*Research Article*

# Resilience and Intercultural Interactions of Italian Erasmus Students: The Relation with Cultural Intelligence

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## ABSTRACT

Cultural Intelligence (CQ) is examined in the literature; nevertheless, a few studies have combined situational and personal aspects to enhance the comprehension of this construct, and none have considered resilience. Therefore, this study aims at investigating the role of international Erasmus students' resilience, the length of their experience, and the intercultural interactions of Italian Erasmus students in their relationship with CQ. Data were collected from 791 outgoing Italian Erasmus students by using a self-report questionnaire. The findings suggested the existence of a significant relationship between resilience and all dimensions of CQ, showing, with the exception of the behavioral dimension, large betas. Forming friendships with international students was positively and moderately related to motivational and metacognitive CQ. Establishing relationships with locals was only positively and weakly related to cognitive CQ. The time of sojourn was only positively and weakly associated with the metacognitive CQ. Developments in international academic mobility policies are discussed.

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## INTRODUCTION

Despite limitations related to the outbreak of the COVID-19 pandemic, international mobility has grown exponentially in the 21st century as far as education and work are concerned. In spite of the facilities introduced by the possibility of remote meetings and classes, mobility across boundaries will likely continue to be promoted in higher education through various international programs, as evidenced by the efforts of the European Commission to boost international mobility in safety. The European Region Action Scheme for the Mobility of University Students (ERASMUS) is one of the main international programs promoted in higher education in Europe. According to the Erasmus+ Annual Report 2019 more than 444,000 students, trainees and staff benefited from a learning period abroad during the 2018/2019 academic year. Erasmus Plus sustains the mobility of both students and staff for a temporary stay abroad.

A fragmented corpus of studies has been developed to monitor the expected learning outcomes of various study-abroad programs (Varela, 2017), such as global careers (e.g., Mohajeri Norris et al., 2009) and cross-cultural competencies, specifically cultural intelligence (CQ; e.g., Varela & Garlin-Watts, 2014). Our study considers the Erasmus Program and focuses on the construct of CQ (Ang et al., 2007): a set of intercultural capabilities "that determine what a person is capable of doing to be effective in culturally diverse settings" (Ang et al., 2015, p. 434).

In line with previous studies (Crowne, 2008; Moon et al., 2012; Uen et al., 2018) that found a positive relationship between international experience and CQ, this study attempts to shed more light on how situational factors of the Erasmus Program are related to CQ, focusing attention on certain quality aspects of experiences abroad. For this purpose, we explore how the length of the experience and the nature of the international network developed abroad are related to the four dimensions of CQ, namely the cognitive, metacognitive, behavioral, and motivational CQ. We also explore the role of the resilience of international students represented in our study by a sample of outgoing Italian Erasmus students. Resilience was studied in relation to the intercultural adjustment process (e.g., Mesidor & Sly, 2016), but it is still fairly unexplored in relation to all four dimensions of CQ. Resilience reflects a person's ability to adapt well in the face of stressful circumstances and to thrive despite the difficulties (Joyce et al., 2018). The investigation of its relationship with the CQ dimensions, together with other situational factors, can provide useful information for effective training or mentoring or counseling practices, for instance during the pre-departure phase. In addition to resilience, in line with the Social Learning Cognitive Theory (SLCT; Bandura, 1997), we considered both personal and situational factors in exploring the CQ. Finally, based on Ng and colleagues' theoretical recommendations (2012), which warned about the fact that very little is known about how each CQ

dimension works, the present contribution pays attention separately to all four dimensions of CQ.

## Research Question

This study empirically investigates the situational and personal factors related to CQ to enhance the comprehension of this construct and to provide practical implications to value the students' international mobility experience. The research question of this study is: "which are the situational and personal factors associated with the Erasmus students' CQ?". In the complexity of the abroad experience (Khanal & Gaulee, 2019), resilience has been poorly studied despite its possible role: this paper focuses on it. Beyond personal factors, by virtue of the peculiarities of Erasmus mobility programs, known for their ability to facilitate students' exchanges, the intercultural interactions with local and/or other international students were investigated. Finally, the role of the last of sojourn—which can vary from one to two semesters abroad in the case of Erasmus exchanges—was examined to better understand its role (Varela, 2017). Beyond the fact that this paper originally and simultaneously considers personal and contextual factors, it is focused on the Italian Erasmus students, a not-native English speakers' population, for which there are still a few contributions in literature, providing information and suggestions also for higher education institutions.

