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Social Energy and Student Integration: A Qualitative Study of Indonesian and Malaysian International Students in Hungary

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ABSTRACT

This study investigates how social energy shapes engagement, peer integration, and classroom interaction among Generation Z international students from Indonesia and Malaysia studying at a Hungarian university. Existing research emphasizes structural integration and cultural adaptation, but the role of interpersonal energy in classroom engagement remains underexplored. Using a qualitative descriptive design, semi-structured interviews were conducted with eight students (four Indonesian and four Malaysian) and analyzed using reflexive thematic analysis. Four themes were developed: (1) interactional warmth and peer belonging, (2) emotional topic sensitivity and social boundary management, (3) social energy activation and depletion dynamics, and (4) contextual variability of classroom participation. Participants described social energy as a situational resource that shaped their willingness and capacity to interact. Although they reported strong peer relationships, they regulated participation according to emotional demands and perceived interactional costs, and reduced social energy did not necessarily diminish academic commitment. Given the small sample and single-interview design, the findings are offered as in-depth, illustrative insights rather than generalizable conclusions. Social energy is proposed as a sensitizing, micro-level concept that links Astin's Student Involvement Theory, Tinto's Student Integration Theory, and Berry's Acculturation Theory.

Keywords: academic burnout, Generation Z, higher education, international students, peer integration, reflexive thematic analysis, social energy

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INTRODUCTION

Generation Z has become an important focus of educational research because of its distinctive behavioral patterns and socio-affective orientations. Raised in a technologically saturated world, this cohort combines unparalleled access to information with acute awareness of online risks such as phishing, cyberbullying, and identity theft (Danu et al., 2025; Seemiller & Grace, 2017). Its members, born between 1997 and 2012, grew up in a society where digital technology is structurally embedded rather than merely supplementary, a condition that has shaped their communication styles and expectations of interaction (Dimock, 2019). Understanding how these generational features translate into classroom socialization requires closer attention to everyday social dynamics.

One metaphor frequently used to describe these dynamics is social energy, or the "social battery," which captures the idea that students draw on a finite reserve when interacting with peers and instructors. Research on personality dynamics suggests that this reserve matters for engagement. Tuovinen et al. (2020) found that introverted individuals who sustain high levels of social interaction report stronger self-esteem than those with low interaction, whereas persistently low interaction is associated with a heightened risk of school burnout and weaker academic performance. Peer processes compound this risk, because negative dispositions toward education can be socially transmitted within a peer group (Steenberghs et al., 2021). The management of social energy is therefore not a peripheral trait but a mechanism with direct implications for engagement.

Despite a growing literature on the social battery and on strategies for managing students' energy (Böhm et al., 2023), little is known about how specific energy states shape actual classroom interaction among Generation Z learners. Existing studies acknowledge digital fatigue and its contribution to student burnout yet seldom situate these processes within a broader interactional context (Safitri et al., 2025). In particular, little empirical evidence exists on how depleted social energy affects participation in group projects and collaborative assignments.

A parallel gap concerns institutions and context. Educational settings often privilege extroverted forms of participation, which can mismatch the social preferences of many Generation Z students (DeGiano et al., 2025; Seemiller & Grace, 2017), and the pedagogical strategies this cohort requires remain underexplored (Düzenli, 2021). Recent studies in the *Journal of International Students* have mapped adaptation and integration among international students in Hungary and Central Europe, including the link between sociocultural and psychological adaptation (Gebregergis & Csukonyi, 2025) and typologies of academic and social integration (Casas Trujillo & Dabney-Fekete, 2026). These studies do not examine how the energy required for everyday interaction is managed, especially among Southeast Asian students, whose acculturative demands intersect with generational communication styles. This study addresses that context.

The purpose of this study is to understand how social energy influences the classroom interactions of Generation Z international students. It focuses on the interactional processes and situational factors that shape fluctuations in social energy during peer socialization in university classrooms. Four research questions guide the study:

1. What are peer relationships and interpersonal interactions like among Generation Z students in the classroom?
2. In which interactional domains or conversational topics do students experience social or emotional exhaustion?
3. How do students show behavioral and psychological signs of social energy depletion and recovery while engaging in class activities?
4. How do differences in students' social battery affect their perceived academic performance and class engagement?

