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Analyzing Intercultural Competence among Erasmus Students

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ABSTRACT: *This study examines intercultural competence among students participating in an Erasmus mobility program at higher education institutions across Europe (primarily Portugal, Spain, and Finland). The study adopts a quantitative approach based on an intercultural competence scale. It explores how intercultural competence varies according to both personal characteristics (gender, nationality, field of study, and travel frequency) and students' perceptions of their attitudes across multiple domains via Mann–Whitney and Kruskal–Wallis tests. Moreover, the study seeks to examine correlations between intercultural competence and integration experiences, as well as between intercultural competence and the impact of the Erasmus program on the host community, using Spearman's tests. Statistically significant differences across groups and correlations between variables are identified whenever they exist. The findings are particularly valuable for educators, policymakers, and tourism professionals when designing programs and initiatives to foster intercultural learning and exchange.*

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INTRODUCTION

Since its inception in 1987, the European Union's Erasmus+ program has facilitated transformative educational experiences that extend far beyond traditional academic boundaries (Lesjak et al., 2015; Silva et al., 2022, 2025). In fact, international mobility has consistently stimulated students' personal, professional, and cultural development (Mizikaci & Arslan, 2019; Sobkowiak, 2019).

Several studies (e.g., Beaven & Borghetti, 2015; Elola & Oskoz, 2008; Silva et al., 2022; Silva et al., 2025; Sobkowiak, 2019) highlight that studying abroad is a mostly positive experience for its participants, significantly contributing to the development of sensitivity toward cultural differences and a sense of intercultural awareness and competence. However, simply residing abroad or experiencing positive intercultural experiences does not guarantee enhanced intercultural competence (Gregersen & Hermans, 2017; Jackson, 2015; Lantz-Deaton, 2017). Moreover, Erasmus experiences are not uniformly beneficial. Various factors, such as macroeconomic contexts or the sociodemographic characteristics of the students, may influence individual experiences (Samuk & Burchi, 2024).

Notwithstanding this last point, exploring Erasmus mobility as a culture-led experience emerges as a great tool for enhancing youth's intercultural competence, i.e., learning the culture of Self and Other and communicating across cultures. Within the scope of the CultSense project "*Sensitizing Young Travellers for Local Cultures*" (2020-1-NL01-KA203-064791), funded by the Erasmus+ program, this study examines intercultural competence among students participating in Erasmus mobility programs at higher education institutions across different European countries (mainly Portugal, Spain, and Finland). The study

adopted a quantitative approach based on Fan et al.'s intercultural competence scale (2022).

While the potential of the Erasmus exchange to promote intercultural competence may be evident, to design effective mobility, education, and tourism interventions, it is essential to analyze whether the outcomes vary according to participants' personal characteristics and integration experiences, quantify these differences, and explore their link to perceived host–community impact. To operationalize this thesis, the study addresses four research questions:

RQ1: To what extent does intercultural competence vary across students' personal characteristics (gender, nationality, field of study, and prior travel frequency)?

RQ2: What is the impact of the Erasmus experience on students' attitudes across multiple domains?

RQ3: How is intercultural competence associated with students' reported integration experiences in host communities?

RQ4: What relationship exists between students' intercultural competence and their perceptions of Erasmus's impact on host communities?

This study makes three concise contributions. First, it applies Fan et al.'s (2022) intercultural competence scale cross-nationally among Erasmus students in Portugal, Spain, and Finland. Second, it links individual predictors—such as gender, nationality, field of study, and travel frequency—to students' integration experiences and their perceived impact on the host community. Third, it offers actionable insights for educators and policymakers to enhance intercultural learning in mobility programs.

LITERATURE REVIEW

Conceptualizing Intercultural Competence

In today's globalized and culturally diverse environments (Arasaratnam, 2016; Ladegaard, 2025; Spitzberg & Changnon, 2009), multicultural and intercultural policies play a crucial role in determining whether diversity is valued and peaceful coexistence is fostered (UNESCO, 2009). Therefore, intercultural competence is a critical asset that enables challenging rigid identity constructs and promoting inclusive perspectives.

Intercultural competence extends beyond effective communication or the mere avoidance of cultural misunderstandings (Arasaratnam, 2016). It fundamentally involves valuing diversity, demonstrating curiosity and genuine interest in others, while engaging in critical self-reflection (Deardorff, 2006; Engberg et al., 2022; Schwarzenthal et al., 2020).

