

A Quantitative Study on the Participation, Influencing Factors, and Perceived Efficacy of International Exchange among Fujian Undergraduates under the Background of the Maritime Silk Road

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Abstract: International exchange is a flagship instrument of higher-education internationalization, yet participation is often socially patterned and the educational value students perceive is shaped by institutional implementation. This study investigates the participation rate, influencing factors, and perceived efficacy of international exchange among Fujian undergraduates within a Maritime Silk Road-oriented internationalization environment. Using a 2025 multi-institution survey of 1,200 undergraduates from eight Fujian higher-education institutions, the study models realized exchange participation with logistic regression including institution fixed effects and estimates perceived efficacy using covariate-adjusted linear models. To address observable selection into participation, inverse probability weighting is applied with balance diagnostics and sensitivity checks for extreme weights. Results show that realized participation is 17.5% and is most strongly associated with opportunity conditions, particularly awareness and perceived institutional support, alongside socioeconomic resources, language proficiency, and exchange-related aid. Risk/safety concerns are negatively associated with completion. Participation is positively associated with higher perceived efficacy across intercultural, academic, career, and adaptability domains; the adjusted association remains substantively meaningful and persists under selection-aware robustness. Heterogeneity analyses indicate stronger participation-linked efficacy among lower-SES students and in environments with higher institutional support. The findings highlight that equitable internationalization depends not only on expanding opportunities but also on reducing information frictions, strengthening advising and administrative coherence, and designing affordability support that addresses indirect and upfront costs so that mobility pathways translate into inclusive educational value.

Keywords: International Exchange, Study Abroad, Higher Education Internationalization, Perceived Efficacy, Fujian Undergraduates.

1. Introduction

International exchange has become a central component of higher-education internationalization, increasingly implemented as a structured learning pathway linked to intercultural competence, academic development, and employability-related skills. Across systems, mobility opportunities have expanded, yet access and participation remain uneven, shaped by policy environments, institutional capacity, and student-level constraints (OECD, 2025). In China, internationalization has developed alongside outward-facing cooperation agendas, including initiatives associated with the Belt and Road framework, within which the Maritime Silk Road (MSR) is commonly invoked as a regional cooperation narrative and partnership orientation rather than a single discrete programme. For coastal provinces such as Fujian, this “MSR background” is therefore understood in practical terms as an institutional and policy environment that

encourages cross-border academic partnerships, exchange channels, and outward-oriented learning opportunities.

However, the expansion of opportunities does not automatically produce equitable access or consistent educational value. A growing body of research shows that participation in study abroad and exchange is strongly patterned by socioeconomic background and related constraints, even in well-resourced mobility systems, because disadvantaged students are more likely to be deterred before or during application and completion stages (Granato & Schnepf, 2025). Recent syntheses likewise emphasize that international mobility is shaped not only by financial capacity but also by institutional and informational structures that can reproduce inequality, such as uneven advising, procedural complexity, and differential access to credible guidance. At the same time, the wider environment in which mobility occurs, ranging from public uncertainty to destination-related risk perceptions, can influence mobility decisions and institutional internationalization practices, underscoring that mobility is sensitive to both institutional management and perceived external conditions. These developments make international exchange a revealing site for education research because it concentrates questions of opportunity distribution, institutional implementation, and student outcomes within a single, policy-relevant domain.

Evidence on outcomes further suggests that students frequently report meaningful learning and developmental gains from international and cross-cultural experiences, but those gains are not automatic and can differ by format and institutional design. Studies in 2024–2025 document perceived growth in intercultural competence and related professional or “soft skill” domains in study-abroad settings, while also highlighting that program structure and support conditions shape what students take away from mobility experiences (Kosman et al., 2024). For contexts such as Fujian, where institutions are encouraged to translate international cooperation into student pathways, this raises a practical empirical question: if exchange is expected to contribute to human-capital development and educational modernization, then it is necessary to understand who completes exchange, which factors are associated with completion, and whether completion is linked to students’ perceived educational value under real institutional conditions.

This study addresses that question by providing a quantitative assessment of international exchange among Fujian undergraduates under an MSR-oriented internationalization environment. The study has three objectives. First, it estimates the prevalence of realized participation in institution-recognized exchange and describes participation patterns across student groups. Second, it identifies the factors associated with realized participation, focusing on both student-side resources (socioeconomic conditions, language capacity, and family support) and institution-side opportunity conditions (information transparency, awareness, and perceived institutional support). Third, it examines how participation relates to students’ perceived efficacy of exchange experiences across intercultural, academic, career, and personal development domains, while accounting for observable selection into participation.

To operationalize these objectives, the paper analyzes a 2025 multi-institution survey of N=1,200 Fujian undergraduates drawn from eight higher-education institutions using a stratified approach across institution types, disciplines, and year levels. The empirical strategy mirrors the conceptual logic. Realized participation is modeled using logistic regression with institution fixed effects to account for cross-institution differences in

programme availability and administrative capacity. Perceived efficacy is then modeled as a function of participation and covariates, supplemented by selection-aware robustness checks using inverse probability weighting with balance diagnostics and sensitivity handling of extreme weights. This design allows the paper to speak to access equity and perceived educational value within the same analytic framework, while keeping inference disciplined and consistent with the observational data structure.

The paper contributes in three ways. Empirically, it provides province-specific evidence on exchange completion and perceived efficacy in a context that is policy-salient and comparatively underrepresented in internationalization scholarship, enriching comparative discussion of how mobility operates in different regional and institutional settings. Analytically, it separates resource constraints from opportunity conditions, emphasizing information transparency and process clarity as core correlates of realized access alongside financial and language-related factors. Practically, it offers evidence that can inform institutional design: improving advising reach, administrative coherence, and affordability support for indirect costs are likely to matter for converting outward-oriented cooperation agendas into inclusive student pathways with perceived educational value.

2. Literature Review

2.1. International Student Mobility as a Stratified Educational Opportunity

International student mobility has expanded worldwide and is now routinely framed as part of higher-education competitiveness and skills formation. Recent international indicator work documents continued growth in cross-border tertiary mobility over the last decade, alongside persistent structural inequalities by origin country income and field of study. In parallel, global higher-education participation has reached record levels, intensifying the policy emphasis on recognition, portability, and the organization of cross-border learning pathways (UNESCO, 2025). Within this expansion, research consistently finds that outward mobility is not randomly distributed across student populations. Instead, it often reflects social reproduction dynamics in which advantaged students are more likely to acquire “mobility capital” and convert it into educational advantage (Bourdieu, 1986; Brooks & Waters, 2011; Granato & Schnepf, 2025).