LITERATURE REVIEW

The Learning Ecology, Communication Styles, and Involvement in Higher Education

Generation Z is widely characterized as a cohort whose learning behavior is shaped by multimodal communication, digitization, and heightened expectations of interactive learning (Düzenli, 2021; Seemiller & Grace, 2017). Active-learning arrangements that emphasize collaboration and real-world engagement, such as project work or community-based learning, are consistently reported to motivate these learners (Cutillas et al., 2025), supporting academic understanding, interpersonal connection, and identity development.

To interpret this engagement, the present study draws on Astin's (1984, 1993) Student Involvement Theory, which defines involvement as the physical and psychological energy students devote to their academic experience rather than their stated preferences alone. This emphasis frames participation as a resource-dependent behavior, which is precisely where social energy becomes relevant. Learner autonomy, widely recognized as a Generation Z characteristic, complicates the picture: students often prefer self-directed learning (Mammadov et al., 2026; Seemiller & Grace, 2017), and involvement may fluctuate as they shift between high-intensity social interaction and independent work.

Communication is a second influence on involvement. Student–teacher exchanges such as questions, clarifications, and debate strengthen academic engagement and performance (Frymier, 2005), while Generation Z learners alternate flexibly between academic and digital registers and favor informal, succinct communication (Adalia et al., 2025; Suyitno et al., 2025). In cross-cultural settings, such as Hungarian universities hosting Indonesian and Malaysian students, communication serves both as an academic mechanism and as a tool of social positioning. Consistent with Tinto's (1993) Student Integration Theory, which identifies academic and social integration as key determinants of persistence, communication is treated here as a central channel through which integration is enacted.

Psychological Limits of Involvement, Social Energy, and Engagement Differences

Research on situational conditions, emotional regulation, and energy states indicates that engagement is not constant but fluctuates with psychological and physiological energy (Spreitzer & Grant, 2012). Cognitively inert environments tend to correlate with lower participation, whereas socially and physically engaging activities raise it. Situational variables intensify this pattern, as emotional exhaustion and reduced concentration have been linked to classroom disruption, noise, and weak instructional management (Ramacula & Pañares, 2023).

Human energy has been conceptualized as a resource that is consumed and generated through activity and interaction (Quinn et al., 2012), and subjective vitality, the felt sense of having energy available, has been shown to vary with situations and relationships (Ryan & Frederick, 1997). Building on these accounts and on Astin's (1984) view of involvement as invested energy, social energy is defined here as a situational, self-perceived state: a student's fluctuating capacity and willingness to devote emotional, cognitive, and verbal resources to interaction in academic settings. This definition separates social energy from adjacent constructs (Table 1). It is a dynamic state that can be depleted and replenished within and across interactions, not a stable trait or a deficit end state. In this study it is treated as a sensitizing concept, operationalized through participants' own accounts of the situations that drain or boost their energy and of the behavioral and psychological signs they associate with each state, and not as a validated psychometric construct.

Table 1
Boundaries Between Social Energy and Related Constructs

Construct	Defining feature	How social energy differs
Burnout and social fatigue	Emotional and psychological exhaustion arising from prolonged stress (Ivančević et al., 2024); typically a relatively stable, deficit-oriented end state.	Social energy is momentary and replenishable; burnout is a possible downstream outcome of chronic depletion.
Introversion	A relatively stable dispositional orientation toward social engagement (Tuovinen et al., 2020).	Social energy is a state; extraverted and introverted students alike may experience depletion.
Social anxiety	Fear of negative evaluation and perceived social threat (Rapee & Heimberg, 1997).	Depletion reflects reduced capacity, not fear; a student can lack energy without feeling threatened.
Loneliness	A subjective discrepancy between desired and actual relationships, not necessarily tied to how often students interact with others (Ivanova et al., 2025).	Social energy concerns the capacity to engage when connections exist; well-connected students may still be depleted.
Boredom	Under-stimulation and reduced motivation in learning contexts (Finkielsztein, 2020; Pawlak et al., 2020).	Boredom and burnout are treated as under-stimulation and over-expenditure of the same resource.