Summarizing the characteristics of an interculturally competent individual, Arasaratnam (2016) described such a person as "*mindful, empathetic, motivated*

to interact with people of other cultures, open to new schemata, adaptable, flexible, able to cope with complexity and ambiguity". Language skills and culture-specific knowledge undoubtedly serve as assets for such individuals. Furthermore, being neither ethnocentric nor defined by cultural prejudices (Arasaratnam, 2016) complements this view, highlighting that intercultural competence demands the capacity to modify one's behavior and act appropriately within the host culture (Bhawuk, 2017).

Overall, with intercultural competence, individuals are able to recognize cultural differences and adjust behaviors on the basis of their cultural knowledge to interact more effectively with people from diverse cultural backgrounds (Tsaur & Tu, 2019). This competence is becoming increasingly important in today's changing global environment, with heightened awareness among higher education institutions of the need to deliver graduates who can function both as global professionals and responsible citizens (Deardorff & Arasaratnam-Smith, 2017; Guillén-Yparrea & Ramírez-Montoya, 2023; Marques & Oliveira, 2023).

Developing Intercultural Competence through the Erasmus Exchange

Guillén-Yparrea and Ramírez-Montoya (2023) noted that intercultural competence is a skill that must be continuously developed. Scherle and Nonnenmann (2008, p. 126) concur and define it as "*a continuous learning process that is determined by specific experiences, reflective observation, abstract conceptualization and active experimentation*". Multiple studies confirm that intercultural competence can be systematically developed and acquired through collaborative learning, appropriate training and education (e.g., Arasaratnam, 2016; Catteeuw, 2012; Deardorff & Arasaratnam-Smith, 2017; Gregersen-Hermans, 2017; Narafshan, 2024). This competence can be further enhanced through various intercultural experiences, such as attending international/culturally diverse schools or maintaining extensive contact with people from other countries (Habib et al., 2025; Schwarzenthal et al., 2020).

In this context, the Erasmus+ program offers a valuable context for developing such awareness (Kubota, 2016; Silva et al., 2022). Participants not only acquire academic knowledge but also immerse themselves in new cultural environments, interacting with both the host culture and fellow international peers (Beaven & Golubeva, 2016; Sobkowiak, 2019). These experiences encourage students to broaden their perspectives, enhance their language skills, build transnational networks, and develop a more nuanced understanding of cultural diversity (Beaven & Golubeva, 2016; Samuk & Burchi, 2024).

Exposure to different cultural contexts during an Erasmus exchange significantly challenges international students, as they move through new academic and social environments. Communicating in a foreign language, adjusting to different educational contexts, experiencing daily life barriers, adapting to cultural norms and, sometimes, feeling homesick often challenge students' existing beliefs and values, prompting reflection and adaptation. When confronted with unfamiliar social norms and practices, participants are encouraged to reassess their own cultural frameworks (Silva et al., 2025). This

reflective process enhances their capacity to communicate across cultural boundaries and fosters a more refined appreciation of diverse perspectives (Asoodar et al., 2017; Catteeuw, 2012; Silva et al., 2022).

In increasingly multicultural societies, the responses to cultural diversity can vary, ranging from assimilation and exclusion to segregation and integration. Therefore, these encounters require adaptation from both newcomers and host communities. In the case of Erasmus mobility programs, for example, Van Mol and Michielsen (2015) reported that "*students predominantly interacted with other internationals, because they expected locals to be less approachable and not fluent in English*" (p. 436). These preconceived expectations limit host–student ties and create a phenomenon often labeled the "*Erasmus bubble*" (Earls, 2018, p.50), referring to a limited social network composed mostly of fellow Erasmus participants. On the other hand, locals may perceive Erasmus students as tourists rather than serious learners, which can lead to avoidance and hinder openness to mutual interaction (Ajanović et al., 2016). All these obstacles can lead to misunderstandings, uncomfortable encounters, and discriminatory behaviors (Ting-Toomey & Dorjee, 2018).

Assessing Intercultural Competence

A significant contribution to this body of literature is offered by Fan et al. (2022), who developed and validated a multidimensional measurement of tourists' intercultural competence through a rigorous mixed-methods approach. Drawing insights from the literature and conducting in-depth interviews with experienced cultural tourists, the authors identified four core dimensions of intercultural competence: intercultural responsibility, understanding, appreciation, and action. These dimensions were validated through an expert panel review and refined via exploratory and confirmatory factor analysis across two empirical studies. The final scale proved to be both reliable and valid, capturing the ethical, cognitive, affective, and behavioral aspects of intercultural competence in tourism contexts. By showing how each dimension builds upon and informs others, the framework provides a richer, more nuanced understanding of the construct.

The study demonstrated that higher levels of intercultural competence were significantly associated with increased tourist participation and more memorable cultural experiences, underscoring the instrumental role of competence development in meaningful intercultural engagement. While previous studies have often considered tourists' intercultural understanding and appreciation as consequences of tourism experiences, this research suggests that they are also important antecedents that can enhance the quality of cultural tourism experiences. By adopting a multidimensional approach to intercultural competence, this framework provides a comprehensive basis for assessing and cultivating this essential capability across various contexts.