A growing body of 2024–2025 evidence sharpens this stratification argument by separating *access* to opportunities from *conversion* into realized participation. For example, recent quantitative work on Erasmus mobility shows that socioeconomic disparities are driven substantially by differential application and uptake processes rather than by formal eligibility alone (Granato & Schnepf, 2025). U.S.-based evidence similarly indicates that geographic context, institutional characteristics, and economic conditions interact with student background to shape both the likelihood of participation and the institutional distribution of mobility opportunities. These patterns align with broader reviews arguing that inequalities in international mobility reflect the cumulative interplay of resources, social networks, institutional gatekeeping, and informational access, rather than any single “cost barrier” explanation.

The stratification perspective is also supported by research on internal and regional student mobility, which often functions as a mechanism that rewards students who combine privileged social origin with academic advantage and high-status educational

tracks (Vögtle & Windzio, 2016). While cross-border exchange differs from internal mobility, both domains show similar selection logic: mobility is most likely when students can mobilize economic resources, navigational knowledge, and institutional legitimacy to overcome administrative frictions and uncertainty (Beine, Noël & Ragot, 2014; Mazzarol & Soutar, 2002). This literature provides the first pillar for the present study: participation in international exchange should be modeled as an outcome of both *student resources* and *institutional opportunity conditions*, rather than treated as a simple preference-driven choice.

2.2. Opportunity Conditions: Information Transparency, Institutional Support, and Perceived Risk

A second, closely related theme concerns *how* institutions shape access through the “opportunity conditions” surrounding exchange. Research on study abroad participation repeatedly identifies informational asymmetries and administrative complexity as central barriers, especially for first-generation and lower-income students, because exchange requires early planning, procedural literacy, and credible guidance (Perna, 2006; Salisbury et al., 2009). More recent work frames these mechanisms as institutionalized inequalities: even when financial support exists, uneven advising quality, differential exposure to opportunities, and opaque procedures can suppress uptake among students who are not already embedded in mobility-oriented peer networks (Mellors & Vicencio, 2025).

In the European and UK settings, widening participation research illustrates that improving outward mobility participation often requires more than scholarships; it depends on proactive communication, budgeting guidance, and tailored support systems that address anxiety and practical uncertainty (Mellors & Vicencio, 2025). Similarly, institutional-level analyses emphasize that geographic and institutional context affects access to study abroad, suggesting that institutional resources and program portfolios mediate individual-level determinants. These findings support an interpretation of “institutional support” as a conversion factor: it influences whether students can translate interest into completion by reducing procedural friction, improving clarity, and ensuring that mobility fits degree progress (Coleman, 1988; Sen, 1999).

Recent macro-level evidence also highlights the role of perceived security and risk as determinants of international mobility flows. A 2025 panel analysis integrates economic, institutional, and security factors to explain international student mobility patterns, reinforcing the view that perceived safety and stability can condition mobility decisions alongside price and institutional quality. At the micro level, perceived risk can operate through family concerns, uncertainty about destination conditions, and doubts about institutional contingency support, factors that are especially salient for students with fewer financial buffers. This strand of literature motivates the inclusion of risk perceptions as a meaningful constraint within participation modeling, while remaining attentive to the fact that risk perceptions are context-dependent and potentially shaped by information quality (Ajzen, 1991).

A related institutional theme concerns policy architectures and program ecosystems. Internationalization initiatives such as Erasmus+ show how large-scale mobility systems develop inclusion and scale simultaneously, while still facing challenges in equitable participation (Erasmus+ European Commission, 2025a, 2025b; European Commission, 2024). Global reporting similarly indicates that mobility ecosystems involve

not only individual motivations but also institutional capacity, national policy rules, and portability/recognition infrastructures. This broader ecosystem framing supports the study's methodological choice to control for institution-level differences while focusing analytically on student resources and perceived opportunity conditions.

2.3. Perceived Efficacy and the Learning Returns of Exchange Participation

The third theme concerns outcomes, especially perceived learning and developmental gains. A large interdisciplinary body of work has long associated study abroad with language development, intercultural competence, and personal growth, while also documenting variation by program duration, structure, and student engagement (Deardorff, 2006; King & Ruiz-Gelices, 2003). More recent studies extend this by examining the psychological and contextual conditions that support intercultural learning. For instance, research in the *International Journal of Intercultural Relations* finds that students' intercultural competence development depends not only on exposure but also on reflective capacity and the ability to manage conflicts and negative emotions during mobility. Quantitative program evaluations also report measurable growth in intercultural knowledge, awareness, and skills within structured mobility settings, while noting that gains are shaped by participant composition and program design (Mayer, Louw & Larsen, 2024).

In addition to intercultural competence, recent work emphasizes employability-linked outcomes. A 2025 study on international student mobility argues that mobility is frequently connected to labor-market signaling and early career transitions, highlighting that perceived employability benefits are an increasingly salient part of mobility's educational value proposition. At the same time, 2025 syntheses and design-oriented work on short-term study abroad stress that educational value is conditional on intentional pedagogy, structured reflection, and alignment with curricular outcomes rather than mere participation. This conditionality matters for the present study because it implies that perceived efficacy is plausibly shaped both by participation and by institutional support conditions that affect the quality and coherence of the exchange experience (Deardorff, 2006; Sen, 1999).

A complementary stream focuses on "virtual exchange" and online international learning as an inclusion-oriented alternative or supplement to physical mobility. While virtual exchange does not substitute fully for physical immersion, recent studies report meaningful effects on global citizenship, intercultural communication competence, and career-related competencies, particularly for students who face financial or logistical constraints. This literature reinforces the broader point that international learning benefits are shaped by design and support, and that equity concerns are central when considering who can access global learning experiences. In the context of this paper, the virtual exchange literature is used not to shift the study's focus away from physical exchange, but to strengthen the interpretive claim that "efficacy" is a function of structured opportunity and institutional scaffolding.

2.4. MSR-oriented Internationalization and China's Higher-education Cooperation Context

A final theme concerns the China- and region-specific policy environment.

Internationalization in China is increasingly discussed through the lens of knowledge diplomacy and outward-facing cooperation, with Belt and Road–related frameworks shaping narratives of partnership-building, talent circulation, and people-to-people ties (Liu et al., 2025). At the regional level, Belt and Road–linked education and mobility patterns are also analyzed in other Asian settings, where the “Belt and Road” frame can influence mobility corridors and institutional cooperation logics (Lee et al., 2025). Although MSR is not a single program with uniform rules, Fujian’s positioning as a coastal gateway and partnership platform can plausibly shape institutional emphasis on outward mobility and international collaboration, making it a relevant context for studying exchange participation and perceived returns.

Recent empirical work also highlights the broader educational and economic dimensions of BRI-related policy. For instance, an economics-oriented 2025 study evaluates an “Education Action Plan” channel within the BRI and argues that education-related cooperation can influence educational development through multiple pathways, including international students’ education in China and broader cultural exchange mechanisms. Related research examines determinants of international students studying in China using panel approaches, underscoring that mobility is shaped by economic conditions, educational quality, national stability, and sociocultural proximity (Li, Zong & Zhang, 2025). While these studies focus primarily on inbound mobility, their frameworks reinforce a general point that mobility decisions reflect both individual-level preferences and institutional/policy conditions, an insight transferable to outbound exchange participation among Chinese undergraduates.