## LITERATURE REVIEW

### Theoretical Framework

Based on the Social Learning Cognitive Theory (SLCT; Bandura, 1997), we explored the link between resilience, some situational factors, and the four dimensions of CQ (Ott & Michailova, 2018). According to the Social Learning Theory (SLT, Bandura, 1977), learning stems from interactions and occurs within a social context. To provide a more comprehensive explanation, Bandura (1997) included the cognitive components, expanding SLT. In particular, Bandura (1997) deepened the role played by self-efficacy, namely the optimistic belief that a person can have in reaching a goal and performing activities. Higher levels of self-efficacy correspond to a greater tendency to consider difficulties and problems as challenges rather than as threats (Bandura, 1997); therefore, highly self-efficacious people tend to be more ambitious and look for challenging goals and demanding experiences (Schwarzer & Warner, 2013). Self-efficacy can have a positive impact on affective, motivational, and behavioral mechanisms and is closely related to resilience, namely the capability to adapt and cope with problematic situations (Schwarzer & Warner, 2013). However, self-efficacy can be present if the source of the stressor is absent, whereas resilience is strongly related to the presence of an adversity (Schwarzer & Warner, 2013). International mobility can be conceptualized as a stressful and challenging experience: when abroad, people are usually faced with intercultural misunderstandings, difficulties

in communication, fatigue caused by having to manage social norms and practices, and so forth (Johnson et al., 2018; Ma & Wen, 2018; Sherry et al., 2010; Smith & Khawaja, 2011). Thus, international experiences are fertile ground for cultural competence's acquisition (Ott & Michailova, 2018), and, based on this theoretical framework (Bandura, 1997), personal and situational factors are associated with the learning process and specifically related to the four CQ dimensions.

### *Cultural Intelligence*

CQ is a multidimensional construct defined as "an individual's capability to function and manage effectively in culturally diverse settings" (Ang et al., 2007, p. 337). This individual capability transcends cultural boundaries, and it is applicable to any culture (Ng et al., 2012). CQ comprises four dimensions that are intertwined and help people to engage in effective behaviors; to show sensibility, empathy, flexibility, and adaptation; to enjoy culturally diverse contexts; and to understand the crucial social practices, rules, and habits of other cultures (Schein, 2018). In this regard, CQ is considered a relevant requirement of today's world (Sharma & Hussain, 2017). Various studies have highlighted that CQ relates to a wide range of outcomes (Ang et al., 2015): better cultural adjustment (e.g., Leung et al., 2014), the perception of less emotional exhaustion when living or traveling abroad (Tay et al., 2008), better cultural judgment and decision making, and so forth (Ang et al., 2007). Based on the Sternberg multiple-loci conceptualization (1986), CQ consists of four components: cognitive, metacognitive, behavioral, and motivational.

More specifically, the cognitive component refers to knowledge about conventions, legal norms, economic rules, and awareness of social practices. People with a higher level of CQ are able to recognize differences and similarities among diverse countries (Ng & Earley, 2006; Ng et al., 2012). By comparison, metacognitive CQ concerns higher-order cognitive processes; it reflects mental processes that individuals use to acquire and understand cultural knowledge. People with a high level of metacognitive CQ are able to plan and monitor their own mental models, and to adjust them during and after cross-cultural interactions (Ang & Van Dyne, 2008; Earley et al., 2006; Ng et al., 2012). The motivational component reflects the ability to direct positive energy toward learning about culturally diverse systems (Ang et al., 2007, Ang & Van Dyne, 2008; Earley et al., 2006; Ng et al., 2012). Those with a high level of motivational CQ are willing to meet people from other countries, take action in another culture, travel, and interact in cross-cultural situations. Lastly, the behavioral dimension is related to all appropriate verbal and non-verbal actions such as language, tone, posture, and facial expressions, which people use differently in culturally diverse settings (Ang et al., 2007; Ang & Van Dyne, 2008; Ng et al., 2012).

### Personal and Situational Factors Associated with Cultural Intelligence

CQ has recently piqued the interest of many scholars, some of whom have tried to explore the variables associated with it (Ott & Michailova, 2018). As highlighted by Ng and colleagues (2012), personality traits and international experience have been the most investigated predictors (e.g., Ang et al., 2006; Crowford-Mathis, 2009; Moon et al., 2012); however, a few studies have analyzed the quality of the experience, or other situational and environmental aspects.