Building on Tinto's (1993, 2012) argument that disrupted integration pathways weaken students' sense of belonging, this study advances social energy as a micro-level mechanism explaining how interactional and contextual factors translate into engagement outcomes. Interaction is not uniformly stimulating: collaborative learning can raise motivation and engagement, yet interaction that exceeds a student's regulatory threshold can produce emotional and social tiredness (DeGiano et al., 2025; Tuovinen et al., 2020). Engagement is therefore better understood as an outcome of available social energy than as a fixed behavioral trait.

This mechanism becomes more intricate in cross-cultural settings. Drawing on Berry's (1997, 2005) Acculturation Theory, international students continuously balance cultural maintenance against adaptation through interactions with peers and institutions, and the cognitive and emotional costs of these demands bear on the social energy available for classroom participation. Cultural misalignment can accelerate depletion and withdrawal, whereas positive integration experiences help students sustain steadier energy through acceptance and belonging. Research in Hungary is consistent with this view. Sociocultural adaptation predicted psychological adaptation among 447 international students (Gebregergis & Csukonyi, 2025), and interview data identified distinct integration profiles, from students who balanced academic and social demands to those who leaned on peer networks despite academic difficulty (Casas Trujillo & Dabney-Fekete, 2026).

Social Energy Depletion, Burnout, and Digital Overload in Generation Z Learners

Burnout, defined by Ivančević et al. (2024) as a state of emotional and psychological exhaustion arising from prolonged exposure to stress, is a key process linking involvement and disengagement. This study treats burnout not as an isolated individual condition but as an interactional outcome of sustained demands within peer networks, educational settings, and institutional structures. It is positioned as a

downstream consequence of chronically unbalanced social energy rather than a synonym for it: social energy names the fluctuating resource, whereas burnout names the deteriorated state that can result when the resource is repeatedly overdrawn without adequate recovery.

Digitally mediated learning heightens this risk. Generation Z students face continual connectedness, online visibility, and communication obligations that add cognitive and emotional strain, producing a paradoxical state of engagement and fatigue (Böhm et al., 2023; Hameed et al., 2025). Consistent with Tinto (2012), persistent fatigue erodes institutional belonging by lowering the frequency and quality of meaningful peer engagement, which can reduce participation to academic compliance. The cohort's emphasis on work–life balance and psychological well-being (George, 2024) further shapes how students regulate participation, often prompting deliberate withdrawal from demanding social settings.

Quality of Interaction, Boredom, and the Social Construction of Engagement

Beyond exhaustion, boredom influences participation and disengagement. Although understudied, boredom has been repeatedly associated with reduced motivation and behavioral withdrawal in learning contexts (Finkielsztein, 2020; Pawlak et al., 2020). This study conceptualizes boredom not as a purely individual cognitive state but as a socially produced response to interactional quality and perceived significance. Conversation can make even unpromising topics more engaging than people expect (Trinh et al., 2026), which suggests that the quality of an exchange, and not its topic alone, shapes how much stimulation students draw from it. From a social energy perspective, meaningful, identity-relevant exchanges sustain energy and continued engagement, whereas emotionally detached exchanges hasten depletion. This dynamic aligns with Tinto (2012), for whom low-quality interaction weakens institutional affiliation, and with Astin (1984), for whom boredom signals a decline in the effort that constitutes involvement.

Considered together, the evidence suggests that international student engagement arises from the interplay of behavioral involvement, institutional integration, and cultural adaptation. Astin's (1984, 1993) theory locates involvement in the energy students invest in their educational experience, Tinto's (1993, 2012) theory explains how interaction shapes belonging and persistence through academic and social integration, and Berry's (1997, 2005) theory specifies the cultural demands that make interaction costly or rewarding. This study positions social energy as the dynamic mechanism connecting the three. Within this framework, boredom and burnout represent two manifestations of social energy imbalance, under-stimulation and over-expenditure respectively, each capable of impairing integration and lowering participation.

The framework guides each research question (Table 2). Tinto's and Astin's theories frame the description of peer relationships and belonging (RQ1). Berry's theory and the definition of social energy frame the emotional costs of particular interactions (RQ2). Astin's notion of invested energy frames the observable signs of depletion and recovery (RQ3). All three theories together frame how differences in social energy relate to engagement and perceived performance (RQ4).