Finally, international reporting on student mobility data sources and trends emphasizes that mobility systems are shaped by measurement conventions, institutional reporting infrastructures, and policy definitions (IIE, 2024). This motivates the present study’s focus on *institution-recognized exchange completion* as the participation outcome, since it corresponds most closely to institutional policy objectives and the administrative processes that students must navigate.

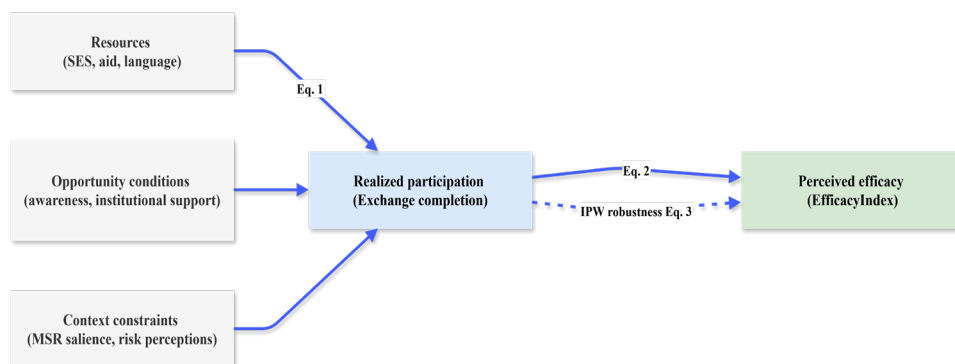
2.5. Conceptual Framework and Implications for Study Design

Synthesizing these themes, the literature suggests a framework in which student resources (e.g., socioeconomic capacity and language readiness) and opportunity conditions (e.g., awareness, process clarity, and institutional support) jointly shape realized participation, while participation, in turn, is associated with perceived efficacy that reflects the quality and coherence of the exchange experience. This framework is consistent with social reproduction perspectives on stratified access (Bourdieu, 1986; Granato & Schnepf, 2025), decision-oriented accounts emphasizing perceived control and constraints (Ajzen, 1991; Perna, 2006), and capability approaches that distinguish resources from the conditions required to convert resources into valued functionings (Sen, 1999). It also implies two empirical requirements that guide the present paper’s methodology: participation should be modeled with attention to both resources and opportunity conditions while controlling for institutional context, and perceived efficacy should be analyzed with explicit attention to selection into participation and to institutional factors that plausibly shape the exchange experience.

Figure 1 summarizes the paper’s explanatory logic by separating resources from opportunity conditions and then linking both to realized participation and perceived

efficacy. Student resources (e.g., socioeconomic capacity, financial aid access, and language readiness) are treated as enabling inputs that make mobility feasible but not sufficient, consistent with stratification and social reproduction accounts of mobility capital (Bourdieu, 1986; Brooks & Waters, 2011; Granato & Schnepf, 2025). Opportunity conditions (e.g., awareness, information transparency, procedural clarity, and institutional support) represent conversion factors that determine whether resources translate into completed exchange, aligning with capability-oriented interpretations of access and conversion (Sen, 1999) and decision-oriented perspectives emphasizing perceived control under constraints (Ajzen, 1991; Perna, 2006; Salisbury et al., 2009). Context constraints (e.g., risk perceptions and macro uncertainty) are positioned as frictional forces that may discourage participation or amplify resource gaps through differential sensitivity and family buffering capacity. The framework therefore maps directly onto the empirical design: participation is modeled as a function of resources, opportunity conditions, and constraints with institution fixed effects (Eq. 1), while perceived efficacy is estimated as an association with participation net of covariates (Eq. 2), complemented by selection-aware robustness via inverse probability weighting and balance diagnostics (Eq. 3).

Figure 1: Conceptual Framework Linking Resources, Opportunity Conditions, Participation, and Perceived Efficacy.



3. Methodology

3.1. Research Design, Setting, and Fieldwork

This study employed a cross-sectional quantitative survey to examine international exchange among Fujian undergraduates, focusing on participation, associated influencing factors, and students' perceived efficacy of exchange experiences in the context of Maritime Silk Road (MSR)–linked educational internationalization. Fujian was selected because its higher-education sector has maintained active international cooperation and mobility arrangements, making it a suitable context for investigating how access to exchange is distributed and how students evaluate its educational value. Data were collected between April 1 and June 30, 2025. This window was selected to avoid peak examination weeks and to minimize systematic nonresponse attributable to end-of-term academic pressure.

3.2. Sample, Recruitment, and Fieldwork Yield

The study used a multi-site design covering eight Fujian higher-education institutions to capture institutional variation in exchange opportunity structures while keeping implementation consistent across sites. To protect double-blind review, the institutions are anonymized as University A–H, but institutional type composition is reported to support interpretability: two research-oriented comprehensive universities, three teaching-oriented public universities, two applied undergraduate institutions, and one private undergraduate institution. Sampling followed a stratified approach to avoid over-representing any single institution, discipline, or cohort. Within each institution, recruitment was distributed across four discipline clusters (humanities/social sciences; business/economics/management; STEM; arts/design) and across year levels (freshman through senior). Recruitment relied on broad academic channels (course announcements, advising networks, and student administrative platforms) rather than international offices alone to reduce selection toward students who were already internationally engaged.

The online questionnaire was open for the full fieldwork window, and each institution used the same recruitment script and survey link to maintain procedural consistency. A total of 1,342 responses were received. After applying pre-specified quality and completeness rules, 1,200 responses were retained for analysis. Exclusions (N=142) occurred for four reasons applied in this order: missing participation status (N=31), missing more than 20% of the perceived efficacy items (N=54), duplicate submissions identified through non-identifying response-consistency checks (N=18), and clear non-attentive completion indicated by uniform straight-line responses across extended item blocks (N=39). These screening rules were applied before any estimation was conducted, and the same retained sample was used across models except where noted for analyses involving scale subcomponents.

3.3. Instrument Development and Measurement Integrity

The questionnaire was developed to capture participation, resource constraints, information access, institutional support conditions, and perceived educational returns to exchange. Items measuring perceived efficacy were adapted from established constructs in internationalization and student development research, with wording refined to fit the Fujian undergraduate context and to remain institution-neutral. Because the survey was administered in Chinese, items were translated and back-translated by bilingual reviewers, and discrepancies were resolved through consensus to preserve conceptual equivalence. A pilot test (N=62) conducted in March 2025 confirmed item clarity, response variability, and completion time, resulting in minor wording adjustments and improved ordering of sensitive questions.

To reduce common-method bias, the instrument used procedural safeguards: predictor blocks (resources, awareness, support, constraints) were placed before the perceived efficacy block, instructions emphasized that there were no correct answers, and items were phrased neutrally to avoid implying desirable responses. Sensitive items such as income were placed after rapport-building questions and offered response bands to reduce item nonresponse.