Considering the assessment of intercultural competence, while the current study builds upon literature on intercultural competence, particularly within the context of Erasmus exchange programs, it adopts a novel approach by quantitatively assessing intercultural competence via a cross-country survey. This

contrasts with previous qualitative work, such as Sobkowiak (2019), which explored the experiences of Polish Erasmus students through interviews.

In summary, the literature indicates that Erasmus exchange programs can foster intercultural competence, although their effects vary. Research highlights how individual traits, program design, and structured interventions shape outcomes. Some studies explore Erasmus qualitatively; others measure intercultural competence quantitatively elsewhere. Few studies have quantitatively assessed intercultural competence multidimensionally among Erasmus students in various host countries. This study addresses that gap by quantitatively analyzing Erasmus participants in Portugal, Spain, and Finland via Fan et al.'s (2022) framework to examine variations in terms of personal characteristics, integration experiences, and host-community perceptions.

METHODOLOGY

This study employed a quantitative approach, conducting an online survey via the Qualtrics platform from March 31 to May 23, 2023. The survey targeted incoming Erasmus students participating in mobility programs at higher education institutions across specific European countries, namely, Portugal, Spain, and Finland. In addition to the three host countries having different national languages, the students themselves represented a wide diversity of countries and languages. Therefore, although Erasmus+ promotes multilingualism, a common *lingua franca* was essential to ensure consistent communication and reliable data collection. As English served as the language of instruction at the three host universities and all these students had to demonstrate proficiency in English before applying, English was chosen as the survey language.

Survey Instrument

The survey was developed through modifications to the CultSense Survey (CSS), created within an EU-funded project. The CSS was designed to provide an overview and an understanding of students' self-perceptions regarding different aspects: intercultural competences in the context of travel; cosmopolitanism traits; travel frequency and behaviors; and perceived travel sustainability (Marques et al., 2023).

Prior to distribution, the study received approval from the ethics committees of the HEIs involved. Moreover, the survey was sent to the Erasmus coordinators to ensure the clarity and relevance of the questions, along with agreement, and all participants consented voluntarily to take part in the research.

For this paper, only a selection of variables was considered, namely:

– Participant information: This information included gender, nationality, field of study, and home and host universities;

– Intercultural Competence scale: According to Fan et al. (2022), 21 statements are rated on a 5-point Likert scale (*1 = Strongly disagree* to *5 = Strongly agree*), which assesses students' perceptions. The scale encompasses four dimensions with proven reliability: intercultural

responsibility (Cronbach's α = 0.849), intercultural understanding (Cronbach's α = 0.775), intercultural appreciation (Cronbach's α = 0.819), and intercultural action (Cronbach's α = 0.774).

− Impact of Erasmus Experience on Student Attitudes: Five items were used to evaluate the extent to which students re-evaluated their self-perception following mobility. The response options included the following: *1 = Reinforced existing views; 2 = Have re-evaluated my views; 3 = Plan to change my behavior; and 4 = Do not think about this.*

− Integration Experience: Six items measured on an 11-point Likert-type scale (*0 = no contact at all* to *10 =* many contacts) were used to assess students' experiences during Erasmus mobility;

− Perceived Impact on Host Community: Three items measured on a 5-point Likert-type scale (*1 = Strongly disagree* to *5 = Strongly agree*).

Conceptual Framework

The conceptual model advanced in this study (Figure 1) explores potentially different levels of intercultural competence according to the following:

− Gender: Considers differences between male and female students;

− Nationality: Comparing intercultural competence levels among students from Portugal, Spain, and Finland;

− Field of study: Analyzing differences across academic disciplines;

− Travel frequency: over the past five years, categorized into four groups (1–3 times, 4–6 times, 7–9 times, and 10+ times);

− Impact of Erasmus Experience on Student Attitudes: how Erasmus experiences challenged and/or reshaped students' values and attitudes.
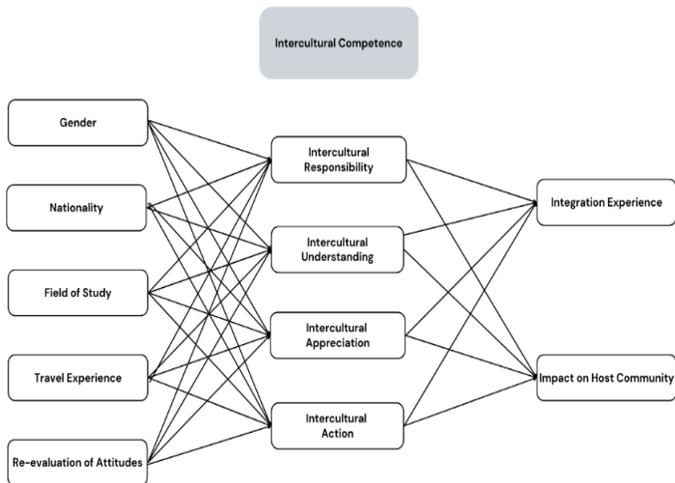