In addition to personality traits, some other personal characteristics have also been investigated in relation to CQ, such as self-efficacy (e.g., MacNab & Worthley, 2012). MacNab and Worthley (2012) found that self-efficacy was a strong predictor of learning CQ as well as its three subcomponents studied metacognitive, motivation, and behavior. Despite the interest in self-efficacy, the close construct of resilience (Schwarzer & Warner, 2013) has not yet been investigated in relation to CQ; a recent contribution by Ghislieri et al. (2018), carried out on a sample of students who had participated in an exchange program during high school, showed the presence of a strong correlation between resilience and self-efficacy as well as with all four CQ dimensions. Resilience is an individual ability possessed by people who can adapt when faced with stressful situations and who manage to thrive despite hindrances, adversity, and challenges (Joyce et al., 2018). Just like self-efficacy, resilience drives people to react proactively in order to achieve their own objectives, especially in stressful situations (Schwarzer & Warner, 2013). As described by scholars since the 1960s (Ma & Wen, 2018; Oberg, 1960; Sherry et al., 2010; Smith & Khawaja, 2011), international mobility experiences can be considered a source of stress. Indeed, after an initial period of euphoria, when the feeling of satisfaction associated with the novelty of the environment declines, people abroad tend to experience a sense of personal disorientation, a culture shock (Oberg, 1960). A new cultural setting may imply for individuals a change in one's values, behaviors, and beliefs, generating a certain amount of acculturative stress (Berry, 1997, 2005). In line with the challenge model (O'Leary, 1998) according to which if a risk factor is not too extreme, it can enhance a person's adaptation (Ledesma, 2014) and in line with SLCT (Bandura, 1997), resilience can be identified as a key individual ability related to the intercultural adjustment and cultural learning (Mesidor & Sly, 2016; Van der Zee & Van Oudenhoven, 2013) and, more generally, in assisting students to overcome challenges in higher education (Brewer et al., 2019). Indeed, similar to self-efficacy (MacNab & Worthley, 2012), resilience can be strongly associated with motivational, behavioral, cognitive, and metacognitive mechanisms; thus, we assumed:

*Hypothesis 1.* Resilience is positively and strongly related to all components of CQ.

In addition to personal characteristics, some scholars have also studied the roles played by certain situational factors as predictors of CQ (e.g., Crowne, 2008, Moon et al., 2012; Uen et al. 2018). More specifically, some scholars found that the number of countries visited for employment and for education is positively

related to the total CQ (Crowne, 2008), as well as to the length of the experience abroad (Crowford-Mathis, 2009; Li et al., 2013). In particular, Crowford-Mathis (2009) conducted a longitudinal study on a sample of Belizean volunteers involved in service-learning activities and found that the participants who spent the most time abroad and interacted more with the locals benefited the most in terms of CQ. In a more recent work, involving a sample of international managers from China, Li et al. (2013) found that the length of overseas work was positively associated with CQ although the betas were relatively low, and this relationship was stronger for those with a divergent-style learning.

In the light of these findings and Varela's (2017) meta-analysis, which not only invited us to explore the role of time spent abroad but also indicated that short programs (< 8 weeks) seem to play a role in attitudinal and behavioral learning, we hypothesized:

*Hypothesis 2.* The length of the stay abroad is positively but weakly related to all components of CQ.

Finally, also intercultural contact is a core element of international experience, and people abroad usually develop three types of friendship networks, namely monocultural (interaction with compatriots), bicultural (interaction with locals), and multicultural (interaction with non-compatriot foreigners) (Bochner et al., 1977; McFaul, 2016; Ward et al., 2001); each social network serves specific psychological functions. Since the 1990s, some scholars have pointed out the benefits of intercultural contact (Smith & Khawaja, 2011; Ward et al., 2001), underlining, for instance, the reduced perception of loneliness, as found by Sawir and colleagues (2008), who conducted a study with international students in Australia, or the positive relationship with the sojourn satisfaction (Rohrlich & Martin, 1991). Further, according to SLT (Bandura, 1977), the interaction with individuals is the core component of learning. Some empirical studies (e.g., Moon et al., 2012; Ng & Earley, 2006) have suggested that social contacts enhance opportunities for enhancing cross-cultural competencies. More specifically, Moon et al. (2012), who conducted a study involving a sample of expatriates from Korean companies, found that the relation between the number of local employees and metacognitive and behavioral CQ is moderated by expatriates' portion of interaction with local employees; in addition, Ng and Earley (2006) suggested that intercultural contact in working environments may have an impact on CQ. Therefore, paying attention to a student population, we hypothesized that:

*Hypothesis 3a:* Friendships with local students are positively and strongly related to all components of CQ.

