors, or institutional staff, all of which would help clarify the broader ecology of knowledge exchange. The cross-sectional design also limits the analysis of how peer network function evolves across a full degree trajectory. Additionally, all participants had completed between two and three academic years in Russia at the time of the interview, meaning that the earliest phase of arrival—when emotional buffering functions may be most acute—could be accessed only retrospectively through participants' recollections rather than through direct observation. This introduces the possibility of recall bias and limits the granularity of the analysis of early-stage peer network function.

The study also did not systematically examine negative or adverse experiences within peer networks. While the dominant pattern across the dataset was mutual support and knowledge sharing, participants also described experiences that complicated this picture: instances of misinformation circulating through group chats—particularly regarding administrative procedures and official requirements—competitive dynamics arising from uneven Russian language proficiency within the Turkish student community and interpersonal tensions that occasionally disrupted peer solidarity. Some participants noted jealousy and social friction between students at different levels of linguistic

development, suggesting that peer communities are not uniformly supportive spaces but rather internally differentiated ones with their own hierarchies and conflicts. The absence of a systematic analysis of these negative cases represents a limitation of the present study; future research should examine both the enabling and the constraining dimensions of peer network participation, including how misinformation spreads, how internal competition shapes knowledge-sharing behavior, and how students who are marginalized within peer communities navigate institutional demands without access to the epistemic infrastructure available to more central members.

The secondary analysis was conducted by the same researcher who collected the original data, which may have introduced interpretive continuities. The study also did not systematically examine how gender shaped access to peer networks or epistemic resources. Given that Turkish and Russian gender norms differ in meaningful ways—particularly with respect to mixed-gender social interaction, public and private role expectations, and academic participation patterns—gender may be a significant moderator of how students access, contribute to, and benefit from peer epistemic infrastructures. Female students, for instance, may face different norms around participation in mixed-gender peer groups, whereas male students may have different patterns of help-seeking and knowledge sharing. These dynamics were beyond the scope of the present study but represent a priority for future research. Future studies should address these limitations through comparative, longitudinal, and multiperspective designs that focus explicitly on gender as an axis of differentiation within peer network participation.

Directions for Future Research

Future research should extend the present findings in several directions. First, multiperspective studies that include domestic students, peer mentors, and institutional staff would provide a more comprehensive understanding of how peer-mediated knowledge circulates across different actors within the academic environment. Second, longitudinal designs are needed to examine how peer network functions evolve and how students transition from initial dependence to proactive navigation. Third, comparative studies across non-Anglophone higher education systems would help assess the transferability of the epistemic infrastructure framework and identify context-specific variations. Finally, future research should examine how students evaluate and update peer-generated knowledge in relation to its reliability and disciplinary specificity.

A particularly important direction concerns cohort discontinuity: how do peer networks function when a cohort has no senior students from the same national background—for instance, when Turkish students enroll in a program where no prior Turkish cohort has studied? This condition represents the complete absence of the epistemic infrastructure documented in the present study, forcing students to rely entirely on individual resourcefulness and formal institutional support. Examining such cases would test the limits of the epistemic infrastructure framework, clarify the conditions under which peer-mediated knowledge accumulation begins, and provide evidence on whether and how students construct epistemic communities from scratch in the absence of inherited

navigational capital. This question has direct practical relevance for universities expanding international recruitment into new national markets, where the absence of established peer communities may significantly increase the adjustment burden on first-cohort students.

Acknowledgment
This work is dedicated to the memory of my brother, İbrahim Halil Ülgen (1 February 1986–10 March 2021). You believed in me before I believed in myself. This one is for you.

The author used generative AI tools to support language refinement and editing during manuscript preparation. All the academic content, citations, and interpretations were created and verified by the author.

REFERENCES

Akanwa, E. E. (2015). International students in western developed countries: History, challenges, and prospects. *Journal of International Students, 5*(3), 271–284. https://doi.org/10.32674/jis.v5i3.421

Arslan, K., & Polat, M. (2023). How well do international students adapt to the Turkish higher education system? *Kastamonu Education Journal, 31*(3), 513–528. https://doi.org/10.24106/KEFDERGI-2022-0044

Bean, J. P., & Metzner, B. S. (1985). A conceptual model of nontraditional undergraduate student attrition. *Review of Educational Research, 55*(4), 485–540. https://doi.org/10.3102/00346543055004485

Beregovaya, O. A., & Kudashov, V. I. (2019). The problems of linguistic and academic adaptation of international students in Russia. *Integration of Education, 23*(4), 628–640. https://doi.org/10.15507/1991-9468.097.023.201904.628-640

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3*(2), 77–101. https://doi.org/10.1191/1478088706qp063oa

Braun, V., & Clarke, V. (2019). Reflecting on reflexive thematic analysis. *Qualitative Research in Sport, Exercise and Health, 11*(4), 589–597. https://doi.org/10.1080/2159676X.2019.1628806