Figure 1: Conceptual Framework

Data collection and analysis

In total, the questionnaire was sent to 151 students who participated in an Erasmus mobility program at the selected HEIs (90 in Portugal, 43 in Finland, 8 in Spain, and 10 in other countries) in 2022. A total of 53 valid questionnaires were gathered, corresponding to a response rate of 35%, which was considered sufficient for statistical analysis. Minimal statistical analysis requires 30 respondents, which is particularly relevant for findings with large standard deviations, as a small sample does not need to argue for representativeness (O'Leary, 2004).

Data were initially analyzed through Qualtrics, with subsequent statistical analyses conducted via SPSS version 29. The analytical approach included both descriptive and inferential statistics. Owing to the ordinal nature of several measures, the study employed nonparametric tests, which are also more suitable for small samples. Mann–Whitney U tests were used for two-group comparisons, and Kruskal–Wallis tests were used to examine statistically significant differences in intercultural competence across multiple groups. Spearman's rank correlation coefficient (rho) was calculated to determine the relationships between the intercultural competence dimensions and the identified variables. In the presence of missing values, those values were excluded test-by-test. Whenever the null hypothesis was rejected, the effect size of the significant differences was presented and analyzed according to Cohen's (1988) criteria.

RESULTS AND DISCUSSION

Profile of the respondents

The survey yielded 53 valid responses (representing an overall response rate of approximately 35%), predominantly from female Erasmus students (69.8%), mostly from undergraduates (88.7%), while 9.4% were pursuing a master's degree. A greater percentage of participants were attending courses in Portugal (49.1%), followed by Finland (26.4%), Spain (15.1%), and other countries (9.4%).

The respondents represented a wide range of nationalities, with students from 20 different countries, predominantly European, although some from outside Europe (Brazil, Kazakhstan, Lithuania, Mauritania, Mexico, Turkey, Ukraine, and Vietnam). The most common nationality was German (17%), followed by Polish (15.1%).

Regarding the timing of their mobility period, 45.3% were enrolled in the second semester (spring), 41.5% in the first semester (autumn), and 13.2% were spending a full academic year abroad. Over one-third of the respondents (38.5%) reported having traveled 1–3 times, and nearly one-third (30.8%) traveled 4–6 times, suggesting that most participants were experienced travelers.

The educational backgrounds of the respondents were diverse. In addition to Tourism and Leisure (24.5%) and Technology and Engineering (30.2%), the most

represented areas, other fields included Arts, Culture and Humanities, Business and Management, and Social Sciences.

Intercultural Competence

The Intercultural Competence scale (Table 1) revealed solid mean scores across the four dimensions. The scale demonstrated strong internal consistency, with Cronbach's alpha (α) values ranging from 0.638--0.853, across the four dimensions (intercultural responsibility - α = 0.705; intercultural understanding - α = 0.638; intercultural appreciation - α = 0.762; and intercultural action - α = 0.853). These reliability values are comparable to those reported in Fan et al.'s original study (intercultural responsibility - α = 0.849; intercultural understanding - α = 0.775; intercultural appreciation - α = 0.819; and intercultural action - α = 0.774).

Table 1: Intercultural Competence Results

	Min.	Max.	*M*	*SD*	Cronbach's α
Intercultural responsibility (n = 53)					0.705
I respect a destination's heritage.	3.00	5.00	4.77	0.505	
I respect and tolerate cultural differences.	3.00	5.00	4.79	0.454	
I comply with a destination's cultural rules.	2.00	5.00	4.45	0.695	
I'm open-minded when traveling.	3.00	5.00	4.79	0.454	
When traveling, I'm careful and ask more questions to show cautious behavior.	2.00	5.00	4.17	0.871	
I can accept a destination's culture that is different from my own background.	3.00	5.00	4.51	0.608	
Intercultural understanding (n = 53)					0.638
I am aware of the differences between cultures.	3.00	5.00	4.68	0.547	
I compare the differences between cultures.	2.00	5.00	4.26	0.858	
I try to reflect on my own culture after a	2.00	5.00	4.13	0.900	

