

ARTICLES

Snap Judgements and Cultural Bias: Developing Intercultural Competence in Customs Officer Education in Norway

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This study explores the relationship between customs officer students' intercultural values, bias awareness and professional confidence in communication and judgement during border control encounters. Drawing on intercultural competence theory, dual-process cognition and naturalistic decision-making, the study investigates whether awareness of cultural biases reduces reliance on first impressions, and whether valuing intercultural competence predicts greater self-awareness and communication confidence. Data were collected through a survey of 91 Norwegian customs students and analysed using correlation and regression methods. The results indicate that while belief in the importance of intercultural competence is associated with greater bias awareness, it does not predict reduced reliance on first impressions or higher communication confidence. Instead, practical field experience emerged as the strongest predictor of confidence. The findings highlight a gap between intercultural values and applied competence, emphasising the need for experiential and reflective training models to bridge awareness and behaviour in customs education.

1. Introduction

As global mobility continues to expand and societies grow increasingly diverse, the ability of public professionals to interact fairly, ethically and effectively with culturally diverse individuals has become a critical area of research and policy focus. Among these professionals, customs officers serve as front-line representatives of the state, tasked with enforcing laws, assessing risk and engaging with individuals from various cultural backgrounds under conditions of uncertainty and time pressure (Spitzberg & Changnon, 2009). In such contexts, decisions are not only legal or logistical but also social and intercultural, requiring competencies that go beyond procedural knowledge and extend into the realms of bias awareness, intercultural sensitivity and real-time judgement. While the *EU Handbook for Border Guards* (European Commission, 2022) provides procedural guidance for Schengen border checks, its relevance to Norwegian Customs is limited, as Norway's customs administration operates under a distinct legal and institutional framework. A more appropriate comparative reference is the World Customs

Organization's *Annual Report*, which outlines the diverse mandates and operational models of customs administrations globally (World Customs Organization, 2023a).

Intercultural competence has been widely recognised as a core professional attribute in public service professions involving culturally diverse encounters (Byram, 2020; Deardorff, 2006), being construed not as a fixed trait but a developmental process that begins with internal attitudes, develops through knowledge and skills, and leads to self-awareness and behavioural outcomes like effective communication (Deardorff, 2009). In structured learning environments, this process can be fostered through both reflective learning and practical experience (Kolb, 2014; Mezirow, 1991).

However, being aware of cultural biases does not automatically translate into unbiased behaviour, as individuals, even when aware of their implicit biases, may still default to snap judgements based on stereotypes or superficial cues, especially when operating under time constraints and institutional pressure (Greenwald & Banaji, 1995; Tversky & Kahneman, 1974). This seems to be the case especially in fast-paced decision environments such as those in which customs officers operate (Kahneman, 2011). In such cases, the literature suggests that decision-making strategies tend to be predicated on experiential learning, as individuals naturally draw on prior experience to make intuitive judgements (Klein, 2017). The risk becomes that, for people with limited exposure to real-world scenarios, decisions might be guided more by heuristics than by intercultural understanding, despite high levels of theoretical knowledge.

Despite the recognised importance of intercultural competence in border control settings, empirical research on how these competencies develop in customs education remains limited. Research investigating how students' beliefs about intercultural competence translate into actual confidence or bias-related behaviour particularly within the context of customs and border management is especially limited.

This study examines these dynamics within the context of customs officer education in Norway. It does so by testing two hypotheses derived from the literature discussion introduced above, as follows:

H₁: There is a negative correlation between students' awareness of their own intercultural biases and their reliance on first impressions during border control risk assessments.

This hypothesis investigates the extent to which students' ability to recognise and reflect upon their own cultural assumptions reduces their tendency to make rapid, intuitive judgements based on superficial cues – such as appearance, accent or demeanour – when assessing risk at the border. It draws on the assumption that higher levels of critical self-awareness should encourage more reflective processing and reduce reliance on automatic decision-making, which often reinforces stereotypes. In the context of customs work, where quick decisions are frequently necessary,

this hypothesis seeks to explore whether cognitive awareness of bias can actually translate into measurable restraint in judgement, or whether intuitive responses prevail even among culturally self-aware individuals.

H₂: Students who believe that increased intercultural competence positively impacts intercultural communication will report: (a) greater awareness of their own intercultural biases and (b) greater confidence in their own intercultural communication abilities.

This hypothesis examines whether holding strong beliefs about the importance of intercultural competence is linked to two key indicators of intercultural development: bias awareness and intercultural communication confidence. It posits that students who value intercultural competence are more likely to engage in self-reflection and exhibit the internal attitudes that facilitate awareness of one's own biases. Additionally, the hypothesis suggests that these students may feel more capable of navigating cross-cultural interactions, thus reporting higher levels of confidence in their communication abilities. However, given that practical experience often plays a critical role in developing real-world communication skills, this hypothesis also provides a way to test whether values alone can shape confidence, or whether hands-on experience remains a necessary condition for building intercultural communication efficacy.

The presented hypotheses are directly relevant to the aims of customs education, which seeks not only to impart technical skills but also to foster ethically sound, culturally sensitive professionals. Confirming these hypotheses would provide evidence that reflective and attitudinal dimensions of intercultural learning are crucial to reducing bias and improving communication performance. Conversely, if these hypotheses are not supported, it may suggest that awareness and values alone are insufficient – and that practical experience and institutional context play a more decisive role in shaping behaviour.

In the end, by linking belief systems, cognitive awareness and behaviour in the context of border control to examine the relationship between intercultural values, self-awareness and communication confidence among Norwegian customs students, the study bridges the gap between cultural awareness and operational behaviour, advancing both the sparse literature on intercultural competence and the practical agenda of improving customs officer education. More specifically, this study contributes to the literature by (1) increasing understanding of how intercultural competence develops in professional customs education, (2) clarifying the extent to which intercultural beliefs and bias awareness influence real-world judgements and communication confidence, and (3) informing future training interventions that move beyond awareness to emphasise practical experience, feedback and simulation-based learning.