Table 2

Alignment of Research Questions, Conceptual Framework, and Themes

Research question	Guiding concepts	Corresponding theme
RQ1: Peer relationships and interpersonal interactions	Tinto: social integration and belonging; Astin: involvement	Theme 1
RQ2: Domains and topics that cause exhaustion	Social energy depletion; Berry: acculturative demands	Theme 2
RQ3: Signs of depletion and recovery	Astin: invested energy; social energy states	Theme 3

Research question	Guiding concepts	Corresponding theme
RQ4: Effects of differences in social battery on performance and engagement	Astin, Tinto, and Berry combined; social energy as connecting mechanism	Theme 4

RESEARCH METHOD

Research Design

This study examined how Southeast Asian international students perceive social energy, interpersonal interaction, and classroom participation in Hungarian higher education, using a qualitative descriptive design (Sandelowski, 2000). Grounded in naturalistic inquiry, qualitative description offers a comprehensive account of participants' experiences while remaining close to their own interpretations, which suited the aim of understanding everyday experience rather than generating abstract theory. Data were analyzed through Reflexive Thematic Analysis (RTA; Braun & Clarke, 2021), which identifies patterned meanings across participant narratives while explicitly acknowledging the researchers' interpretive role.

Participants

Eight international students born between 1997 and 2002 took part: four from Indonesia and four from Malaysia, all enrolled at the same university in eastern Hungary (Table 3). Purposeful sampling was used to recruit participants able to offer rich accounts of social energy, interpersonal relationships, and classroom engagement.

The focus on Indonesian and Malaysian students was theoretical and contextual. These groups are among the largest Southeast Asian student populations in Hungary, yet they remain little studied in Central and Eastern European higher education, where most international-student research has centered on Western host countries. Both share broadly collectivist, relationship-oriented communication norms that contrast with the more individualistic classroom cultures they enter. The two national groups were included to broaden the range of experience, not to support systematic comparison between nationalities. With four participants per group, national differences were noted descriptively and not interpreted as national patterns.

Table 3
Demographic Profiles of Participants (N = 8)

Pseudonym	Country of origin	Gender	Year of birth	Level of education
Lilis	Indonesia	Female	2000	Master
Balqvias	Indonesia	Female	2002	Bachelor
Ilyas	Indonesia	Male	1997	Master
Irfus	Indonesia	Male	2002	Bachelor
Ema	Malaysia	Female	1999	Bachelor
Tity	Malaysia	Female	2002	Bachelor
Thefi	Malaysia	Female	2000	Bachelor
Maman	Malaysia	Male	2002	Bachelor

Participant Selection Criteria

A purposive sampling technique was employed to select participants according to the following criteria:

1. International students enrolled at a Hungarian university.
2. Origin from Indonesia or Malaysia.
3. Enrolled for a minimum of one semester at a university.
4. Agreed to be a voluntary participant in the research.

Participants were identified through international-student networks and personal recommendation. After a prospective participant accepted the invitation via WhatsApp, a mutually convenient time and location for the interview were arranged.

Sample size was guided by information power (Malterud et al., 2016) rather than statistical representativeness. Four considerations supported a small sample: the narrow and well-specified aim of the study, the relatively homogeneous participant profile, the guidance of three established theoretical frameworks (Berry, Tinto, and Astin), and the depth of the interview dialogue. Recruitment continued until the research team judged that the accounts offered sufficiently rich and patterned insight to address the research questions. Even so, eight participants at a single university limit what the data can support. The findings are offered as in-depth, illustrative insights into how social energy is experienced, and not as evidence about Indonesian or Malaysian students in general.

Data Collection Procedures

Data were collected through semi-structured interviews, which allow participants to elaborate on their experiences while enabling the researcher to probe issues relevant to the study's aims (Kallio et al., 2016). The interview guide (see Appendix A) had three parts: sociocultural background, energy status, and social battery in the classroom. Because social energy is conceptualized as fluctuating, a single interview cannot observe fluctuation as it happens. The guide therefore asked participants to reflect on variation across situations, interlocutors, and time, for example, when their energy is drained or boosted, how long they can socialize and how long they need to recover, and whether they felt emotionally exhausted during a semester. The data thus capture perceived variability as recalled by participants and do not measure it directly.

All participants responded in English, the common language of communication between researchers and participants. Interviews lasted approximately 30 to 60 minutes and were conducted face-to-face at venues chosen by participants, including quiet public spaces, residence halls, and university buildings where privacy could be maintained. With consent, all interviews were audio-recorded and transcribed verbatim.