cultural experience at a destination.					
I try to see the world through locals' eyes.	1.00	5.00	4.23	1.031	
I try to learn about cultural advantages.	3.00	5.00	4.40	0.716	
Intercultural appreciation (n = 52)					0.762
I prefer unique and novel destination cultures.	2.00	5.00	3.98	0.754	
I like to make contact with a novel culture.	3.00	5.00	4.15	0.751	
I am interested in the destination's culture.	3.00	5.00	4.56	0.608	
I can appreciate the beauty of a destination's culture.	3.00	5.00	4.65	0.590	
I can appreciate a destination lifestyle.	3.00	5.00	4.60	0.603	
Intercultural action (n = 52)					0.853
I would like to interact with objects at a destination.	3.00	5.00	4.23	0.675	
I would like to experience a destination's authentic culture.	3.00	5.00	4.46	0.753	
I try to learn about the cultural background of a destination.	2.00	5.00	4.27	0.770	
I look for cultural information of a destination.	2.00	5.00	4.13	0.929	
I would like to take part in local activities and cultural exchanges.	2.00	5.00	4.31	0.875	

Note. M = mean, SD = standard deviation.

Scale: 1 = strongly disagree to 5 = strongly agree

These findings suggest that the participants exhibit an open, respectful, and proactive attitude toward the cultural diversity encountered during their academic mobility.

The Intercultural Responsibility dimension had high mean values (ranging from 4.17-4.79) across all the items, reflecting a strong sense of respect, tolerance,

and open-mindedness with respect to cultural norms and traditions at host destinations. The highest-rated items, "*I respect and tolerate cultural differences*" and "*I'm open-minded when traveling*" (both M = 4.79), indicate that the participants assimilated core values tied to cultural sensitivity. The internal consistency of this dimension (α = 0.705) is acceptable, although somewhat lower than that reported in Fan et al.'s original study (α = 0.849). Bivariate statistical analysis through the Mann–Whitney test revealed significant gender differences in this dimension, with female students demonstrating significantly higher scores (mean rank = 29.41) than male students did (mean rank = 19.33, p = 0.027). This implies that gender influences students' approach to cultural respect and tolerance. The effect size (r = -0.30) indicates a statistically medium or moderate impact.

The Intercultural Understanding dimension had slightly lower mean scores (ranging from 4.13--4.68) and the lowest internal consistency of the four dimensions (α = 0.638). This suggests that while students are aware of cultural differences (the highest-rated item being "*I am aware of the differences between cultures*" M = 4.68), developing a deeper understanding requires more nuanced cognitive processes. The items related to seeing the world through locals' eyes (M = 4.23) or reflecting on one's own culture (M = 4.13) showed greater variability (SD = 1.031 and 0.900, respectively). Notably, this dimension revealed the most significant field-of-study differences (H(4) = 11.988, p = 0.017), with Social Sciences students scoring lowest (M = 19.86, MR = 16.07) compared with Tourism and Leisure students (M = 23.31, MR = 36.92). Given the large effect size (η^2 = 0.2189), the results suggest that academic background significantly influences cognitive cultural processing abilities and that some disciplines may better prepare students for intercultural reflection and analysis.

Conversely, the Intercultural Appreciation dimension demonstrated a strong value for host cultures, particularly in items such as appreciation for a destination's culture (M = 4.65) and appreciation for different lifestyles (M = 4.60). The lowest-rated item in this dimension was "*I prefer unique and novel destination cultures*" (M = 3.98), indicating that while students appreciate cultural differences, they may not necessarily seek highly distinctive cultural experiences as a primary motivation. Subsequent analysis revealed that students who reinforced their views of environmental sustainability during their Erasmus experience had significantly higher intercultural appreciation levels (M = 23.13) than did the other groups, with a large effect size (η^2 = 0.14). This finding points to a meaningful connection between ecological consciousness and cultural value, which warrants further investigation.

The highest internal consistency was observed in the Intercultural Action dimension (α = 0.853), surpassing even the values reported in the cited study. The results suggest that students most strongly endorsed experiencing a destination's culture (M = 4.46) and participating in local activities and cultural exchanges (M = 4.31). This demonstrates that they are not only culturally aware and appreciative but also take concrete steps to engage with the local culture. Furthermore, students with higher intercultural action scores were significantly more likely to have re-evaluated their views about global peace (M = 22.91, MR = 32.86) than were those planning behavioral changes. The latter showed lower action scores (M =

18.00, MR = 10.90, H (3) = 8.601, p = 0.035), with a large effect size (η^2 = 0.1654), suggesting that active cultural engagement promotes deeper attitude transformation rather than superficial behavioral intentions.