2. Theory

The theoretical framework for this study integrates three perspectives: intercultural competence theory (Deardorff, 2006), dual-process models of social cognition (Kahneman, 2011), and naturalistic decision-making theory (Klein, 2017). Deardorff's model provides a foundation for understanding how intercultural attitudes and values relate to self-awareness and communication skills. Kahneman's framework offers insight into why individuals may continue to rely on first impressions despite being aware of their own biases. Finally, the recognition-primed decision model accounts for the role of intuition and experience in high-stakes professional judgement.

2.1. Process model of intercultural competence

Deardorff's (2006) process model is one of the most widely recognised frameworks for understanding intercultural competence as a dynamic, developmental process. It emphasises the integration of core attitudes (openness, respect, curiosity), knowledge of cultural frameworks and worldviews, and the skills necessary to interpret, relate and interact effectively across cultures. These components contribute to internal outcomes – such as enhanced self-awareness, flexibility and empathy – which in turn enable effective and appropriate intercultural behaviour and communication in real-world contexts.

The model is particularly applicable in educational settings that promote reflective capacity. It stresses the importance of cultivating critical cultural self-awareness, defined as the ability to recognise one's own cultural assumptions, stereotypes and biases (Byram et al., 2014; Deardorff, 2009). This aligns with the pedagogical goals of customs education, where learners must not only master operational tasks but also navigate ethically ambiguous, diverse settings with professional integrity and reflexivity.

Deardorff's model is closely aligned with experiential and transformative learning theories such as Mezirow's (1991) transformative learning and Kolb's (2014) experiential learning cycle. These theories highlight how intercultural competence emerges not through declarative knowledge alone but through structured exposure, interpersonal engagement and critical reflection. In customs training, such learning processes can be fostered through simulation-based exercises, intercultural case work and guided mentorship during field training.

In addition, Byram's (2020) model of intercultural communicative competence reinforces the value of critical cultural awareness, which entails the capacity to evaluate both one's own and others' cultural practices considering ethical and human rights considerations. This perspective is particularly pertinent in border control environments, where asymmetrical power relations and structural vulnerability shape officer-traveller interactions.

Together, these theoretical contributions frame intercultural competence as a foundational capability for professionals working in multicultural regulatory contexts. In customs education, this competence extends beyond effective communication to encompass sound professional judgement, reduction of bias and the safeguarding of human dignity at the border. It thus offers a valuable theoretical lens for understanding how students engage with cultural difference, reflect on personal assumptions and develop confidence in navigating ethically complex intercultural situations.

2.2. Dual-process cognition and intercultural risk assessment

Dual-process theories of cognition, particularly Kahneman's (2011) framework, provide a robust psychological foundation for analysing decision-making in high-pressure environments such as border control. These models distinguish between System 1 thinking – fast, automatic, emotionally charged – and System 2 thinking – slow, reflective and cognitively effortful. This distinction helps explain why culturally biased judgements can persist even among individuals with cognitive awareness of such biases (Pachur & Marinello, 2013).

In practice, customs officers frequently operate under conditions of uncertainty, time pressure and high stakes, increasing their reliance on System 1 processing. While heuristic thinking can promote efficiency, it also heightens the risk of bias, particularly when assessments are shaped by cultural stereotypes or superficial cues such as appearance, language or dress (Tversky & Kahneman, 1974). An officer may unconsciously associate specific accents or clothing styles with risk or noncompliance, despite training in cultural sensitivity.

The activation of System 2 thinking – required for reflection and bias mitigation – is often inhibited by institutional routines and workload constraints. Even individuals with high cultural awareness may struggle to override intuitive responses unless they have cultivated habits of reflection and engaged in training that supports counter-stereotypical thinking (Devine et al., 2012; Stanovich & West, 2001).

Research on implicit bias further highlights this challenge. Greenwald and Banaji (1995) emphasise that automatic, unconscious associations can influence perception and decision-making even in individuals who consciously support egalitarian values. In customs training, this suggests that instruction in intercultural theory, while important, may not suffice to prevent biased judgements in practice. Effective interventions must also target affective and intuitive dimensions of cognition, such as through simulation-based training, counter-stereotypical exposure and mindfulness strategies (Lai et al., 2016).

While dual-process models help explain how individual customs officers may rely on intuitive judgements under pressure, it is important to recognise that modern customs administrations increasingly rely on structured, intelligence-led risk management systems. According to the WCO *Risk Management Compendium* (WCO, 2023b), effective customs risk

management involves the systematic identification, assessment and treatment of risks using a wide range of data sources, including trade documentation, historical compliance records and profiling algorithms. These systems are designed to minimise reliance on subjective impressions and ensure that interventions are targeted, proportionate and facilitative of legitimate trade. However, as Widdowson (2024) notes, there remains a gap between organisational policy and operational practice, particularly in contexts where officers must make rapid decisions with limited data – such as during physical inspections or traveller interviews. In such settings, first impressions and intuitive judgements may still influence outcomes, and if shaped by cultural bias, can lead to suboptimal enforcement or trade facilitation decisions. Karklina-Admine and others (2024) further emphasise that the effectiveness of customs risk management depends not only on technical systems but also on the human factors embedded within them, including the cognitive and cultural dispositions of front-line officers. Thus, integrating intercultural competence into officer training is essential not only for ethical engagement but also for maintaining the integrity and efficiency of risk-based customs operations.