3.4. Measures and Variable Construction

The primary outcome was realized participation in international exchange. Participation was coded as 1 if a student completed at least one structured, institution-recognized cross-border learning programme during undergraduate study and 0 otherwise. To ensure consistent interpretation, the questionnaire defined “international exchange” as a programme that was either credit-bearing or formally certified by the university with documented learning activities. Examples included semester exchange, joint programmes, and supervised short-term academic programmes with defined learning tasks; informal travel and unstructured overseas visits were explicitly excluded. Two alternative participation measures were defined a priori for sensitivity analyses: an applied/accepted indicator and a near-term intention indicator. The primary models use realized participation because it directly reflects access and completion rather than aspiration. Perceived efficacy was measured using a multi-item Likert scale (1 = strongly disagree; 5 = strongly agree) covering four domains: intercultural competence, academic development, employability and career clarity, and self-efficacy/adaptability. A composite efficacy index (EfficacyIndex) was constructed as the mean of retained items after item screening. Internal consistency for the composite was high in the analytic sample (Cronbach’s $\alpha = 0.86$). Dimensionality diagnostics supported domain subscales; therefore, domain-level indices were also constructed and used in robustness analyses to ensure that aggregation did not obscure domain-specific effects.

Predictors were defined to reflect key mobility determinants and MSR-relevant contextual salience. Socioeconomic resources were operationalized as a standardized index combining family income band and parental education. Financial access was measured using an indicator for exchange-related scholarship or subsidy support and a perceived affordability measure. Language proficiency was measured using reported test bands when available and otherwise by a functional self-rating anchored to performance descriptors. Information access and awareness were captured by an index reflecting knowledge of opportunities, deadlines, advising routes, and programme requirements. Institutional support was measured through an index capturing advising quality, procedural clarity, and perceived transparency of credit recognition and transfer. Academic performance was captured through GPA bands. Family support measured perceived encouragement for overseas study, and risk/safety perceptions captured concerns about uncertainty and safety in overseas contexts. MSR salience measured awareness of MSR-related educational cooperation and perceived relevance of MSR initiatives to learning and career planning. Indices were coded so that higher values reflected more enabling conditions, except risk/safety perceptions, where higher values reflected greater concern. To reduce confounding, all models controlled for gender, year level, discipline cluster, home background (urban/rural proxy), prior overseas travel experience, and exposure to internationalized curriculum such as bilingual modules.

3.5. Statistical Models and Estimation

The analysis proceeded in two linked steps: modeling participation and modeling perceived efficacy, supplemented by a selection-aware approach because participation is self-selected. Participation was estimated using logistic regression:

$$\Pr(\text{Participation}_i = 1 \mid X_i, Z_i) = \Lambda(\alpha_0 + X_i^T \alpha_1 + Z_i^T \alpha_2 + \delta_{u(i)}) \quad (1)$$

Notation and Definitions: Participation_i denotes realized participation for student i . $\Lambda(\cdot)$ is the logistic cumulative distribution function. X_i includes the focal predictors (socioeconomic resources, financial access, language proficiency, awareness, institutional support, academic performance, family support, risk/safety perceptions, and MSR salience). Z_i includes controls (gender, year level, discipline cluster, home background, prior overseas travel, and exposure to internationalized curriculum). $\delta_{u(i)}$ represents institution fixed effects to account for systematic institutional differences in programme availability and administrative capacity across Universities A–H. Results are reported as odds ratios and average marginal effects; interpretation prioritizes marginal effects because they translate estimates into probability differences that are substantively meaningful in educational decision contexts.

Perceived efficacy was modeled as a function of participation and covariates using:

$$\text{EfficacyIndex}_i = \beta^0 + \beta^1 \text{Participation}_i + X_i^T \beta^2 + Z_i^T \beta^3 + \delta_{u(i)} + \varepsilon_i \quad (2)$$

The primary specification uses OLS because the efficacy index aggregates multiple Likert items and approximates a continuous underlying evaluation. To ensure conclusions were not an artifact of scale treatment, ordered-response specifications were estimated for domain subscales as robustness checks when diagnostic plots indicated notable departures from linearity.

To address observable selection into participation, inverse probability weighting was applied. Let $\hat{p}_i$ denote the predicted propensity from Eq. (1). Stabilized weights were defined as:

$$w_i = \frac{\Pr(\text{Participation}_i)}{p_i^{\text{Participation}_i} (1 - \hat{p}_i)^{(1 - \text{Participation}_i)}} \quad (3)$$

Eq. (2) was then re-estimated using weighted least squares with w_{iw_iwi} . Balance was assessed using standardized mean differences for all covariates included in Eq. (1), with balance considered adequate when post-weighting differences were substantially reduced and generally below conventional thresholds. To prevent undue influence of extreme weights, the distribution of w_{iw_iwi} was inspected and weights above the 99th percentile were winsorized in a sensitivity specification; substantive conclusions were evaluated for stability across the unweighted, IPW-weighted, and winsorized-weight models. All findings are interpreted as selection-adjusted associations rather than definitive causal effects because unobserved factors may still shape participation and efficacy.

3.6. Diagnostics, Missing Data, and Inference

All models used heteroskedasticity-robust standard errors. As a robustness alternative, standard errors clustered at the institution level were also estimated to account for within-institution correlation. Multicollinearity was evaluated using variance inflation factors, and predictors were retained in index form only when they improved interpretability without introducing redundancy. Sensitivity analyses included alternative participation definitions, alternative efficacy constructions (composite versus domain indices), and heterogeneity analyses by gender, discipline cluster, and socioeconomic tier to test whether constraints and returns differed across student groups.

Missing data were handled through a rule-based approach that was applied consistently across analyses. When missingness on model covariates was $\leq 5\%$, complete-case estimation was used to preserve interpretability. When missingness exceeded 5%, multiple imputation by chained equations was implemented as a sensitivity analysis, and results were compared with complete-case estimates to confirm that core conclusions were not driven by missing-data handling.

3.7. Ethics and Transparency

Participation was voluntary and anonymous. Students provided informed consent at the start of the survey and were informed that they could discontinue at any time without penalty. No personally identifying information was collected, and findings are reported only in aggregate form. The protocol was reviewed through the appropriate institutional ethics process prior to fieldwork. A de-identified dataset, codebook, and analysis scripts are available in line with institutional policy and journal expectations.

4. Results

4.1. Sample Characteristics and Baseline Patterns

The analytic sample included $N=1,200$ undergraduates drawn from eight Fujian institutions (Universities A–H). Unless otherwise noted, all descriptive statistics, models, and figures reported in this section use the same analytic sample ($N=1,200$) and the realized participation definition specified in the Methodology. Realized participation in institution-recognized international exchange was 17.5% ($N=210$), consistent with the expectation that completed mobility is a minority outcome when costs, information frictions, and programme capacity constrain access. Table 1 reports descriptive statistics for the outcomes, predictors, and controls that enter Equations (1)–(3). The mean perceived efficacy index (EfficacyIndex, 1–5) was 3.62 ($SD = 0.58$). Participants reported higher perceived efficacy on average (3.93) than non-participants (3.55), a descriptive difference of 0.38 points that is examined under covariate adjustment in Table 4.