Analysis of variance in Intercultural Competence

The Kruskal–Wallis test revealed no statistically significant differences between host countries ($p > 0.05$). Further analysis of the differences among the groups revealed that intercultural competence varied significantly in only two specific situations (Table 2):

> **Gender differences**: The Mann–Whitney U test results indicate that female students reported significantly higher levels of intercultural responsibility (median = 29.00, mean rank = 29.41) than male students did (median = 27.00, mean rank = 19.33), U = 170.000, z = -2.207, p = 0.027, with a small effect size (r = -0.049). This finding indicates statistical significance but has a limited practical impact.

> **Field of study**: The Kruskal–Wallis test results revealed significant differences in intercultural understanding based on the students' field of study (H(4) = 1 1.988, p = 0.017). Post hoc analysis indicated that students in Social Sciences fields reported lower levels of intercultural understanding (M = 19.86, MR = 16.07) than did students in Tourism and Leisure (M = 23.31, MR = 36.92), Arts, Culture and Humanities (M = 22.80, MR = 32.60), among other fields.

Table 2: Intercultural Competence (understanding) * field of studies

Field Of Studies	*n*	*M*	*Md*	*MR*
Tourism and Leisure	13	23.31	23.00	36.92
Arts, Culture and Humanities	5	22.80	23.00	32.60
Business and Management	12	20.67	21.50	20.33
Technology and Engineering	16	21.62	21.50	26.67
Social Sciences	7	19.86	20.00	16.07
Total	53			

Note. H = 11.988 df = 4   p = 0.017

Impact of Erasmus mobility on students' attitudes

The Erasmus experience appears to have a transformative effect on students' attitudes across multiple domains (Table 3). The data reveal varying degrees of attitudinal change, with some domains showing more pronounced shifts than others.

Table 3: Impact of Erasmus mobility on student attitudes (n = 51)

	Did not think about this		*Reinforced existing views*		*Have re-evaluated my views*		*Plan to change my behavior*	
	N	%	N	%	N	%	N	%
Respect for other cultures	11	21.5	20	39.22	16	31.37	4	7.84
Attitudes toward environmental sustainability	10	19.61	16	31.37	18	35.29	7	13.73
Attitudes toward global peace	15	29.41	20	39.22	11	21.57	5	9.80
Attitudes toward religion	25	49.02	15	29.41	9	17.65	2	3.92
Attitudes toward traveling	7	13.73	28	54.90	11	21.57	5	9.80

The most notable attitudinal changes occurred in relation to environmental sustainability, with 35.29% of the students reporting that they had re-evaluated their views and an additional 13.73% planning to alter their behavior in this field.

Similarly, nearly one-third of the students (31.37%) reported having re-evaluated their views about other cultures, whereas 39.22% indicated that their Erasmus experience reinforced their existing views. This finding aligns with the core objectives of the Erasmus program, i.e., to foster intercultural understanding and appreciation.

Attitudes toward religion showed the least change, with nearly half of the respondents (49.02%) reporting that they "*did not think about this*" aspect during their exchange.

The strongest reinforcement effect was observed in attitudes toward travel, with 54.90% of the students reporting that their Erasmus experience strengthened their existing views in this domain.

These results reflect how Erasmus experiences can challenge and reshape students' preconceived notions about different cultural groups and values, often leading to re-evaluation and growth in terms of personal attitudes and beliefs. This immersive exposure, as noted by Sobkowiak (2019), not only drives personal transformation but also fosters self-analysis of their own cultural identity, enhancing their self-awareness and encouraging them to act with greater cultural sensitivity and openness.

Two key situations were identified when analyzing differences in intercultural competence levels according to students' position on each attitude (Table 4):

- Students who stated that they had reinforced their views regarding environmental sustainability presented higher levels of intercultural appreciation (M = 23.13) than the other groups did (all with mean values

of approximately 21), H (3) = 7.594, p = 0.05, with a large effect size (η^2 = 0.1460).
– Students with higher levels of intercultural action reported having re-evaluated their views about global peace (M = 22.91), whereas students with lower intercultural action scores reported intentions to change their behaviors (M = 18.00), H(3) = 8.601, p = 0.035, also with a large effect size (η^2 = 0.1654).