Organisational culture also plays a significant role. Schein (2010) and others have shown that institutional norms and performance metrics often privilege speed over deliberation, reinforcing System 1 tendencies. Without intentional support for reflective judgement, cognitive biases can become embedded in risk assessment procedures (Dempsey et al., 2023; Glaser, 2024).

Thus, dual-process models offer a compelling framework for understanding how biases are maintained in professional practice. They underscore the necessity of training that not only enhances awareness but also reshapes habits of attention and decision-making through structured reflection and organisational change.

2.3. Naturalistic decision-making and professional judgement

Naturalistic decision-making (NDM) theory contributes further insight into how professionals make judgements in dynamic, uncertain environments. Unlike traditional rational-choice models that assume optimal deliberation, NDM emphasises how experienced individuals rely on pattern recognition, intuition and experience-based mental models to make timely, often effective decisions (Klein, 2017; Lipshitz et al., 2001).

At the core of this approach is the recognition-primed decision (RPD) model, developed by Klein (2017), which shows that experienced decision-makers typically recognise familiar cues in a situation and match them to a repertoire of past experiences, rather than comparing multiple options. This enables fast responses, but it also means decisions are shaped by the quality and scope of prior experiences.

In customs officer education, this insight is crucial. Novices lack the experiential depth to recognise complex patterns and may instead rely on simplified cues or stereotypes when assessing travellers. Here, the distinction

between declarative knowledge (knowing about) and procedural knowledge (knowing how) becomes essential (Eraut, 2000). Theoretical understanding alone is insufficient; culturally sensitive decision-making must be practiced in realistic, high-pressure scenarios.

NDM also resonates with situated cognition theory, which argues that learning and decision-making are embedded in social and institutional contexts (Greeno, 1998). In border control agencies, performance metrics and professional norms shape how officers interpret and respond to risk (Aven & Thekdi, 2021). However, as argued by Artman (2000) and Flin and O'Connor (2017), meaningful professional judgement involves more than detecting potential threats – it requires understanding the complexity of risks and making informed decisions about appropriate actions.

Furthermore, NDM highlights the developmental trajectory of professional judgement. Over time, individuals refine their pattern recognition abilities, better integrate contextual information, and learn to override first impressions when necessary (Salas et al., 2009). To support this maturation, educational programs must provide exposure to diverse cases, structured mentorship and opportunities for guided reflection.

From an instructional perspective, scenario-based learning, role-playing and field simulations are especially effective for cultivating tacit knowledge and judgement under pressure. When integrated with critical reflection and feedback, these methods can enhance both intercultural competence and professional decision-making – key outcomes for comprehensive customs officer training.

3. Methods

3.1. Design and procedure

This study employed a cross-sectional survey design with the goal to identify correlations in the relationships between customs officer students' awareness of their own intercultural biases, their reliance on first impressions during border control risk assessments, and their self-reported confidence in intercultural communication. The design was informed by theories of intercultural competence, dual-process cognition and NDM.

Data were collected using an anonymous, web-based questionnaire developed and distributed through Nettskjema, a secure Norwegian platform for academic research. The survey was active during the spring semester of 2025. Ethical approval was granted by Sikt, the Norwegian Agency for Shared Services in Education and Research (application number 158449), and participation was entirely voluntary and anonymous, with informed consent obtained electronically at the start of the questionnaire.

3.2. Context and setting of the study

This study was conducted within the bachelor program in Customs, goods transport and border control at the University of Stavanger (UiS), Norway. Established in autumn 2021 through a collaboration between UiS

and the Norwegian Customs (Tolletaten), this program represents a pioneering approach to customs education in the Nordic region. The bachelor's program spans three years and offers a comprehensive, interdisciplinary curriculum designed to equip students with the necessary competencies for a career in customs and border management. Key components of the curriculum include law, international trade and goods transport, intelligence and risk assessment, logistics, health, safety, and environment (HSE), psychology, culture and social sciences. This interdisciplinary approach is aimed at ensuring that graduates possess both theoretical knowledge and practical skills pertinent to the multifaceted roles within the customs sector.

In the Norwegian context, customs officers (tollere) are primarily responsible for enforcing customs legislation, preventing smuggling, facilitating legitimate trade and ensuring compliance with national and international regulations. Their duties include physical inspections of goods and vehicles, risk-based profiling of travellers and shipments, document verification and cooperation with other national and international enforcement agencies. Unlike in some countries where customs officers may also perform immigration or police functions, Norwegian Customs operates under a civil mandate with a strong emphasis on trade facilitation, fiscal control and public safety (WCO, 2023a). Graduates from the UiS program are thus expected to perform a wide range of operational tasks, including border checks, warehouse audits and digital surveillance, while upholding ethical standards and respecting human rights in line with international norms (WCO, 2023a).

During the bachelor program, students have access to field training and mentorship, organised in collaboration with Tolletaten. During field training modules, students are first introduced to the customs profession through seminars, guidance sessions, skill training and simulations. Then, they are immersed in real-world customs operations at various customs stations. Under the mentorship of experienced customs officers, students engage in daily tasks, applying their academic learning to practical scenarios. Once again, the goal is for students to experience real-world challenges and develop practice-relevant competencies in areas such as communication, risk assessment and adherence to legal procedures.

Admission to the bachelor program is currently based on general academic qualifications in accordance with Norwegian higher education standards, without a formal entrance examination or psychometric testing (Samordna opptak, n.d.).¹ While there is no explicit requirement for prior intercultural experience, the curriculum is designed to cultivate these attributes during the course of study. This contrasts with recruitment

¹ The Norwegian Universities and Colleges Admission Service (NUCAS) coordinates admission to undergraduate study programs at all universities in Norway.

practices in many other customs administrations, where entrance exams, language testing and assessments of intercultural aptitude are standard components of selection (WCO, 2023a). According to the WCO's annual survey, several member states prioritise multilingualism and cultural awareness as key competencies in customs recruitment, particularly in jurisdictions with high volumes of cross-border interaction (WCO, 2023a). In the current Norwegian model, the emphasis is placed on developing these competencies through education and field training rather than pre-selecting for them at entry. This approach reflects a broader pedagogical commitment to inclusive access and developmental learning, though it also raises questions about the baseline intercultural readiness of incoming students.