*Hypothesis 3b:* Friendships with international students are positively and strongly related to all components of CQ.

CQ and the variable related to it have been examined in the literature; however, a few studies have combined situational and personal aspects, and none have considered resilience.

## METHOD

### Participants and Procedure

The sample consisted of 791 outgoing Italian Erasmus students; their average age was around 22 years ($M = 22.42$, $SD = 1.69$). The students were enrolled at a university in northwest Italy and hailed from different fields of study: 30% from law, political and economic sciences; 26% from the humanities; 19% from life sciences; 16% from psychological, educational, and anthropological sciences; 3% from math and physics; 3% from earth science; and 3% from other study courses. Regarding the country of sojourn, Spain was the destination chosen by the highest proportion of the participants (33%), followed by France (21%), Germany (9%), Scandinavian countries (8%), Portugal (8%), Poland (4%), the United Kingdom and Ireland (5%), Balkan States (3%), Baltic States (2%), Belgium (2%), and other countries (5%). Students spent on average almost 7 months abroad ($M = 6.74$, $SD = 2.32$).

A total of 75% females took part in this study; this rate is in line with female participation in Erasmus programs at the university where the study was conducted, which stands at 68%. Further, at this university, males outnumber females in the fields of study of Computer Science, Math, Physics, and Earth Sciences,[2] which were underrepresented in the present sample.

The students completed a self-report questionnaire online on the LimeSurvey platform. Participants in the study completed the questionnaire about one month after the end of their Erasmus experience, a time interval far enough from the experience to avoid the disturbing effect of emotional charge due to the return, but relatively close to avoid the other experiences that would interfere with the results. Data were collected from three cohorts of Erasmus students, between 2016 and 2018; this sample represents 21% of the outgoing Erasmus student population of the Italian university in which the research was conducted. The voluntary and unpaid nature of participation in the research as well as the confidentiality of data were emphasized. We obtained each participant's informed consent. The study was conducted in accordance with the Helsinki Declaration (World Medical Association [WMA], 2001); since it did not involve medical treatment or other procedures capable of causing any psychological or social discomfort to participants, no further ethical approval was required.

### Measures

The first section of the questionnaire collected sociodemographic data and information about international mobility (e.g., destination, length of experience). In particular, the time of sojourn was measured in months. Age, gender, and cultural distance were used as control variables.

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[2] University internal sources.

*Cultural distance*: In order to calculate cultural distance, we used the formula by Kogut and Singh's (1988), taking into consideration the differences in cultural dimensions between Italy and the other countries. We considered the six dimensions of the updated Hofstede model (2011): power distance, individualism, masculinity, uncertainty, indulgence, and long-term orientation. All countries' indices were obtained, starting from Hofstede's (2015) site. The countries identified as culturally distant from Italy were as follows: the Scandinavian countries, certain Balkan States, Portugal, the United Kingdom, and Austria.

*Cultural Intelligence*: This was measured by 20 items from the Ghislieri et al.'s Italian adaptation (2018) of the CQS (Ang et al., 2007), using a 7-point Likert scale with scores ranging from 1 (strongly disagree) to 7 (strongly agree). Four dimensions define the factor-structure of this scale: cognitive, metacognitive, motivational, and behavioral. The *cognitive dimension* was measured by six items; an example item is "I know the legal and economic systems of other cultures." Cronbach's alpha was .79. The *metacognitive dimension* was evaluated by using four items; an example item is "I am conscious of the cultural knowledge I use when interacting with people with different cultural backgrounds." Cronbach's alpha was .82. The *motivational dimension* was measured by five items; an example item is "I enjoy interacting with people from different cultures." Cronbach's alpha was .83. Finally, the *behavioral dimension* was evaluated by using five items; an example item is "I change my verbal behavior (e.g., accent, tone) when a cross-cultural interaction requires it." Cronbach's alpha was .85.

*Resilience*: This was measured by 10 items from the Italian adaptation by Di Fabio and Palazzeschi (2012) (Connor & Davidson, 2003), with a 5-point Likert scale with scores ranging from 1 (strongly disagree) to 5 (strongly agree); an example item is "I tend to bounce back after illness, injury, or other hardships." Cronbach's alpha was .83.