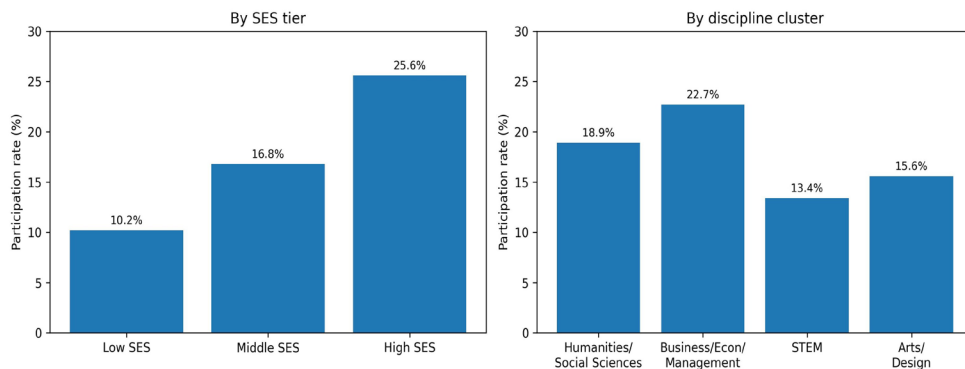
Table 1: Descriptive Statistics for Outcomes and Key Covariates ($N=1,200$).

Variable	Mean	SD	Min	Max
Participation (0/1)	0.175	0.380	0.00	1.00
EfficacyIndex (1–5)	3.620	0.580	1.80	5.00
SES index (z)	0.000	1.000	-2.30	2.10
Exchange aid/support (0/1)	0.124	0.330	0.00	1.00
Language proficiency (0–100)	71.413	10.801	35.00	98.00
Awareness index (1–5)	3.020	0.790	1.00	5.00
Institutional support index (1–5)	3.150	0.720	1.00	5.00
GPA band (1–5)	3.220	0.910	1.00	5.00
Family support (1–5)	3.310	0.900	1.00	5.00
Risk/safety concern (1–5)	3.050	0.880	1.00	5.00
MSR salience (1–5)	3.080	0.820	1.00	5.00
Female (0/1)	0.520	0.500	0.00	1.00
Prior overseas travel (0/1)	0.214	0.410	0.00	1.00

Note. Participation is realized completion of an institution-recognized exchange as defined in the Methodology. Indices are coded so higher values indicate more enabling conditions except Risk/safety concern (higher = greater concern). SD = standard deviation.

Figure 2 presents unadjusted participation rates by socioeconomic tier and discipline cluster. Participation increases across SES tiers and varies by discipline. These patterns are descriptive and are tested under covariate adjustment in the participation model (Table 3).

Figure 2: Realized Participation Rate by SES Tier and Discipline Cluster (N=1,200).



Caption. Rates are unadjusted proportions. SES tiers are terciles of the standardized SES index.

4.2. Measurement Quality of Perceived Efficacy

Table 2 reports reliability statistics and factorial validity evidence. The overall scale demonstrated high reliability (Cronbach's $\alpha = 0.86$), with domain reliabilities ranging from 0.78 to 0.84. A four-factor confirmatory structure aligned with the scale design showed acceptable fit (CFI = 0.95, TLI = 0.94, RMSEA = 0.046, SRMR = 0.041), supporting the use of the composite index as the primary outcome and domain indices for robustness. The CFA was estimated using a robust estimator appropriate for ordinal indicators; missingness was handled using full-information procedures consistent with the model estimator.

Table 2: Reliability and Factorial Validity of the Perceived Efficacy Scale (N=1,200).

Domain / Scale	Items (k)	Cronbach's α
Intercultural competence	4	0.84
Academic development	4	0.81
Employability & career clarity	4	0.79
Self-efficacy & adaptability	4	0.78
Overall Efficacy Index	16	0.86
CFA fit (4-factor): CFI = 0.95; TLI = 0.94; RMSEA = 0.046; SRMR = 0.041.		
<i>Note.</i> Items are rated 1–5. Fit indices are reported to document measurement structure. The primary outcome in Eq. (2) is the composite mean index; domain indices are used in robustness checks.		

4.3. Determinants of Realized Participation in International Exchange

We estimated Eq. (1) to identify factors associated with realized exchange participation. The model includes the full covariate set described in the Methodology

and institution fixed effects to account for systematic differences in programme supply and administrative capacity across Universities A–H. Table 3 reports odds ratios and average marginal effects (AMEs). AMEs are emphasized because they translate associations into probability differences that are more directly interpretable for educational decision-making and policy design.

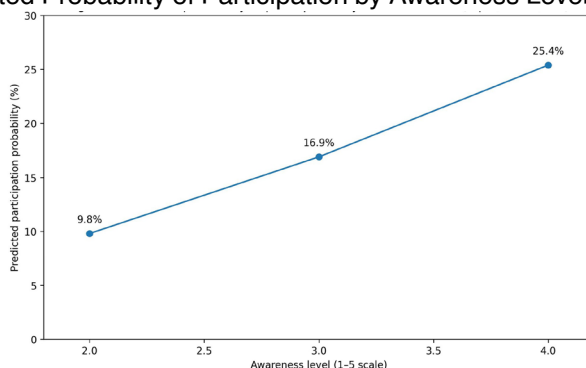
Awareness shows the largest marginal association: a one-point increase on the 1–5 awareness scale corresponds to a +6.1 percentage-point increase in predicted participation probability (AME = 0.061, $p < .001$). Exchange-related aid is also strongly associated with participation (AME = +4.3 pp, $p < .01$). Socioeconomic resources remain statistically and substantively meaningful net of aid and other controls (AME = +2.5 pp per 1 SD, $p < .01$). Language proficiency (per 10-point increase) is associated with a +2.0 pp higher participation probability ($p < .01$). Risk/safety concern is negatively associated with participation (AME = –2.1 pp, $p < .05$), indicating that perceived uncertainty is linked to reduced realized participation even after controlling for resources and institutional support.

Table 3: Logistic Regression of Realized Exchange Participation with Institution Fixed Effects (Eq. 1; N=1,200).