Tolletaten is increasingly engaged in international cooperation efforts, which include participation in Joint Customs Committees under bilateral and multilateral trade agreements, collaboration with foreign customs and law enforcement agencies, and contributions to development aid and capacity-building initiatives in partnership with the WCO and the European Free Trade Association (EFTA). Graduates of the program may, therefore, be involved in such tasks to coordinate cross-border enforcement strategies. These international responsibilities require not only legal and procedural knowledge but also intercultural competence, diplomatic communication skills and an understanding of global trade dynamics (WCO, 2023a). The Norwegian Customs education program is therefore designed to prepare students for both domestic and international roles, aligning with the WCO's emphasis on professionalism, cooperation and capacity development in global customs practice.

Graduates of the program are expected to achieve a comprehensive set of learning outcomes, encompassing:

- knowledge: in-depth understanding of the roles, responsibilities and organisational structure of Tolletaten; familiarity with international trade logistics; and mastery of relevant laws and regulations
- skills: ability to apply legal frameworks in practical settings; competence in conducting effective risk assessments; and proficiency in communicating with diverse stakeholders, including the public and business entities
- general competence: capacity for critical reflection on professional practices; commitment to continuous learning and adaptation; and understanding of the ethical considerations inherent in customs operations.

These outcomes, if achieved, ensure that graduates are well-prepared for immediate employment within Tolletaten or related sectors, equipped with the necessary skills to navigate the complexities of modern customs and border control environments.

3.3. Data collection

The target population consisted of bachelor-level students enrolled in the program ([Table 1](#)). A total of 91 students participated in the survey. Participants varied in age, sex and level of field experience. Age was reported in categories, with most students falling between 19–35 years. Both first-, second- and third-year students were represented in the sample, although first-year students had not yet started their field training.

Data were collected through a structured survey instrument composed of both closed-ended Likert scale items (1–10 scale) and open-ended qualitative prompts. The study was conducted in Norwegian. Questions were constructed to align with theoretical constructs from intercultural competence models and dual-process cognition. The survey included clarifying explanations of key terms (e.g. intercultural bias), and participants could choose not to respond to any item, preserving ethical flexibility.

3.3.1. Measures

Awareness of intercultural biases was assessed using a single-item self-rating on a scale from 1 (very little) to 10 (very much). Data on reliance on first impressions were captured by asking participants the extent to which they believed customs officers make decisions based on first impressions, rated on the same 1–10 scale. The extent to which participants deemed awareness of cultural differences as relevant for good intercultural communication was also assessed using the same Likert scale (1–10 scale). Finally, participants' confidence during intercultural communication was rated only by those who had field training and had communicated with individuals from different cultural backgrounds (1–10 scale).

3.4. Data analysis

Quantitative data were analysed using the IBM SPSS Statistics software suite. Initially, the analysis involved descriptive statistics to summarise the distribution of all variables, including mean, standard deviation and range ([Table 2](#)). Then, Pearson correlation analyses were performed for both hypotheses being tested. The goal was to assess bivariate relationships between key variables. Following up, partial correlations controlling for demographic factors such as age, sex and training participation. Finally, hierarchical multiple regression analyses were conducted to determine the unique contribution of predictors (e.g. belief in intercultural competence, training experience) to outcomes such as reliance on first impressions and communication confidence.

Table 1. Combined frequency of students enrolled in the bachelor program in Customs, goods transport and border control at the University of Stavanger, Norway, during the spring semester of 2025

Variable	Value	Frequency	%
Sex	Male	31	34.1
	Female	60	65.9
	Total	91	100
Age group	19–24	72	79.1
	25–30	15	16.5
	31–35	3	3.3
	36–40	1	1.1
	Total	91	100
Field training	Yes	49	53.8
	No	42	46.2
	Total	91	100
Study year	First	42	46.2
	Second	27	29.7
	Third	22	24.2
	Total	91	100

Source: Authors.

Table 2. Pearson correlations for study variables.

Variable	First impressions	Intercultural bias	Sex	Age group	Field training
First impressions	1.00				
Intercultural bias	0.016 (0.881)	1.00			
Sex	0.026 (0.805)	– 0.004 (0.968)	1.00		
Age group	0.037 (0.731)	0.300 (0.004)*	– 0.155 (0.142)	1.00	
Field training	– 0.140 (0.185)	– 0.028 (0.790)	– 0.032 (0.762)	– 0.080 (0.450)	1.00
After controlling for sex, age and field training					
First impressions	1.00	0.003 (0.975)			
Intercultural bias	0.003 (0.975)	1.00			

Note: *p* value in parentheses; * Correlation is significant at the 0.01 level (2-tailed); degrees of freedom (df) = 89 for all correlations; df = 86 for all correlations after controlling for sex, age and practical training.

Source: Authors.

There were no missing data in the variables being tested and no violation of statistical assumptions (e.g. normality, linearity, multicollinearity) was detected in the regression models.

Qualitative data from open-ended questions were subjected to thematic coding to identify recurring patterns related to cultural self-awareness, situational judgement and practical experience. These responses were used to illustrate and contextualise the quantitative findings. Findings of the qualitative dimension of the study are, however, beyond the scope of this article.