*Intercultural contacts*: Students were asked whether they had established relationships and made friends first with local students (1 item) and second with foreign students (1 item) by using a 5-point Likert scale, with scores ranging from 1 (not at all) to 5 (completely).

**Data Analysis**

SPSS 25 statistics software was used to perform descriptive data analysis. Pearson correlations were tested to detect relationships between variables, and Cronbach's alpha coefficient was calculated to verify scale reliability. A full structural equation model (SEM) was tested by using Mplus7 in order to estimate the hypothesized regressions. The method of estimation was Maximum Likelihood (ML). According to the literature (Bollen & Long, 1993), the model was assessed by using several goodness-of-fit criteria: the $\chi2$ goodness-of-fit statistic; the Root Mean Square Error of Approximation (RMSEA); the Comparative Fit Index (CFI); the Tucker Lewis Index (TLI); and the Standardized Root Mean Square Residual (SRMR).

# RESULTS

## Correlations and Descriptive Statistics

The four dimensions of CQ, as illustrated in the correlation matrix (Table 1), were significantly positively related one with another. The control variables did not correlate with resilience and the dimensions of CQ, except for gender, which was positively related to the motivational dimension ($r = .07$, $p < .05$). Internal consistency of measures was good, since all α values met the criterion of .70 (Nunnally & Bernstein, 1994), as they ranged between .79 and .83.

**Table 1**: **Correlation Analysis and Descriptive Statistics**

| | M | SD | 1. | 2. | 3. | 4. | 5. | 6. | 7. | 8. | 9. | 10. | 11. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Cognitive CQ | 4.07 | .88 | (.79) | | | | | | | | | | |
| 2. Metacognitive CQ | 5.04 | .93 | .63** | (.82) | | | | | | | | | |
| 3. Motivational CQ | 5.55 | .96 | .35** | .52** | (.83) | | | | | | | | |
| 4. Behavioral CQ | 4.66 | 1.18 | .40** | .50** | .45** | (.85) | | | | | | | |
| 5. Resilience | 3.82 | .55 | .32** | .32** | .39** | .19** | (.83) | | | | | | |
| 6. Friendship with locals | 3.46 | 1.22 | .15** | .09* | .15** | .09* | .20** | - | | | | | |
| 7. Friendship with international students | 4.29 | .97 | .10** | .18** | .30** | .09* | .19** | .08* | - | | | | |
| 8. Length of experience | 6.74 | 2.37 | .08* | .08* | .05 | .05 | .04 | .09** | .02 | - | | | |
| 9. Gender (1 = F) | - | - | −.05 | −.02 | .07* | .03 | −.07* | −.05 | .01 | −.01 | - | | |
| 10. Age | 22.42 | 1.69 | −.01 | −.01 | −.01 | −.04 | −.03 | .02 | −.01 | −.11** | −.11** | - | |
| 11. Cultural distance | - | - | .01 | .01 | .02 | −.01 | .04 | −.05 | .05 | −.13** | −.10** | .01 | - |

*Note*: means, standard deviations, Cronbach's alpha, correlations,
**$p < .01$, * $< .05$

## Confirmatory Factor Analysis

The confirmatory factor analysis was performed by using Mplus7 on the whole sample ($N = 791$). The solution fit adequately to the data, confirming the four-factor structure of CQS: $\chi^2(160) = 617.025$; $p = .00$; RMSEA = .06 (.05; .06); CFI = .93; TLI =.92; SRMR = .05. The factor loadings for cognitive CQ ranged from .44 to .68; the factor loadings for metacognitive CQ ranged from .69 to .78; the factor loadings for motivational CQ ranged from .64 to .80; and the factor

loadings for behavioral CQ ranged from .59 to .81. Moreover, this solution fit better to the data than the one-factor solution model: $\chi^2(166) = 1978.554$; $p = .00$; RMSEA = .12 (.11; .12); CFI = .74; TLI = .70; SRMR = .09. The final four-factor solution showed the covariance between residuals of two items of cognitive CQ, two items of motivational CQ, and two pairs of items of behavioral CQ (Table 2).

**Table 2: Results of CFA, Alternative Models ($N = 791$)**

|  | $\chi^2$ | *Df* | *p* | CFI | TLI | RMSEA | SRMR | Comparison | $\Delta\chi^2$ | *p* |
|---|---|---|---|---|---|---|---|---|---|---|
| $M_1$ | 617.025 | 160 | (.79) | .93 | .92 | .06 (05, .06) | .05 |  |  |  |
| $M_2$ | 1978.554 | 166 | .00. | .74 | .70 | .12 (11, .12) | .09 | $M_2 - M_1$ | 1361.529 | <.001 |

*Note*: $M_1$ 4-factor model; $M_2$ 1-factor model.