Predictor	Odds Ratio	Robust SE	AME (pp)	p-value
SES (per 1 SD)	1.28	0.10	+2.5	.004
Exchange aid (1=yes)	1.75	0.24	+4.3	.002
Language (per 10 points)	1.29	0.12	+2.0	.006
Awareness (per 1 point)	2.10	0.22	+6.1	<.001
Institutional support (per 1 point)	1.22	0.11	+1.7	.018
GPA band (per 1 level)	1.15	0.07	+1.1	.032
Family support (per 1 point)	1.30	0.10	+2.2	.008
Risk/safety concern (per 1 point)	0.78	0.07	–2.1	.041
MSR salience (per 1 point)	1.18	0.09	+1.3	.049

Note. Institution fixed effects included (Universities A–H). Robust standard errors are heteroskedasticity-robust. AMEs are average marginal effects computed from the fitted logit model using observed covariate values; AME standard errors were obtained via the delta method. Controls included gender, year level, discipline cluster, home background proxy, prior overseas travel, and internationalized curriculum exposure (coefficients omitted for brevity). Model pseudo $R^2 = 0.21$.

Figure 3: Predicted Probability of Participation by Awareness Level (Eq. 1; N=1,200).



Caption. Predictions computed from Eq. (1) with institution fixed effects; values shown are average predicted probabilities.

Figure 3 illustrates predicted participation probabilities across awareness levels, holding the remaining covariates at their observed values. The probability gradient aligns with the AME magnitude in Table 3 and demonstrates that awareness is not merely correlated with participation at the margins, but is associated with large shifts in predicted participation within the observed range of student awareness.

4.4. Perceived Efficacy of Exchange and Robustness to Selection Adjustment

We next estimated Eq. (2) to examine whether perceived efficacy is higher among students who completed exchange, after adjusting for resources, opportunity conditions, and institutional context. Table 4 shows that participation is positively associated with EfficacyIndex after covariate adjustment (coefficient = 0.32, $p < .001$). Relative to the outcome standard deviation (0.58; Table 1), this corresponds to approximately 0.55 SD, indicating a substantively meaningful difference in perceived educational returns between participants and non-participants. Language proficiency and institutional support are also positively associated with efficacy, consistent with the interpretation that students' evaluations reflect both exchange experience status and the quality of learning conditions that surround and enable international experiences. Risk/safety concern is negatively associated with perceived efficacy.

Table 4: OLS Regression of Perceived Efficacy on Participation and Covariates (Eq. 2; N=1,200).

Predictor	Coefficient	Robust SE	p-value
Participation (1=yes)	0.32	0.04	<.001
Language (per 10 points)	0.06	0.01	<.001
Institutional support (per 1 point)	0.15	0.03	<.001
Awareness (per 1 point)	0.07	0.02	.001
MSR salience (per 1 point)	0.05	0.02	.012
SES (per 1 SD)	0.04	0.02	.046
Risk/safety concern (per 1 point)	-0.06	0.02	.004

Note. Institution fixed effects included (Universities A–H). Controls included gender, year level, discipline cluster, home background proxy, prior overseas travel, and internationalized curriculum exposure (coefficients omitted for brevity). Robust SEs reported. Model $R^2 = 0.29$.

Table 5: Heterogeneity in the Participation–Efficacy Association (interaction models; N=1,200).

Term	Coefficient	Robust SE	p-value
Participation	0.28	0.05	<.001
Participation × Low SES (1=yes)	0.11	0.05	.029
Participation × Institutional support	0.06	0.02	.006

Note. Low SES is the bottom tercile of the SES index. Models include the full covariate set and institution fixed effects. Coefficients shown are from a model including both interactions simultaneously.

To assess whether the association between participation and perceived efficacy differs across student groups, Table 5 reports interaction models. The positive participation–efficacy association is larger for students in the low-SES tercile (interaction coefficient = 0.11, $p < .05$). In addition, the interaction between participation and institutional support is positive (coefficient = 0.06, $p < .01$), indicating that participants report stronger

perceived efficacy in environments where advising and administrative clarity are higher. These interaction results are consistent with the view that both access and institutional implementation shape how exchange translates into perceived learning gains.

Because participation is self-selected, we implemented the inverse probability weighting approach described in Eq. (3). Table 6 compares unweighted and IPW-weighted estimates and documents balance improvement to support the selection-adjusted interpretation. The participation coefficient remains positive and statistically precise after weighting, though modestly attenuated (unweighted = 0.32, IPW-weighted = 0.28). Covariate balance improved substantially: the mean absolute standardized mean difference decreased from 0.17 (pre-weighting) to 0.06 (post-weighting). To ensure that findings were not driven by extreme weights, a sensitivity specification winsorized weights at the 99th percentile; the participation estimate remained stable (0.27). Together, these results indicate that observable selection explains part, but not all, of the association between participation and perceived efficacy.

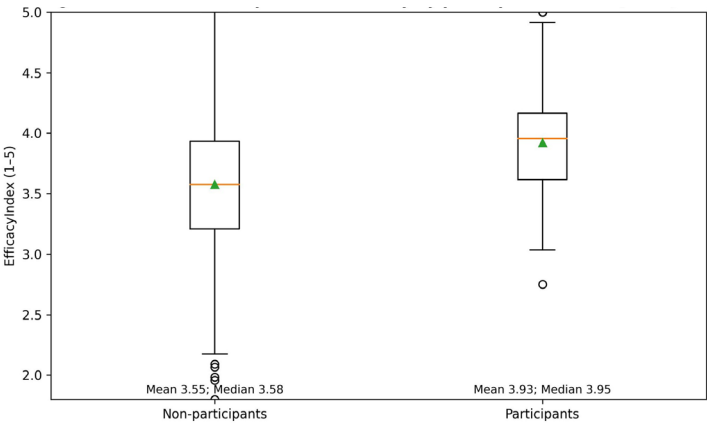
Table 6: Robustness: Selection-aware Estimation and Sensitivity Specifications (Eq. 3; N=1,200).

Specification	Participation Effect on Efficacy Index	Robust SE	p-value
OLS (Eq. 2, unweighted)	0.32	0.04	<.001
IPW-weighted OLS (Eq. 3)	0.28	0.05	<.001
IPW (99th pct winsorized weights)	0.27	0.05	<.001
Domain robustness (Intercultural subscale)	0.31	0.05	<.001

Note. IPW uses stabilized weights derived from Eq. (1). Balance diagnostics: mean ISMDI = 0.17 before weighting and 0.06 after weighting. Weight diagnostics: weights were inspected for extreme values; sensitivity winsorization capped weights at the 99th percentile. All specifications include institution fixed effects and the full covariate set.

Figure 4 provides a distributional view of perceived efficacy by participation status. The participant distribution is shifted upward relative to non-participants, consistent with the adjusted estimates in Tables 4–6 and indicating that the association is not driven by a small subset of high-scoring participants.

Figure 4: Distribution of Perceived Efficacy by Participation Status (N=1,200).