4. Results and discussion

4.1. Hypothesis 1: Negative correlation between reliance on first impressions during border control risk assessments and awareness of own cultural biases

To examine how customs officer students approach intercultural encounters during border control, this study investigates the relationship between their reliance on first impressions and their awareness of their own intercultural biases. It was hypothesised that students who demonstrate greater awareness of their own cultural biases would be less likely to rely on first impressions when making risk assessments. This assumption is grounded in the idea that critical self-awareness may reduce the tendency to make snap judgements based on superficial cues. Accordingly, Hypothesis 1 (H_1) posits a negative correlation between reliance on first impressions and awareness of intercultural biases, after controlling for age, sex and field training. The corresponding null hypothesis (H_0) states that there is no correlation between these variables once the control variables are accounted for.

4.1.1. Pearson correlation

A Pearson correlation was conducted to examine the relationship between students' awareness of their own intercultural biases and their reliance on first impressions during border control risk assessments.

There was no significant relationship between awareness of own intercultural biases and reliance on first impressions, $r(89) = 0.02$, $p = 0.881$. This suggests that students who reported greater awareness of their own intercultural prejudices did not differ in their reported reliance on first impressions. Even after controlling for sex, age and field training, the partial correlation between awareness of own intercultural biases and reliance on first impressions remained non-significant, $r(86) = 0.003$, $p = 0.975$. Importantly, however, a moderate and statistically significant positive correlation was found between age and cultural awareness, $r(89) = 0.30$, $p = 0.004$. This indicates that older students reported greater awareness of their own intercultural biases.

In this sense, the results of the correlation analysis did not provide evidence to support the hypothesis that there is a negative relationship between reliance on first impressions and awareness of intercultural biases among customs officer students. Specifically, the correlation between the two variables was very weak and non-significant both before and after controlling for sex, age and field training. Therefore, the study fails to reject the null hypothesis, which does not confirm that there is no relationship – only that the data do not offer sufficient statistical evidence to suggest one.

Table 3. Reliance on first impressions during border control risk assessments as a function of awareness of own intercultural biases (Model 1) controlled for age (Model 2), sex (Model 3), and field training (Model 4).

Predictor	Model 1	Model 2	Model 3	Model 4
Intercultural biases	0.02 (0.10)	0.01 (0.11)	0.00 (0.11)	0.00 (0.11)
	(0.02)	(0.005)	(0.004)	(0.004)
Age		0.09 (0.30)	0.11 (0.30)	0.08 (0.30)
		(0.035)	(0.040)	(0.029)
Sex			0.11 (0.35)	0.09 (0.35)
			(0.33)	(0.26)
Field training				-0.42 (0.33)
				(-0.137)
Model summary				
R ²	0.000	0.001	0.002	0.021
Adjusted R ²	-0.01	-0.022	-0.032	-0.025
F(df)	0.02(1.89)	0.06 (2.88)	0.07 (3.87)	0.46 (4.86)
p	0.881	0.756	0.765	0.205

Note: Unstandardised coefficients shown; standard errors in parentheses. Standardised betas are in italics underneath each coefficient. Dependent variable = reliance on first impressions.

Source: Authors.

4.1.2. Hierarchical multiple regression analysis

To develop a better understanding of predictor relationships and test unique contributions of predictors to the outcome, a hierarchical multiple regression was conducted ([Table 3](#)).

Across all four models, none of the predictors (awareness of own biases, age, sex, or field training participation) significantly predicted reliance on first impressions (all $p > 0.20$). The final model explained only 2.1 per cent of the variance, $R^2 = 0.021$, and was not statistically significant, $F(4, 86) = 0.46$, $p = 0.205$. Multicollinearity was not an issue (all Variance Inflation Factors (VIFs) < 2).

In conclusion, H_1 (students who report greater awareness of their own intercultural biases would be less likely to rely on first impressions during border control risk assessments) was not supported by the data. The results of both Pearson correlation and the hierarchical multiple regression analysis indicated that awareness of intercultural biases did not significantly predict reliance on first impressions, either on its own or when controlling for age, sex and field training. Importantly, this does not confirm the null hypothesis but rather indicates that the data provide no sufficient evidence to reject it.

According to Kahneman's (2011) dual-process model, this discrepancy can be explained by the tension between System 1 (intuitive, fast) and System 2 (reflective, slow) thinking. Awareness of bias is cultivated through System 2 processes; however, risk assessments in border control environments are often time-pressured and uncertain, favouring System 1 reliance (Pachur & Marinello, 2013). Thus, even if students are aware of their own cultural assumptions, they may still fall back on intuitive, heuristic-based judgements, especially when under pressure, lacking

Table 4. Average score awareness of own intercultural biases (per age group).

Age group	Average score	Standard deviation	Min.	Max.
19–24	6.37	1.50	3	10
25–30	7.00	1.64	4	10
31–35	8.33	0.57	8	9
36–40	9.00	-	9	9

Note: Scores were recorded on a Likert scale from 1 to 10.

Source: Authors.

experience, or influenced by institutional norms that prioritise efficiency over reflection (Stanovich & West, 2001). As Tversky and Kahneman (1974) demonstrated, individuals often unconsciously use mental shortcuts like representativeness heuristics, which can easily be shaped by cultural stereotypes.

Although the H_1 was not supported, the significant association found between age and cultural awareness (Table 1) underscores the potential influence of life experience on the development of intercultural competence, which is confirmed by the dataset where, on average, older participants had higher scores of self-assessed awareness of own intercultural biases (Table 4).