*Legenda.* CFI = Comparative Fit Index; TLI = Tucker Lewis Index; RMSEA = Root Mean Square Error of Approximation; SRMR = Standardized Root Mean Square Residual.

**Full Structural Equation Model**

The full SEM of the hypothesized model fit well to the data: $\chi^2(230) = 749.468$; $p = .00$; RMSEA = .05 (.05; .06); CFI = .92; TLI = .91; SRMR = .05. As shown in Figure 1, the model presented a significant positive relationship between resilience and the CQ dimensions, strong for the cognitive [$\beta = .38$, $p < .001$], the motivational [$\beta = .46$, $p < .001$], and the metacognitive [$\beta = .37$, $p < .001$] dimension, and slightly weaker for the behavioral dimension [$\beta = .23$, $p < .001$]. These results fully confirmed our first hypothesis, except for the behavioral dimension, which was significant but not strongly associated with resilience. On the contrary, the second hypothesis was only partially confirmed: Indeed, the length of experience [$\beta = .08$, $p < .05$] was weakly and positively related only to the metacognitive dimension.

Finally, also our third hypotheses were partially confirmed. Indeed, forming friendships with local students (Hypothesis 3a) showed a significant but weak positive relation with the cognitive dimension [$\beta = .09$, $p < .05$]; whereas no significant association was found with the other three dimensions. Further, the association between friendships with international students (Hypothesis 3b) was significant and positive with the metacognitive [$\beta = .14$, $p < .001$] and the motivational dimensions [$\beta = .25$, $p < .001$], showing relatively low-medium betas; the cognitive and the behavioral dimensions were not significantly related to friendships with international students. As regards the control variables, the cultural distance was not associated with the four dimensions of CQ. Age did not show any relationships with the four endogenous variables. On the contrary, the model presented a significant and positive relationship between the female gender [$\beta = .12$, $p < .001$] and the motivational CQ.

The model explains 29% of the variation in the motivational CQ, 16% of the variation in both the cognitive and the metacognitive CQ, and only 7% of the variation in the behavioral CQ.
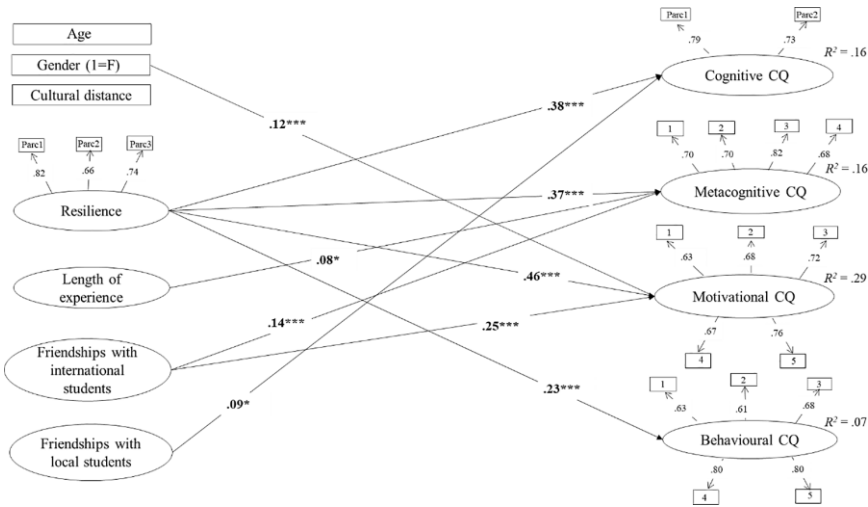


**Figure 1: Full Structural Equation Model (*N* = 791).**

*Notes*: Only significant relationships were reported.
*** *p* < 0.001; ** *p* < 0.01; * *p* < 0.05.

## DISCUSSION

In line with the reflections of Ng et al. (2012), the results of our study showed that the four components of CQ are associated with different variables, confirming the complexity of a construct in its definition and development. In particular, the most interesting findings are those related to resilience and intercultural interactions.

More specifically, the confidence of socializing with people from other cultures and the enjoyment of living in a different country—namely what synthesizes the motivational component of CQ—are positively associated, although with different effect sizes, with an interesting set of factors. Indeed, resilience seems to be strongly related to motivational CQ; however, intercultural interactions with other international students show medium betas, and the female gender is also significantly but weakly related to it.