Table 4: Intercultural competence dimensions (appreciation and action) and students' perceptions of their attitudes (Kruskal–Wallis test results)

	N	M	Md	MR
Intercultural Appreciation * Attitudes toward environmental sustainability				
Did not think about this	10	21.10	22.00	20.65
Reinforced existing views	16	23.13	23.00	34.16
Have re-evaluated my views	18	21.83	22.00	23.78
Plan to change my behavior	7	21.14	21.00	20.71
Total	51			
Kruskal–Wallis test results		H=7.594 df=3 p=0.05		
Intercultural Action * Attitudes toward Global peace				
Did not think about this	15	21.07	21.00	23.17
Reinforced existing views	20	21.90	22.00	28.13
Have re-evaluated my views	11	22.91	23.00	32.86
Plan to change my behavior	5	18.00	19.00	10.90
Total	51			
Kruskal–Wallis test results		H=8.601 df=3 p=0.035		

Analyzing the relationships between intercultural competence, integration experience, and the impact of Erasmus on host communities

As shown in Table 5, Erasmus students had more contact with other Erasmus students (M = 8.04 on a 1--10 scale) than with local people (M = 4.77). Cultural engagement was moderate, with students reporting reasonably high contact with local food and drinks (M = 6.49), moderate engagement with local customs (M = 4.65), and limited adoption of local dress codes (M = 3.74). This "*Erasmus bubble*" phenomenon suggests that although the exchange program creates international networks and opportunities to interact, it may not automatically facilitate deep integration in host communities. However, their contact with foreign cultures through their international peers could be considered a context favorable for raising their awareness and allowing them to learn about cultural diversity.

Spearman's correlation analysis (Table 5) revealed a significant negative relationship between intercultural understanding and contact with local customs (rho = -0.277, p = 0.047). This counterintuitive finding warrants deeper theoretical

consideration. This relationship suggests three possible explanations. First, students with greater intercultural understanding may be more selective or critical in their engagement with commercialized or superficial presentations of local customs, preferring deeper cultural insights. Second, greater intercultural understanding may lead students to recognize that customs are complex, context-dependent phenomena requiring deeper contextualization than brief encounters can provide. Third, students with advanced competence may prioritize quality over quantity in cultural engagement, selecting fewer but more meaningful interactions rather than broad but shallow cultural consumption.

With respect to perceived impact, the students overwhelmingly disagreed with the idea that Erasmus participants harm local culture (M = 1.58) and strongly endorsed the view that they contribute positively to host communities (M = 4.26). They expressed moderate disagreement with the statement that "*Erasmus students do not mingle with local people*" (M = 2.46), indicating some recognition of the integration challenges while maintaining a generally positive self-perception.

The absence of significant correlations between intercultural competence dimensions and perceived impact suggests that students' assessments of their influence on host communities may be shaped more by program narratives or social desirability than by their actual level of intercultural development. This highlights the importance of encouraging critical reflection on the reciprocal nature of intercultural exchanges within the Erasmus framework.

Table 5: Erasmus student integration experiences and their perceptions of their impact on the host community

	Min.	Max.	*M*	*SD*	Intercultural understanding	
					rho	*p*
Integration experience (n = 53)						
Contact with other Erasmus students	1.00	10.00	8.04	2.28		
Contact with local friends and family (whom you knew before the trip started)	1.00	10.00	2.00	2.92		
Contact with local people (excluding family and friends)	1.00	10.00	4.77	2,83		
Local food and drinks	1.00	10.00	6.49	2.94		
Local dress code	1.00	10.00	3.74	2.97		
Local customs	1.00	10.00	4.65	2.76	-.277*	.047

Rho = Spearman's correlation; *correlation is significant at the 0.05 level (2-tailed)
0 = No contact at all to *10 = many contacts*

Students' perceptions of how they impact host community (n = 50)

Erasmus students hurt local culture and customs	1.00	5.00	1.58	0.87
Erasmus students do not mingle with local people	1.00	5.00	2.46	1.08
Erasmus students contribute positively to the places they visit	3.00	5.00	4.26	0.72

1 – *strongly disagree* to 5 – *strongly agree*

CONCLUSION

In general, the study emphasized that intercultural competence involves more than just effective communication. It requires valuing diversity, demonstrating curiosity, and engaging in self-reflection. The specific statistical patterns revealed important findings: those who reinforced their environmental sustainability views presented higher intercultural appreciation levels; female students scored significantly higher on intercultural responsibility; and field-of-study differences in intercultural understanding—with social sciences students scoring lowest, compared with Tourism and Leisure students—revealed important demographic variations in competence development.

Overall, this quantitative study contributes to ongoing discourse surrounding international education, highlighting the transformative potential of the Erasmus experience in shaping students' intercultural competence and promoting global citizenship. The findings reveal that students participating in the Erasmus mobility program at higher education institutions, primarily across three European countries (Portugal, Spain, and Finland), exhibit well-developed intercultural competence, particularly in appreciation and action. These results indicate that participants adopt an active, respectful, and adaptive approach to navigating cultural diversity.