5. Discussion

5.1. *Interpreting the Participation Pattern in Context*

The results depict international exchange in Fujian as an opportunity shaped by a combination of student resources and institutional opportunity conditions rather than a uniformly accessible educational option. The descriptive gradients in participation by socioeconomic tier are reinforced by the multivariable participation model, where socioeconomic resources remain positively associated with realized participation even after accounting for exchange-related aid and institution fixed effects. This pattern indicates that financial support, while important, does not fully offset broader resource differences that shape mobility feasibility. In practical terms, participation appears to be influenced by layered affordability: direct programme funding matters, but so do indirect costs and the capacity to manage uncertainty (for example, documentation costs, deposits, insurance, and short-term liquidity), which tend to be more tightly linked to household socioeconomic conditions.

The participation model also shows that information access is not a peripheral correlate but a central factor. Awareness produces the largest average marginal association in Table 3 and corresponds to substantial shifts in predicted participation probabilities across the observed range. This finding is consistent with international exchange operating partly as an information-mediated opportunity: students who can identify relevant programmes, understand eligibility and timelines, and navigate procedures are materially more likely to complete exchange. Institutional support is also positively associated with participation, implying that advising quality and procedural clarity shape whether potential opportunities translate into realized mobility. Taken together, these results point to a dual mechanism, student-side capacity and institution-side implementation, where the latter operates through transparent processes and guidance rather than only through programme supply.

Risk/safety concerns are negatively associated with realized participation. Given that exchange destinations and formats vary in predictability and that mobility decisions often involve family considerations, perceived risk can operate as a constraint even when other enabling conditions are present. The magnitude is smaller than the awareness association but remains meaningful because it persists net of socioeconomic resources, aid, and institutional support. This pattern underscores that credible information, clear contingency planning, and consistent communication may matter not only for participation logistics but also for reducing perceived barriers that discourage completion.

Because the study uses cross-sectional survey data, all results in Tables 3–6 should be interpreted as associations rather than causal effects. Reverse causality is possible (for example, students who are more internationally oriented may seek information more actively), and unobserved factors may influence both participation and reported perceptions even after extensive adjustment and selection-aware robustness checks.

5.2. *Understanding Perceived Efficacy and what it Implies about Educational Value*

Students who completed exchange report higher perceived efficacy than non-participants, and this difference persists after adjustment for background characteristics

and institutional context. The adjusted association is substantively meaningful relative to the outcome's dispersion and is consistent with the distributional shift shown in Figure 4, indicating that the pattern is not driven solely by a small subset of exceptionally high-scoring participants. Within the limits of observational inference, the evidence supports the conclusion that realized exchange participation is linked to broadly higher perceived learning and developmental returns.

Two findings clarify how perceived efficacy is shaped. First, institutional support is positively associated with perceived efficacy even after controlling for participation and student characteristics. This suggests that students' evaluations reflect not only exchange completion but also the institutional conditions that structure the experience, including advising quality, administrative clarity, and the manageability of credit recognition. Second, the positive interaction between participation and institutional support indicates that supportive environments may amplify how effectively participation translates into perceived gains. This interaction should be interpreted as suggestive rather than definitive, but it aligns with the practical view that exchange outcomes depend on the coherence of pre-departure guidance, procedural predictability, and post-return academic integration.

The heterogeneity results provide an additional equity-relevant insight. The participation–efficacy association is larger among low-SES students, implying that when lower-resource students complete exchange, they may perceive relatively stronger returns. This does not imply that exchange automatically equalizes opportunity; rather, it suggests that expanding access for constrained groups could yield meaningful perceived benefits, strengthening the case for equity-oriented mobility design.

Selection-aware robustness analyses reinforce confidence in the efficacy findings without overstating what the data can establish. After inverse probability weighting, the participation coefficient remains positive, although modestly attenuated, and balance diagnostics show substantial reduction in observable differences between participants and non-participants. This pattern is consistent with partial selection on observables, students who participate tend to have more enabling profiles, while indicating that the participation–efficacy association is not fully explained by measured background and opportunity conditions. At the same time, unobserved factors may remain, so the weighted estimates are best interpreted as improved comparability rather than causal identification.

5.3. Policy and Institutional Implications for Equitable Exchange Under MSR

The findings suggest a practical policy sequence: strengthening the conditions that convert “opportunity” into “access,” and strengthening the conditions that convert “access” into perceived educational value. For participation, awareness is the most policy-relevant correlate, with the largest marginal association in the participation model and large probability shifts across observed awareness levels. This implies that institutions can plausibly increase realized participation through structured information systems that reduce asymmetries: clear program maps, simplified eligibility and timeline communication, centralized advising access, and routine outreach beyond internationally oriented student circles. Because awareness operates with large probability differences, even incremental improvements in information delivery may translate into meaningful increases in realized participation.

Financial support remains essential, but the persistence of SES associations net of aid

indicates that support design should address the layered nature of affordability. Beyond covering tuition or programme fees, targeted funding that covers indirect and upfront costs, such as documentation, insurance, deposits, and contingency expenses, may be particularly important for constrained students. This design is consistent with the finding that low-SES students report larger participation-linked efficacy gains, suggesting that equity-targeted access expansion may yield substantial perceived educational returns.

Institutional support emerges as a cross-cutting factor because it is associated with both participation and efficacy. Advising quality, procedural clarity, and credit-transfer transparency appear to shape whether students enter exchange and how effectively they translate exchange into perceived learning gains. In practical terms, internationalization strategies that treat administrative design and curricular integration as core components, rather than as auxiliary services, are more likely to convert exchange participation into educational value. In addition, the negative association between risk perceptions and participation implies that institutions can reduce perceived barriers by providing transparent destination-specific briefings, clear safety protocols, and consistent support channels that address student and family concerns.

Finally, MSR salience shows positive associations with both participation and perceived efficacy in adjusted models. This suggests that MSR framing can be educationally productive when it is operationalized through concrete pathways, curriculum-linked exchange options, thematic modules, supervised projects, or structured internships, rather than remaining at the level of general policy messaging. When MSR-related cooperation is implemented through clear program design and credible institutional support, it can provide a coherent narrative that helps students connect exchange experiences to academic development and future planning.

6. Conclusion

This study examined international exchange among Fujian undergraduates in the Maritime Silk Road–related internationalization context by linking realized participation, the factors associated with participation, and students' perceived efficacy of exchange experiences. The evidence indicates that participation is patterned rather than evenly distributed, with access shaped jointly by student resources and institutional opportunity conditions. Information transparency and process clarity, reflected in students' awareness of opportunities, navigational capacity, and perceived institutional support, emerge as especially consequential correlates of whether students translate interest into completion, while financial access remains important yet does not fully eliminate socioeconomic stratification in realized mobility. At the same time, students who complete exchange report consistently higher perceived educational value across intercultural growth, academic development, career clarity, and adaptability, and this advantage remains visible after adjustment for student background and institutional context and under selection-aware robustness checks. Taken together, the findings support a central implication for internationalization practice: exchange is most likely to yield equitable educational value when institutions reduce information frictions, strengthen advising and administrative coherence, and design affordability support that addresses indirect and upfront costs in addition to direct fees. In the MSR setting, this means that policy narratives matter most when they are translated into concrete, supported pathways that students can realistically complete and integrate into their learning trajectories.