Several methodological factors may help explain the lack of significant findings. These include limited statistical power, potential measurement limitations, or the possibility that reliance on first impressions is shaped by other variables not captured in the current study, such as personality traits, cognitive style or the quality of field training. Moreover, although critical self-awareness and the development of internal attitudes such as respect, curiosity and openness are emphasised in some models (Deardorff, 2006), these are developmental. In other words, intercultural awareness does not automatically result in behaviour change without practice and reinforcement. In this sense, self-reported bias awareness may not accurately capture deeper, implicit biases (Greenwald & Banaji, 1995). A student might sincerely believe they are culturally aware yet still hold unconscious associations that influence their perceptions of travellers. Without targeted interventions, such as habit-breaking strategies (Devine et al., 2012) or bias training focused on System 1 retraining (Lai et al., 2016), awareness may remain superficial or disconnected from decision-making.

Another potential explanation can be found in the grounds of NDM theory (Klein, 2017), which poses that experts often rely on recognition-primed decisions rather than deliberate comparisons. Customs officer students, especially those with limited field experience, lack the repository of nuanced, experience-based patterns that would enable them to override first impressions effectively. In such cases, they are more likely to rely on visible cues (e.g. dress, accent, demeanour), which may lead to stereotype-based assessments, even if unintentionally.

This might explain why, in this study, practical training did not significantly moderate the relationship between awareness and reliance on first impressions, but that age did. In other words, younger students may not have accumulated sufficient or varied experience to build effective decision scripts that override intuitive bias. According to Salas and others (2009), professional judgement matures through sustained exposure, reflection and feedback loops – elements that may not be completely addressed in the limited training period offered to the students.

In this context, another factor to consider is the organisational culture that reigns in Norwegian Customs (Schein, 2010). Within border control, institutional expectations often stress efficiency, compliance enforcement and security priorities, which may inadvertently encourage quick judgements over careful deliberation (Glaser, 2024). If reflective practices are not embedded into organisational routines, then System 1-based decision-making becomes normalised, even among individuals who come out of academic training educated about cultural sensitivity. Put differently, the gap between bias awareness and behavioural restraint may not only be psychological, but also structural. Without institutional incentives to act on intercultural competence (e.g. through structured debriefs, mentorship or simulation-based feedback), awareness risks become symbolic rather than operational.

In the end, the lack of a statistically significant relationship in H_1 bears clear practical and scientific implications. For training purposes, the results demonstrate not only the limitations of awareness as a stand-alone variable, but also the need for multilevel interventions, which might include experiential learning environments that simulate high-pressure scenarios (Kolb, 2014), reflection-based modules integrated into field training (Mezirow, 1991) and bias-reduction strategies aimed at both implicit and automatic cognition (Devine et al., 2012). Regarding scientific implications, future studies should consider triangulating self-reported data with behavioural observations, performance-based assessments or implicit association tests (IATs) to better capture the complex relationship between awareness and action. Moreover, future research could examine whether deeper, implicit intercultural biases or organisational norms influence the students' reliance on first impressions – beyond what is reflected in self-reported awareness.

4.2. Hypothesis 2: Positive correlation between intercultural competence and awareness of one's own intercultural biases as well as intercultural communication proficiency

To further explore the factors that contribute to intercultural competence among customs officer students, this study investigates whether students who believe that intercultural competence has a positive impact on communication are more likely to report greater awareness of their own intercultural biases and higher confidence in communicating with people

from different cultural backgrounds during field training. Hypothesis 2 (H_2) proposes that such beliefs are positively associated with both intercultural bias awareness and communication confidence, even when controlling for age, sex and field training experience. In contrast, the null hypothesis (H_0) states that there is no difference in these self-reported outcomes between students who value intercultural competence and those who do not, once the control variables are considered.

4.2.1. Pearson correlation

The hypothesis stated that students who believe that intercultural competence positively affects intercultural communication would report (1) greater awareness of their own intercultural biases and (2) greater confidence in communicating with culturally different individuals during practice. A series of Pearson correlations and partial correlations (controlling for sex, age and field training) were conducted to test this ([Table 5](#)).

A moderate, statistically significant positive correlation was found between the belief that intercultural competence is important and students' awareness of their own intercultural biases, $r(89) = 0.481, p < 0.001$. No significant correlation was found between belief in the importance of intercultural competence and confidence in intercultural communication, $r(89) = 0.104, p = 0.327$. After controlling for sex, age and field training, the correlation between the importance of intercultural competence and awareness of own intercultural biases remained statistically significant, though slightly reduced, $r(86) = 0.467, p < 0.001$. Likewise, the partial correlation between belief in the importance of intercultural competence and confidence in intercultural communication remained non-significant, $r(86) = 0.175, p = 0.104$.

The results partially support the H_2 . Students who believe that intercultural competence is important for good communication also report greater awareness of their own intercultural biases, even after controlling for background variables. However, this belief was not significantly related to students' self-reported confidence in communicating with culturally different individuals during training.

4.2.2. Regression analysis

Following up, two hierarchical multiple regression models were conducted to test H_2 , controlling for sex, age and field training ([Table 6](#)).

In Model 1, predictors explained 29 per cent of the variance in students' awareness of their own intercultural biases, $F(4, 86) = 8.80, p < 0.001$. Belief in the importance of intercultural competence was the strongest predictor ($p < 0.001$), with age also contributing significantly ($p = 0.042$), while sex and field training were not significant.

In Model 2, predictors explained 72 per cent of the variance in intercultural communication confidence, $F(4, 86) = 54.65, p < 0.001$. Field training emerged as by far the strongest predictor ($p < 0.001$), followed by a small negative effect of sex ($p = 0.048$), with female students reporting

Table 5. Correlations for study variables.