More specifically, the dimensions of appreciation and action emerged as notably well developed, with students demonstrating substantial capacity to value diverse cultural perspectives and actively engage with unfamiliar cultural environments. While responsibility and understanding also yielded positive results, there was room for improvement, particularly regarding reflective practices and critical cultural awareness—areas that may benefit from more structured educational interventions.

This finding underscores the importance of considering all four dimensions proposed by Fan et al. (2022). While Erasmus programs effectively foster intercultural appreciation and action through immersive experiences, explicit instructional strategies, such as targeted reflection sessions or ethics-focused workshops, may be needed to enhance intercultural responsibility and understanding more fully. This aligns with Fan et al.'s (2022) argument that genuine intercultural competence demands not only valuing and engaging with other cultures but also actively reflecting on one's own biases and assumptions.

Furthermore, the statistical analysis revealed meaningful relationships between intercultural competence dimensions and integration experiences, as well as perceived community impact, suggesting that competence development is closely tied to the quality and depth of students' engagement with their host communities. These findings underscore the importance of fostering meaningful connections between Erasmus students and local populations and creating opportunities for active cultural immersion.

The results highlight important differences across the dimensions of intercultural competence. The items related to understanding showed high dispersion, indicating that the students interpreted these constructs differently, depending on their context and experience.

In addition, the negative correlation between intercultural understanding and contact with local customs indicates that students with higher levels of understanding tend to engage differently with local practices. This finding points to the complexity of intercultural competence development, as greater awareness does not necessarily translate into more frequent contact. Fan et al.'s (2022) framework helps interpret this complexity. Heightened intercultural understanding involves critical reflection and nuanced cognitive processing. As a result, students may become more selective or discerning in their participation, preferring deeper cultural experiences over superficial engagements. This finding reinforces Fan et al.'s (2022) argument that competence includes ethical responsibility and critical awareness.

The implications are far-reaching, offering valuable perspectives for various stakeholders. For universities, intercultural competence development should be considered an ongoing process, included as part of orientation programs, academic curricula, and student support services. Initiatives such as buddy programs pairing local and international students, the celebration of cultural events through activities and exhibitions, and the promotion of student participation in community projects can foster deeper host–student engagement.

Additionally, businesses and local associations could collaborate with universities to create initiatives that engage Erasmus students and benefit from their diverse perspectives and international networks.

These findings can inform the refinement and expansion of student mobility initiatives, ensuring their lasting impact on both individual participants and the communities they engage with. Overall, this study reinforces that education and cultural immersion are powerful tools for creating a more understanding, sustainable, and interconnected world. More holistically, it validates Fan et al.'s (2022) multidimensional construct as an analytical foundation for gauging youth's global citizenship and capacity to operate across cultures.

Limitations

This study has several methodological limitations that should be acknowledged when interpreting its findings. The relatively small sample size (n = 53) constrains the statistical power and generalizability of the results. Additionally, a demographic bias for female participants may not adequately

represent the experiences of all Erasmus students. The geographical focus on three specific countries (Portugal, Spain, and Finland) limits the applicability of the findings to other European contexts with different cultural dynamics.

From a methodological perspective, the reliance on self-reported data introduces potential response biases, including social desirability bias and the well-documented tendency for individuals to overestimate their intercultural competence. As suggested in the literature, more nuanced evaluation approaches should incorporate others' perceptions alongside self-assessment. Furthermore, the study captures participant perspectives at a single point in time, which precludes analysis of how intercultural competence develops throughout the mobility experience.

The study also faces temporal limitations, as it does not account for the potential evolution of intercultural competence from the beginning to the end of the mobility period. The effects of the mobility experience may continue to develop after the study's conclusion, suggesting the need for longitudinal approaches to fully capture the developmental trajectory of intercultural competence among exchange students.

Future Research Directions

To address these limitations, future research should recruit larger, more demographically balanced samples across a wider range of European countries. Longitudinal studies would be particularly valuable for tracking the development of intercultural competence throughout and beyond the mobility experience, offering insights into how these skills progress over time.

Future investigations should also incorporate the perspectives of local community members to better understand the bidirectional impact of exchange programs. Exploring the long-term impacts of these exchanges on both students and host communities would provide a more comprehensive picture of the value of mobility programs. Additionally, quantifying the economic and social benefits to host regions would strengthen the case for continued investment in these educational initiatives. Additionally, research should investigate strategies that enhance immersion in local cultures to ensure more holistic and mutually beneficial international experiences that serve both visiting students and their host communities. Finally, building on Jin and Robledo's (2024) findings, which link travel frequency and reflection to student transformation, future studies should specifically examine both factors within the Erasmus context. Researchers can also explore how Erasmus experiences foster transformative learning, as defined by Mezirow (2003), which includes diverse intercultural encounters.

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