Researchers' Positionality

The researchers acknowledge that their interpretation of participant narratives was shaped by their own experiences and backgrounds. Having been international students and having worked as researchers in higher education, they brought prior understanding of the challenges international students face. Consistent with RTA (Braun & Clarke, 2021), they treated this positioning as a resource in knowledge construction rather than a bias to be eliminated. Reflexive notes and analytical memos documented assumptions, emerging interpretations, and points at which prior experience might color coding decisions, and the team periodically revisited them to check that developing themes stayed anchored in participants' accounts. Coding decisions were discussed collaboratively to surface and interrogate divergent readings.

Data Analysis

All audio recordings were transcribed verbatim, and the transcripts were imported into ATLAS.ti to support systematic coding and retrieval. In keeping with RTA, emphasis was placed on reflexivity and

the researchers' active role in generating meaning rather than on inter-coder reliability procedures aimed at consensus.

Analysis followed the six recursive phases of RTA. The researchers first read the transcripts and field notes repeatedly to become immersed in the data. Second, initial codes were generated inductively across the full dataset, predominantly semantic at first and progressively more interpretive. Third, related codes were clustered into candidate themes. Fourth, candidate themes were reviewed against the coded extracts and the full dataset, and several were merged or relabeled. Fifth, themes were defined and named to reflect their organizing concepts. Finally, the three theoretical frameworks were used to interpret the themes and situate them within the study's conceptual model of social energy. Analytical memos documented how and why coding and theme boundaries shifted, providing an audit trail.

Trustworthiness

Reflexive memo writing, an audit trail, and detailed description supported interpretive credibility (Lincoln & Guba, 1985). Coding choices, theme development, and analytical reflections were recorded throughout, and verbatim quotes from Indonesian and Malaysian participants link interpretation to participants' narratives.

Ethics Statement

All participants gave informed consent and took part willingly before data collection. The goal of the study, confidentiality policies, and the freedom to withdraw at any moment without repercussions were explained to them. Pseudonyms were used, and all identifying information was removed from the interview transcripts. Only the research team had access to the securely stored audio recordings and transcripts.

RESULTS

Four interconnected themes were developed: (1) interactional warmth and peer belonging, (2) emotional topic sensitivity and social boundary management, (3) social energy activation and depletion dynamics, and (4) contextual variability of classroom participation (Table 4). Together they show social energy as a dynamic resource, not a fixed personal characteristic, that shapes how students connect with peers, manage interpersonal interactions, and take part in class activities in an intercultural learning environment.

Table 4
Themes, Sub-Themes, and Indicative Codes

Theme	Sub-theme	Indicative codes	Linked outcome
1. Interactional warmth and peer belonging	Positive relationships	Enjoy talking; no tension; excited to meet classmates	Social integration process: classroom comfort, peer connection, and participation
	Peer belonging	Close friendship; feeling accepted; social inclusion	
	Boundaries	Respect for privacy; maintaining boundaries; occasional intimidation	

Theme	Sub-theme	Indicative codes	Linked outcome
2. Emotional topic sensitivity and social boundary management	Personal and emotional disclosure	Family issues; private life; traumatic events; economic concerns	Higher emotional cost of interaction; energy depletion; reduced willingness to engage in class
	Sensitive identity topics	Politics; religion; personal beliefs	
	Future-oriented and academic topics	Academic discussions; future plans; internship or work; teaching peers	
3. Social energy activation and depletion dynamics	Activation: increased social engagement	Enjoy being together; hanging out more; getting along	Greater classroom participation and increased student involvement
	Activation: enhanced verbal expression	Talkative; laughing; expressive sharing of ideas	
	Activation: positive emotional activation	Excited; energized; motivated to socialize	
	Depletion: social withdrawal	Avoiding talking; ignoring others; not joining conversation	Reduced classroom participation, lower student involvement, and challenges to social integration
	Depletion: reduced communication	Silent; passive; flat expression; limited response	
	Depletion: emotional and physical exhaustion	Tired; exhausted; frustrated; need to rest	
4. Contextual variability of classroom participation	Negative impact	Lost focus; reduced concentration; social exclusion	Different patterns of classroom participation, student involvement, and social integration
	Adaptive management	Self-regulation; strategic participation; mood management	
	Minimal impact	Work unaffected; relationships unaffected; small community support	