6.1. Limitations, Future Research, and Implications

The study relies on cross-sectional survey data and therefore cannot establish causal effects or fully rule out unobserved selection; longitudinal designs that measure students before and after exchange, as well as quasi-experimental approaches using programme eligibility rules, capacity thresholds, or phased rollouts, would strengthen causal interpretation and clarify mechanisms. Several constructs, including perceived efficacy and some predictors, are self-reported and may be influenced by recall and social desirability, although procedural safeguards were used to reduce these risks; future research should triangulate survey responses with administrative mobility records, verified language benchmarks, and structured learning outcome measures. The institutional sample captures meaningful diversity within Fujian, but generalization beyond the province should be cautious; comparative studies across coastal and inland provinces and across different forms of MSR-linked partnerships would deepen external validity. Practically, the results point to three priorities: widen equitable access by improving information transparency and advising reach, ensure process coherence through predictable credit recognition and administrative procedures, and expand affordability support to cover indirect and upfront costs so that mobility opportunities translate into inclusive educational value.

References

- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), pp. 179-211. doi: [https://doi.org/10.1016/0749-5978\(91\)90020-T](https://doi.org/10.1016/0749-5978(91)90020-T)
- Beine, M., Noël, R. & Ragot, L. (2014). Determinants of the international mobility of students. *Economics of Education Review*, 41, pp. 40-54. doi: <https://doi.org/10.1016/j.econedurev.2014.03.003>
- Bourdieu, P. (1986). The Forms of Capital. In J. Richardson (Ed.), *Handbook of Theory and Research for the Sociology of Education* (pp. 241-258). Greenwood.
- Brooks, R. & Waters, J. (2011). *Student Mobilities, Migration and the Internationalization of Higher Education*. Springer. doi: <https://doi.org/10.1057/9780230305588>
- Coleman, J. S. (1988). Social Capital in the Creation of Human Capital. *American Journal of Sociology*, 94, pp. S95-S120. doi: <https://doi.org/10.1086/228943>
- Deardorff, D. K. (2006). Identification and Assessment of Intercultural Competence as a Student Outcome of Internationalization. *Journal of Studies in International Education*, 10(3), pp. 241-266. doi: <https://doi.org/10.1177/1028315306287002>
- Erasmus+ European Commission. (2025a). *Downloadable statistics for researchers*. Retrieved from <https://erasmus-plus.ec.europa.eu/resources-and-tools/data-evaluations-statistics/statistics/for-researchers>
- Erasmus+ European Commission. (2025b). *Erasmus+ Programme Guide 2025 (Version 2)*. Retrieved from <https://erasmus-plus.ec.europa.eu/document/erasmus-programme-guide-2025-version-2>
- European Commission. (2024, November 26). *Erasmus+ Annual Report released (Press release IP/24/6106)*. Retrieved from https://ec.europa.eu/commission/presscorner/detail/en/ip_24_6106

- Granato, S. & Schnepf, S. V. (2025). Why are lower socioeconomic background students underrepresented in Erasmus? A focus on the selection into mobility and degree course organization. *Studies in Higher Education*, 50(3), pp. 638-652. doi: <https://doi.org/10.1080/03075079.2024.2349963>
- IIE. (2024). *Open Doors 2024*. Institute of International Education. Retrieved from <https://www.iie.org/publications/open-doors-2024>
- King, R. & Ruiz-Gelices, E. (2003). International student migration and the European 'Year Abroad': effects on European identity and subsequent migration behaviour. *International Journal of Population Geography*, 9(3), pp. 229-252. doi: <https://doi.org/10.1002/ijpg.280>
- Kosman, B. A., Castro de Jong, D., Knight-Agarwal, C. R., Chipchase, L. S. & Etxebarria, N. (2024). The benefits of virtual learning abroad programs for higher education students: A phenomenological research study. *Nurse Education Today*, 136, pp. 106133. doi: <https://doi.org/10.1016/j.nedt.2024.106133>
- Lee, K. H., Cheng, Y. E., Yeoh, B. & Ho, K. C. (2025). The internationalisation of education and 'Belt and Road' student mobilities in Southeast Asia. *Asian Population Studies*, 21(1), pp. 1-6. doi: <https://doi.org/10.1080/17441730.2024.2445351>
- Li, T., Zong, X. & Zhang, W. (2025). The determinants of international students studying in China: An empirical research based on the "Belt and Road" perspective. *PLoS One*, 20(8), pp. e0329787. doi: <https://doi.org/10.1371/journal.pone.0329787>
- Liu, W., Yan, T., Li, Y. & Lv, W. (2025). International higher education as knowledge diplomacy: The role of Chinese universities in China's belt and road initiative. *Industry and Higher Education*, 39(2), pp. 187-197. doi: <https://doi.org/10.1177/09504222241271659>
- Mayer, C.-H., Louw, L. & Larsen, J. (2024). Developing Intercultural Competences in the Study-Abroad Programme Semester at Sea (SAS). *Journal of Intercultural Communication*, 24(1), pp. 120-131. doi: <https://doi.org/10.36923/jicc.v24i1.644>
- Mazzarol, T. & Soutar, G. N. (2002). "Push-pull" factors influencing international student destination choice. *International Journal of Educational Management*, 16(2), pp. 82-90. doi: <https://doi.org/10.1108/09513540210418403>
- Mellors, J. & Vicencio, A. (2025). Widening participation in outward student mobility: Successes, challenges and opportunities. *British Educational Research Journal*, 51(5), pp. 2358-2376. doi: <https://doi.org/10.1002/berj.4176>
- OECD. (2025). *What are the key trends in international student mobility?* (Education Indicators in Focus, No. 88). OECD Publishing, Paris. doi: <https://doi.org/10.1787/2a423a76-en>
- Perna, L. W. (2006). Studying College Access and Choice: A Proposed Conceptual Model. In J. C. Smart (Ed.), *Higher Education: Handbook of Theory and Research* (pp. 99-157). Springer Netherlands. doi: https://doi.org/10.1007/1-4020-4512-3_3
- Salisbury, M. H., Umbach, P. D., Paulsen, M. B. & Pascarella, E. T. (2009). Going Global: Understanding the Choice Process of the Intent to Study Abroad. *Research in Higher Education*, 50(2), pp. 119-143. doi: <https://doi.org/10.1007/s11162-008-9111-x>

- Sen, A. (1999). *Development as Freedom*. Oxford University Press. Retrieved from <https://global.oup.com/academic/product/development-as-freedom-9780198297581>
- UNESCO. (2025). *Higher Education*. Retrieved from <https://www.unesco.org/en/higher-education>
- Vögtle, E. M. & Windzio, M. (2016). Networks of international student mobility: enlargement and consolidation of the European transnational education space? *Higher Education*, 72(6), pp. 723-741. doi: <https://doi.org/10.1007/s10734-015-9972-9>