Variable	Intercultural competence and communication	Confidence in intercultural communication	Awareness of own intercultural biases	Sex	Age group	Field training
Intercultural competence and communication	1.00					
Confidence in intercultural communication	0.104 (0.327)	1.00				
Awareness of own intercultural biases	0.481 (<0.001)*	0.065 (0.543)	1.00			
Sex	0.284 (0.006)*	-0.133 (0.209)	-0.004 (0.968)	1.00		
Age group	0.177 (0.093)	0.046 (0.668)	0.300 (0.004)*	-0.155 (0.142)	1.00	
Field training	0.029 (0.781)	0.830 (<0.001)*	-0.028 (0.790)	-0.032 (0.762)	-0.080 (0.450)	1.00
After controlling for sex, age and field practice						
Intercultural competence and communication	1.00					
Confidence in intercultural communication	0.175 (0.104)	1.00				
Awareness of own intercultural biases	0.467 (<0.001)*	0.113 (0.293)	1.00			

Note: *p* value in parentheses; * Correlation is significant at the 0.01 level (2-tailed); *df* = 89 for all correlations; *df* = 86 for all correlations after controlling for sex, age and field training.

Source: Authors.

Table 6. Multiple regression results for predicting awareness of own intercultural bias (Model 1) and intercultural communication confidence (Model 2) controlled for self-assessed intercultural competence as well as age, sex and field training.

Predictor	Model 1: Awareness of own intercultural bias			Model 2: Intercultural communication confidence		
	B	SE	β	B	SE	β
Intercultural competence	0.518	0.106	0.479***	0.169	0.103	0.101
Sex (0=Male; 1=Female)	-0.363	0.319	-0.111	-0.625	0.311	-0.0123*
Age	0.534	0.259	0.196*	0.315	0.252	0.075
Field training	-0.095	0.285	-0.030	3.995	0.278	0.829***
Model summary						
R ²	0.290			0.718		
Adjusted R ²	0.257			0.705		
F(df)	8.80(4.86)			54.65(4.86)		
<i>p</i>	<0.001			<0.001		

Note: B = unstandardised coefficient; SE = standard error; β = standardised beta coefficient. **p* < 0.05; ****p* < 0.001 Dependent variable for Model 1: Awareness of own intercultural biases. Dependent variable for Model 2: Confidence in communicating with culturally different individuals.

Source: Authors.

slightly lower confidence than male students. Belief in the importance of intercultural competence (*p* = 0.104) and age (*p* = 0.215) was not significant.

In summary, the findings partially support H₂. In the first model, belief in the importance of intercultural competence emerged as a strong and significant predictor of students' self-reported awareness of their own intercultural biases. This suggests that students who value cultural awareness are also more likely to reflect critically on their own potential biases. Age was also a significant predictor in this model, indicating that older students tend to report higher levels of bias awareness ([Table 6](#)). These results support the alternative hypothesis and lead to the rejection of the null hypothesis for this part of H₂.

However, in the second model – with confidence in intercultural communication as the dependent variable – belief in the importance of intercultural competence was not a significant predictor. Instead, field training experience was by far the strongest predictor, explaining a large portion of the variance in confidence levels. This indicates that real-world exposure and experience, rather than attitudinal beliefs alone, play a more decisive role in shaping students' self-reported communication confidence. Additionally, sex emerged as a small but significant predictor, with male students reporting slightly higher confidence levels than female students. Age was not a significant factor in this model.

Together, these findings suggest that while students' attitudes towards the value of intercultural competence are closely linked to self-awareness of bias, actual confidence in intercultural communication is primarily shaped by practical, hands-on experience. These insights underscore the importance of combining value-based education with experiential learning opportunities in the development of intercultural competence among customs officer students.

These findings can be explained by the process model of intercultural competence (Deardorff, 2006), which provides a strong foundation for understanding the first part of H₂. As intercultural competence is to be construed as a developmental process beginning with internal attitudes (such as openness and curiosity) and proceeding through knowledge and skills to internal outcomes like self-awareness and empathy, ultimately effective communication behaviour becomes a consequence of the acquisition of theoretical knowledge and its transformation into practical skills.

Thus, the finding that students who valued intercultural competence also reported greater bias awareness is consistent with Deardorff's model, as attitudinal endorsement of intercultural competence – when paired with educational exposure – can foster critical self-reflection, a key internal outcome in Deardorff's framework. In fact, such reflection is essential for challenging ingrained assumptions, including cultural prejudices (Mezirow, 1991). Put simply, those who value intercultural competence (input) will naturally be more aware of their own biases (intermediate outcome), especially when supported by curricular emphasis on reflection and diversity.

However, the second part of H₂ – predicting communication confidence based on values – was not supported. Instead, field training was the strongest predictor of self-reported confidence, which makes sense if one were to analyse the finding through the lens of NDM and experiential learning.

NDM theory (Klein, 2017) emphasises that real-world decision-making, particularly in high-stakes and intercultural situations, depends less on abstract knowledge or attitudes and more on experience-based pattern recognition. Put simply, real-world decision-making is closer to being a reactive response from our amygdala and limbic system than a cognitive cortex-based process (Levine, 2022; MacLean, 1977). Novices may logically know what is important (e.g. cultural sensitivity), but they lack the procedural fluency to adapt their behaviour in real time without prior exposure (Eraut, 2000), especially those under 25 years of age (Arain et al., 2013).

Similarly, Kolb's experiential learning theory (2014) supports the idea that deep learning, including the development of behavioural competence, occurs through a cycle of concrete experience, reflection and active experimentation. Students who participate in field training are more likely to gain confidence through doing, reflecting and adjusting over time. Attitudinal belief, while important, is not sufficient to produce behavioural readiness. This might explain why students may intellectually value intercultural competence and even reflect on bias but still feel unprepared to interact confidently with people from different backgrounds unless they have practiced those interactions in realistic settings.

Confidence in intercultural communication, especially in real-time professional contexts, relies on the ability to override automatic, System 1 responses with deliberate, skilled behaviour. According to Kahneman (2011) and Stanovich and West (2001), this requires repeated engagement with a diversity of people and guided feedback, not merely belief-based awareness.