Theme 1: Interactional Warmth and Peer Belonging

Participants typically described helpful and constructive peer connections in Hungarian classrooms. They highlighted acceptance, comfort, and interpersonal ease rather than exclusion, which contrasts with international-student literature that commonly describes social isolation and difficulty forming meaningful peer connections (Sherry et al., 2010; Smith & Khawaja, 2011). Following Tinto (1993, 2012), meaningful peer interaction helps students feel they belong in the academic community, so these

accounts can be read as signs of social integration. Participants also valued interpersonal boundaries, suggesting that extensive self-disclosure was not necessary for belonging. This sense of ease and mutual acceptance appeared in participants' own accounts:

> I can say that our relationships are really, really good. Besides meeting in class, we also do activities together, such as having dinner every weekend and hanging out together. (Lilis, Indonesian, Master student)

Theme 2: Emotional Topic Sensitivity and Social Boundary Management

Social weariness was linked more closely to the emotional demands of certain conversational topics than to the frequency of interaction. Participants were typically open to class discussion and peer interaction but hesitant about talks requiring significant emotional disclosure, such as family issues, personal hardship, or traumatic experiences, and about sensitive identity topics such as religion and politics. By contrast, participants described future-oriented and academic topics as comparatively less demanding. From a social energy perspective, emotionally taxing interactions demand more interpersonal investment and so raise the risk of depletion. Avoiding particular subjects therefore appeared as strategic boundary management rather than social detachment, and it may also reflect the coping demands of cultural adjustment (Berry, 1997, 2005). One participant explained why she avoided arguments about religion:

> I don't really like arguing with people about religion, especially if they don't practise my religion or don't believe in any religion at all. It's difficult to explain miracles to someone who doesn't believe because they involve things that cannot always be described or proven. I'm a believer. I'm not saying I'm a perfect person, but I do have faith. Trying to explain this to them is really difficult because the conversation often goes back and forth. It starts to feel like they just want to argue rather than have a genuine discussion. In my experience, when I hear this kind of thing, I just think that these people dislike or judge me. I don't understand why they feel the need to argue about it. (Ema, Malaysian, Bachelor student)

Theme 3: Social Energy Activation and Depletion Dynamics

Participants described clear behavioral markers of high and low social energy. At high energy they were more talkative, socially engaged, and emotionally upbeat, offering ideas, joining conversations, and seeking out peers. At low energy they became silent, less responsive, socially withdrawn, and tired. These accounts are consistent with Astin's (1984, 1993) view that involvement depends on the expenditure of psychological and behavioral energy, and they suggest that participation depends on the energy available at particular moments of interaction, as participants recalled them, rather than on a fixed disposition. One participant described a period of high social energy:

> When my energy was boosted, I really wanted to go outside with my peers and friends, whether it was to play badminton or just go to different places together. (Balqvias, Indonesian, Bachelor student)

The relationship between social energy and classroom participation was neither linear nor uniform. Some participants said that low social energy left their academic performance largely unaffected, whereas others reported reduced focus, idea generation, and social involvement. Several used adaptive tactics to keep completing academic assignments despite reduced social connection. Social and academic involvement therefore did not always change together: students continued to devote cognitive effort to academic tasks even as their inclination to engage socially declined. The experience of depletion was described in markedly different terms:

> I can feel physically tired, but when I'm with certain people, I become really energetic and don't really care about being tired. I just do things that I feel are a better way to spend my time, like reading or listening to podcasts. I'm not always very productive, but I still try to do those things

because they make me feel better, even if I'm not that productive. (Irfus, Indonesian, Bachelor student)

Theme 4: Contextual Variability of Classroom Participation

The influence of social energy on classroom participation varied considerably across situations and individuals. Some participants associated low social energy with lost focus, reduced concentration, and a sense of social exclusion, whereas others reported that their academic work and peer relationships remained largely unaffected. Between these poles, many described adaptive strategies, including self-regulation, strategic participation, and mood management, through which they calibrated involvement to situational demands. Participation thus appeared to be shaped less by a fixed level of sociability than by students' ongoing regulation of a fluctuating interpersonal resource. One participant's account illustrates this variability:

> I think there is an impact because sometimes, when I become quiet, people notice it. As I mentioned, my classmates will come to me and ask questions. When I'm in a good mood, I will answer them thoroughly and explain everything they need to know. However, when I'm not in the mood and my energy is drained, I tend to give very short answers, and then they will ask other friends instead. (Tity, Malaysian, Bachelor student)

Taken together, the four themes suggest that social energy ran through participants' classroom experiences: it shaped how warmly they engaged with peers, which conversations they entered, how visibly they participated, and how they adapted when their reserves ran low.