Although resilience shows a stronger beta than the intercultural interactions with local students, both are significantly associated with the capacity to acquire knowledge about the values, religious beliefs, social practices, legal and economic systems, and linguistic rules of other cultures. The capability to be conscious and adjust the cultural knowledge to better interact in a different culture—namely the metacognitive CQ dimension—appears to be positively associated with the

following set of variables: resilience, friendships with international students, and length of experience; however, in line with the other CQ dimensions, their effect sizes differ and are particularly strong only for resilience. On the contrary, the capability to change the verbal and non-verbal behaviors when a cross-cultural interaction requires was not so well explained by this set of variables, and only resilience appeared to be largely positively related to it. On the basis of previous research (Crowford-Mathis, 2009; Engle & Nerht, 2012; Tay et al., 2008), the SLCT theoretical framework (Bandura, 1997), and Bandura's triadic model, some other personal characteristics, behaviors, and environmental factors might contribute toward further explaining the dimensions of CQ and, in particular, the behavioral component. For stays that exceed a year, such as in the case of international assignments for work, the duration of the stay abroad might contribute to behavioral CQ.

More specifically, in line with SLCT (Bandura, 1997) and consistent with previous findings on the cultural adjustment process (Mesidor & Sly, 2016; Van der Zee & Van Oudenhoven, 2013), our first assumption was confirmed: Resilience seems to be associated with all dimensions of CQ *(Hyphotesis1)*, with large betas except for the behavioral component, which shows a lower beta. Findings confirmed that, similar to highly self-efficacious people (Schwarzer & Warner, 2013), highly resilient people tend to interpret difficulties as learning opportunities (Mesidor & Sly, 2016; Tugade & Fredrokson, 2004) rather than exclusively as stressful situations and threats. Resilience is elicited in culturally diverse situations on the grounds that these are often stressful. Indeed, students abroad often have to deal with problems related to language barriers, differences in values and ideals, discrepancies in learning methods and views of the teacher–student relationship, initial transition issues, discrimination, and so forth (Sherry et al., 2010; Smith & Khawaja, 2011). How well international students adapt depends on how they manage these aspects (Smith & Khawaja, 2011). Resilient people should be able to overcome intercultural barriers, be confident to socialize in an unfamiliar cultural context, to deal with the stresses of adjusting to a culture, and to change verbal and non-verbal behaviors when a cross-cultural interaction requires it. Thus, linguistic barriers could be a source of motivation for improving language proficiency; discrepancies in view of the teacher–student relationship could be read as an opportunity to gain a better understanding of certain social aspects and values; and, finally, financial or bureaucratic problems could help students learn more about the law, economic issues, and administrative rules.

As regards situational factors, contrary to expectations, the length of the experience was not a significant factor for the components of CQ, except to a slight extent for the metacognitive dimension (*Hypothesis 2*); therefore, compared with resilience, the role of the length of the experience seems to be more marginal. The duration of the stay in the Erasmus Program is, in any case, limited to between a minimum of 3 months and a maximum of 12; therefore, it could be argued that for relatively brief periods of time abroad, such as in the case of the Erasmus Program, time does not play a significant role. In any case, as suggested by Varela (2017), who pointed to the need for further exploration of this topic, time plays a discontinuous role. Future studies could investigate this variable in more detail,

reconsidering the moderation effect of divergent learning style as shown by Li and colleagues (2013).

Social relationships with international students were positively related to the desire to learn and to be in culturally diverse environments, to a feeling of confidence in social situations, in cultural adaptation and adjustment to cross-cultural conditions (Ang & Van Dyne, 2008; Ng et al., 2012). Building a multicultural network was also related to the ability to modify one's own mental model and manage interactions effectively by using the cultural knowledge developed (*Hypothesis 3a*). Although the intercultural interactions with international students show betas not large as those of resilience, their relationship with two out of four CQ dimensions is anyway significant and moderately strong.

Contact with local students during the Erasmus Program was related, although only weakly, to the cognitive component of CQ, namely a wide range of knowledge about social practices, economic rules, habits, customs, and so forth (*Hypothesis 3b*). All results, which partially confirmed the relation between intercultural contacts and competence development, can be explained by SLT (Bandura, 1977), according to which learning comes from interactions with other people.