Cohen, S., & Wills, T. A. (1985). Stress, social support, and the buffering hypothesis. *Psychological Bulletin, 98*(2), 310–357. https://doi.org/10.1037/0033-2909.98.2.310

Deil-Amen, R. (2011). Socioacademic integrative moments: Rethinking academic and social integration among two-year college students in career-related programs. *Journal of Higher Education, 82*(1), 54–91. https://doi.org/10.1353/jhe.2011.0006

Edwards, P. N., Jackson, S. J., Chalmers, M. K., Bowker, G. C., Borgman, C. L., Ribes, D., Burton, M., & Calvert, S. (2013). *Knowledge infrastructures: Intellectual frameworks and research challenges*. University of Michigan.

Fedotova, V. A. (2021). International students' adaptation in Russia: Its varying due to the student's culture of origin. *The Bulletin of Kemerovo State University, 23*(4), 995–1004. https://doi.org/10.21603/2078-8975-2021-23-4-995-1004

Glass, C. R., & Westmont, C. M. (2014). Comparative effects of belongingness on the academic success and cross-cultural interactions of domestic and international students. *International Journal of Intercultural Relations, 38*, 106–119. https://doi.org/10.1016/j.ijintrel.2013.04.004

Heaton, J. (2004). *Reworking qualitative data*. SAGE Publications Ltd. https://doi.org/10.4135/9781849209878

Irwin, S., & Winterton, M. (2011). Qualitative secondary analysis: A guide to practice. *Timescapes Methods Guides Series*. University of Leeds.

Lave, J., & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation*. Cambridge University Press.

Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Sage.

Makeeva, E., Kulinich, M., & Yakovleva, I. (2021). Adaptation of international students: Challenges and solutions. *Journal of Intercultural Communication, 21*(3), 41–54. https://doi.org/10.36923/jicc.v21i3.20

Nonaka, I. (1994). A dynamic theory of organizational knowledge creation. *Organization Science, 5*(1), 14–37. https://doi.org/10.1287/orsc.5.1.14

Patton, M. Q. (2002). *Qualitative research and evaluation methods* (3rd ed.). Sage.

Poyrazli, S., & Lopez, M. D. (2007). An exploratory study of perceived discrimination and homesickness. *The Journal of Psychology, 141*(3), 263–280. https://doi.org/10.3200/JRLP.141.3.263-280

President of the Russian Federation. (2024, May 7). *Ukaz Prezidenta Rossiiskoi Federatsii No. 309*. http://publication.pravo.gov.ru/document/0001202405070015

Rostovskaya, T. K., Skorobogatova, V. I., Larionov, A. V., & Valiakhmetov, R. M. (2025). Migration Intention Index of International Students in Russia. *University Management: Practice and Analysis, 29*(1), 45–55. https://doi.org/10.15826/umpa.2025.01.004

Sari, C. A. K., Yoenanto, N. H., & Paramita, P. P. (2026). Revisiting social support and academic adjustment among international students: A systematic review and meta-analysis. *Journal of International Students, 16*(1), 161–182. https://doi.org/10.32674/ef4e5y06

Smith, R. A., & Khawaja, N. G. (2011). A review of the acculturation experiences of international students. *International Journal of Intercultural Relations, 35*(6), 699–713. https://doi.org/10.1016/j.ijintrel.2011.08.004

Tinto, V. (1993). *Leaving college: Rethinking the causes and cures of student attrition* (2nd ed.). University of Chicago Press.

Ülgen, H. (2026). Turkish students' academic adjustment in Russian-medium higher education: Academic Russian, social support, and institutional contexts. *Journal of International Students, 16*(8), 194–220. https://doi.org/10.32674/ds54vq82

Vershinina, I., Kurbanov, A., & Panich, N. (2016). Foreign students in the Soviet Union and modern Russia: Problems of adaptation and communication. *Procedia – Social and Behavioral Sciences, 236*, 295–300. https://doi.org/10.1016/j.sbspro.2016.12.032

Volkova, N. V., & Kolesov, A. A. (2022). Adaptation challenges of domestic and international students in a Russian English-medium instruction university. *Journal of International Students, 12*(2), 302–323. https://doi.org/10.32674/jis.v12i2.3594

Wenger, E. (1998). *Communities of practice: Learning, meaning, and identity*. Cambridge University Press.

Yeh, C. J., & Inose, M. (2003). International students' reported English fluency, social support satisfaction, and social connectedness as predictors of acculturative stress. *Counseling Psychology Quarterly, 16*(1), 15–28. https://doi.org/10.1080/0951507031000114058

Yosso, T. J. (2005). Whose culture has capital? A critical race theory discussion of community cultural wealth. *Race Ethnicity and Education, 8*(1), 69–91. https://doi.org/10.1080/1361332052000341006

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