DISCUSSION

This study examined how social energy shapes the classroom experiences of Indonesian and Malaysian Generation Z international students in Hungarian higher education. Across four themes, participants described social energy as a dynamic resource, not a stable trait, that varied with situational conditions, emotional context, and interactional demands and shaped how they engaged academically and socially.

Most participants reported supportive peer relationships. This contrasts with research emphasizing isolation and limited friendships with domestic peers (Ivanova et al., 2025; Sherry et al., 2010; Smith & Khawaja, 2011). It may reflect features of this small, purposively selected group, such as a shared regional background and a shared university, more than Hungary as a host country. It is nonetheless consistent with evidence from Hungary that sociocultural adaptation predicts psychological adaptation (Gebregergis & Csukonyi, 2025), which underscores the value of social integration for well-being. Following Tinto (1993, 2012), positive peer relationships mark social integration because meaningful interaction fosters belonging. Recent scholarship in the *Journal of International Students* supports this emphasis on interaction quality: belonging was shaped more by interactional processes than by roommates' nationality (Yang, 2025), and it remains loosely defined, with proactive integration the most common thread across studies (Mohamad & Manning, 2024).

Casas Trujillo and Dabney-Fekete's (2026) typology offers a useful comparison. Their interview study distinguished profiles defined by academic and sociocultural integration, among them engaged achievers, who balance both, and focused scholars, who prioritize academics. Participants here most resembled engaged achievers, yet their accounts also describe episodic movement toward a focused-scholar pattern, in which academic commitment is maintained while social involvement is reduced, when energy is low. Social energy may thus help explain within-person movement between profiles that typologies describe between persons. Given the small sample and reliance on recall, this reading is tentative and should be tested in designs that follow the same students over time.

Participants also valued interpersonal boundaries, indicating that unrestricted intimacy is not a precondition for integration. Selective self-disclosure coexisted with belonging. Social energy was strongly

shaped by the emotional content of interaction: conversations touching on personal hardship, family difficulty, or traumatic experience were consistently judged more taxing than academic or future-oriented topics. This selective engagement reflects active emotional-resource management among Generation Z students, who attend closely to psychological well-being (Seemiller & Grace, 2017). Read through Berry's (1997, 2005) framework, it can be understood as adaptive coping with the emotional demands of an unfamiliar cultural setting. Avoiding emotionally charged topics is thus better interpreted as strategic boundary management that conserves resources while sustaining social connection than as disengagement, in line with a positive psychology intervention that raised both well-being and belonging among international graduate students (Hsieh & Watson, 2025).

The accounts also illustrate the dynamic quality of social energy. At high energy, participants were animated, talkative, and fully engaged in discussion and group work; at low energy, they reported exhaustion, silence, withdrawal, and reduced responsiveness. These accounts support Astin's (1984, 1993) contention that involvement depends on the investment of psychological and physical energy. The study extends that framework by suggesting that students' willingness or capacity to invest energy varies with interactional and emotional circumstances, positioning social energy as a mechanism that participants themselves link to shifts in involvement across situations.

A further contribution is that reduced social energy did not necessarily entail academic disengagement. Some participants reported difficulty concentrating or generating ideas when depleted, yet many continued to complete academic tasks and contribute intellectually, several describing a deliberate strategy of scaling back social engagement while maintaining academic commitment. This challenges the assumption that social and academic engagement fluctuate in tandem. Social energy appears to affect facets of involvement unevenly, constraining communication and interpersonal engagement while leaving academic performance comparatively intact, although this rests on participants' own perceptions of their performance.

Finally, social energy offers a lens for understanding how students negotiate cross-cultural learning settings. Participants calibrated their level of contact according to their energy reserves, social expectations, and emotional demands, and in doing so connected Tinto's integration outcomes, Astin's engagement processes, and Berry's acculturative dynamics. Participation is thus best viewed not as a fixed trait but as a dynamic process in which energy states influence willingness to participate, emotionally demanding interactions govern the allocation of social resources, and positive peer relationships promote integration and belonging.