In addition to what was deduced from Smith and Khawaya's review (2011) about the acculturation experiences and in detail about the positive role played by social support networks in decreasing acculturative distress of international students, these findings allow us to shed light on the peculiarities of the various types of intercultural networks with both international and local students, which are differently associated with the CQ dimensions.

As regards the control variables, age was not found to be related to any components of CQ. In line with the results of Varela's meta-analysis (2017), no association was found between cultural distance and the four dimensions of CQ. Prior to assuming the non-existent role of cultural distance in learning, future research is needed to take into consideration countries that are more culturally distant from Italy than those considered in the present study, such as the Asian countries. Indeed, one limit of this research is to have considered only European countries due to the Erasmus Program exchange criteria.

Beyond the scope of our assumptions, the female gender was found to be significantly but also weakly related to motivational CQ. These results were in line with those reported by Maeland and Wattenberg (2017), who carried out a study on a sample of university students in Norway, according to which the female gender is positively related to motivational CQ. One of the elements of the motivational dimension is the pleasure derived from interacting with people from other countries (Ang et al., 2007); therefore, the social component appears to be relevant. As reported by Groves (2005), who conducted a study on female leadership with a sample of senior leaders and their direct followers, levels of social and emotional skills were higher among women than among men. Moreover, higher levels of emotional intelligence, which at least partially overlaps with CQ (Crowne, 2009), were also observed, more so among women than among men, as shown by Naghavi and Redzun's review (2011) of empirical studies conducted on a sample of students (2011). Further research is needed to

explore these differences between men and women in greater detail and to better explain this aspect.

## CONCLUSION

In light of the findings of our study, training sessions could be implemented in order to encourage international students to develop self-awareness about their emotions, strengths, and weaknesses before embarking on their Erasmus Program (Mesidor & Sly, 2016). Further, through online delivery, specific interventions could be implemented to sustain students during their stay abroad, using approaches as mindfulness-based stress reduction strategies (Brewer et al., 2019).

Beyond the interventions focused on emotions, linguistic training may be reinforced or implemented where absent in both the pre-departure phase and during the stay in the country. For the non-native English populations, such as the Italian one, the improvement of English can enable students to be more easily involved in exchange with the other international students, with their teachers, and with academic institutions and mobility services. Beyond the English proficiency, in particular for those countries such as France, Spain, or Portugal where the lessons are often taught in the local language, specific linguistic training should be implemented. Therefore, the calls may be planned in time to ensure that students have the necessary time for language preparation. Further, the host university should provide opportunities for meeting both local and international peers. For instance, specific orientation programs for Erasmus students could be implemented and improved at the beginning of the experience and could involve local students for coordinating activities. Regarding accommodation, this could be managed, where possible, so that international students have roommates from different countries. Even teachers can play a key role in promoting intercultural interactions (Ma & Wen, 2018), paying attention to curriculum content, instructional approaches, and giving space to specific moments of dialogue to favorite intercultural exchanges (Schein, 2018). Evaluations (such as group assignments) can also be useful to promote interactions and to prepare students for future multicultural working collaborations.

In addition to the mobility services offered by universities, it seems important to emphasize the reinforcement and maintenance of Erasmus Students Network (ESN),[3] whose mission is to work in the interest of international students, improving their social and practical integration often through a tradition of mutual acceptance among students. Students who have returned from their mobility experience can be valued: Students can become, on a voluntary basis, experts of the country where they studied and resided; they can be invited to participate in seminars to prepare other future outgoing Erasmus students or to help the incoming students.

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[3] https://esn.org/.

Apart from having practical implications for fostering the development of intercultural networks and building resilience, this study also presents some limitations and some suggestions for future studies. First, the cross-sectional design did not allow us to establish the existence of causality relationships between variables (Podsakoff et al., 2012). Despite the difficulties due to the COVID-19 pandemic, further longitudinal studies are currently ongoing. In addition to longitudinal research, which monitors the changes and causality relationships between the variables before and after the mobility experience, future research could use the diary study method, asking international students to complete self-administered forms at specified times or at time intervals. Second, the use of self-reported data may have potentially inflated the results (Conway, 2002). In future studies, it would be interesting to consider other-reported and objective ratings as well and by integrating quantitative and qualitative methods. Third, the sampling procedure limited the data collection only to a single university in Northwest Italy for reasons such as time and resources; in future, data will be collected in other Italian or abroad universities. Finally, in future research, cross-cultural studies should be conducted in order to monitor cultural differences.

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