IMPLICATIONS

The findings carry several practical implications for universities supporting international students. First, institutions should move beyond the assumption that more interaction automatically yields better engagement and offer flexible participation formats, such as written reflection, small-group work, or asynchronous channels alongside large-group speaking. Second, because emotionally demanding discussion depletes social energy unevenly, instructors can signal topics in advance and normalize the right to pass on personally sensitive exchanges. Third, because reduced social energy did not diminish academic commitment in these accounts, faculty should avoid reading momentary social withdrawal as disengagement or lack of ability. Fourth, student-affairs and international offices can provide low-intensity, recovery-oriented spaces and peer-mentoring structures that let students replenish social energy, consistent with evidence that interaction quality and responsive staff support strengthen belonging (Yang, 2025).

CONCLUSION

This study set out to understand the role of social energy in the classroom lives of Indonesian and Malaysian Generation Z students at a Hungarian university. Participants' accounts indicate that social energy is a dynamic resource, not a fixed personal trait, that varies with situational, emotional, and interactional demands and thereby shapes their willingness and capacity to participate academically and

socially. Contrary to accounts that foreground isolation, most participants described supportive peer relationships, yet their engagement was consciously regulated: they managed emotionally taxing interactions, maintained personal boundaries, and prioritized discussions within their emotional comfort zones. Integration, on this evidence, depends not only on opportunities for engagement but on students' capacity to manage the interpersonal and emotional demands those opportunities entail. Social energy connected Berry's acculturation processes, Astin's involvement, and Tinto's integration, offering a micro-level account of how international students negotiate cross-cultural learning environments.

Several limitations should be acknowledged. First, the study draws on eight participants from two national groups at a single Hungarian university. It aimed at analytic depth rather than generalization, and the two groups were not designed for cross-national comparison, so the findings are illustrative and transferable only with caution. Second, social energy was conceptualized as fluctuating, but the data came from single interviews that rely on participants' recall and self-report, in English, which may have shaped how experiences were articulated. The study therefore captures perceived variability and not fluctuation as it occurs. Third, social energy was treated as a sensitizing concept and not measured with a validated instrument, so its boundaries with related states are conceptual and untested empirically.

Future research could recruit larger and more diverse samples across host countries, institutions, and disciplines, and could compare nationalities systematically. Designs that match the dynamic nature of the concept, such as diary or experience-sampling studies, repeated interviews, and classroom observation, would show how energy fluctuates within and across days and courses. Quantitative measures that separate social energy from fatigue, introversion, and social anxiety would allow its links with involvement, integration, and academic outcomes to be tested. By introducing social energy as a lens for understanding how students manage involvement, relationships, and adaptation in multicultural classrooms, this study contributes to the growing literature on the international student experience and offers a foundation for more fine-grained investigation of the dynamics that shape participation in higher education.

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Appendix A

Interview Guide Questions

A. Sociocultural

1. Could you please introduce yourself (year of birth, origin country, study programme)?
2. How many languages you can speak?
3. How many siblings do you have? And what order are you in your family?
4. What is your hobby? Does your hobby require people to be involved?
5. Based on your personality, what is your MBTI type?

B. Energy status

6. What is your preparation to interact with your peers?
7. In what situation is your energy drained and boosted?
8. How long can you manage to socialise with your friends?
9. What are the typical symptoms that are shown when your energy is drained or boosted?
10. How long do you need to boost your energy?

C. Social battery in the class

11. How many times a week do you go to class? And how many classmates do you have?
12. How is your relationship with them?
13. How do you feel before going to class?
14. In the classroom, do you prefer to do tasks alone or with teamwork?
15. For school work based on groups, are you drained of energy or do you gain energy to meet your teamwork?
16. During one semester, have you ever felt emotional exhaustion from socialising with your classmates and teachers? Please explain it.
17. In which topic do you usually feel exhausted to talk about with your peers? Please provide with example.
18. What are the symptoms that you show when you are drained of energy and boost energy?
19. If you only have one course and have free time after that, will you prefer to stay social with your peers or go back home? Please explain it.
20. What happens when your social energy is drained or boosted?
21. How does the social battery impact your relationships with peers in group work? And what is the impact?