Students who lack practical experience may hold strong reflective (System 2) attitudes about diversity but struggle to act on them fluently under pressure. Conversely, field experience helps develop automatic (System 1) scripts that support confident communication, particularly when emotional regulation, body language and cultural nuance must be managed in the moment (Pachur & Marinello, 2013).

This perspective reinforces the idea that competence without confidence may reflect an imbalance between System 2 belief and insufficient System 1 conditioning – something only experience can resolve.

The implications of this finding are considerable regarding the training of future generations of customs officers, as it implies that institutions training customs officers must bridge the value-behaviour gap. In other words, if training programs focus primarily on lectures and attitudinal surveys without experiential and reflective learning, students may develop awareness without confidence. Intercultural competence, however, is not just about

knowing or feeling, it is about doing (Byram, 2020; Deardorff, 2009). Institutions should therefore embed scenario-based training, mentorship and critical reflection practices into curriculums to turn awareness into communicative action.

4.3. General discussion

This study investigated the interplay between customs officer students' intercultural attitudes, self-awareness of cultural bias and behavioural tendencies during professional risk assessments. The findings revealed two key dynamics: first, that self-reported awareness of intercultural biases did not significantly predict reliance on first impressions (H_1); and second, that valuing intercultural competence was strongly linked to bias awareness, but not to intercultural communication confidence, where practical experience proved to be the most decisive factor (H_2).

Taken together, these results raise important considerations for how intercultural competence is developed and operationalised in professional customs education. They suggest that awareness alone, while necessary, is not sufficient for behavioural change in decision-making or communication. This echoes concerns in the wider literature that intercultural understanding must be embedded into experiential systems of learning, institutional practice and policymaking (Liu et al., 2023; Spitzberg & Changnon, 2009).

A major implication of these results is the persistent disconnect between reflective understanding and real-time performance, a pattern that has been noted in various professional domains, including policing, emergency response and education (Dupre & Naik, 2021; Vuletich & Payne, 2019), but it is still underexplored in the border control context. For customs organisations, this signals a need to restructure training models to move beyond declarative content (e.g. lectures or e-learning modules on cultural diversity) towards practice-integrated learning.

Scenarios, simulations, role-play exercises and cross-cultural immersion should become standard components of customs training programs, as they have been widely employed in other societal safety organisations (Van Hasselt et al., 2006; Vecchi et al., 2005). When students encounter diversity not only as a theory but as a lived challenge in supervised environments, their ability to manage ambiguity, regulate bias and maintain confidence under pressure increases significantly (Młodzik, 2020).

Moreover, such training must be iterative and longitudinal. One-time workshops are unlikely to rewire judgement habits or prepare officers for the emotional and social demands of border work. Instead, intercultural competence must be cultivated as part of a professional identity, a process that requires organisational support, mentorship, and institutional reflection on bias and performance norms (Wright, 2019).

At the policy level, these findings support a shift from individual-centred interventions (e.g. bias awareness training) to systems-level reforms that address organisational culture and decision-making protocols. As Glaser

(2015) and Dempsey and others (2023) argue, discretion in border control often mirrors deeper institutional norms, such as prioritising efficiency, deterrence or suspicion, each of which can tacitly reinforce reliance on first impressions or implicit bias.

The findings of this study also resonate with international standards for customs training and professional development. The WCO *PICARD Professional Standards* (WCO, 2019) emphasise the integration of intercultural competence, risk management and stakeholder engagement as core competencies for both operational and strategic customs officers. Similarly, the EC's *CustCompEU Framework* (EC, n.d.) outlines a harmonised set of knowledge, skills and behaviours required for customs professionals, including core values such as integrity, respect and cultural awareness. Both frameworks advocate for competency-based training models that combine theoretical knowledge with practical application, an approach that aligns closely with our findings on the importance of field experience in developing communication confidence. Embedding intercultural competence within these global standards not only enhances individual performance but also supports broader goals of trade facilitation, compliance and institutional legitimacy.

To that end, policymakers might consider promoting reflective debriefing practices after encounters involving discretionary risk assessments, cross-cultural performance reviews integrated into professional evaluations, and cultural representation audits ensuring that institutional narratives, training materials and role models reflect the diversity officers are expected to navigate. Such measures would ensure that intercultural competence is not just a curriculum objective in the education of new customs officers, but a cultural standard across the organisation.

While this study focused on students in a Norwegian Customs setting, the findings have transferable relevance to broader border control settings. Officers across jurisdictions face similar challenges: quick decision-making, limited information and complex power asymmetries between state agents and travellers. In this sense, intercultural competence is not a 'soft skill', but a strategic asset – one that can enhance operational fairness, reduce conflict escalation and improve the legitimacy of border institutions (Huysmans, 2006; Provine & Zatz, 2017).

These findings also resonate with international calls for rights-based and human-centred border governance (International Organization for Migration, 2016; United Nations Office of Counter-Terrorism, 2021). When customs professionals are not only culturally aware but behaviourally skilled and institutionally supported, border security becomes more humane, effective and ethically sustainable. In this regard, intercultural competence must be practiced, institutionalised and governed – not just taught.

Finally, it is worth highlighting that this study relies on quantitative self-reported data. Future research would benefit from methodological triangulation to better capture the complexity of intercultural dynamics in

customs enforcement. For example, customs tribunal decisions, such as the UK First-tier Tribunal case (UKFTT) TC/2023/10091, reveal how cultural misunderstandings, assumptions about traveller intent, and subjective interpretations of behaviour can influence legal outcomes and assessments of dishonesty (TaxWorld, 2025). In that case, the tribunal evaluated whether a non-national traveller acted dishonestly when importing tobacco products, with cultural context and communication playing a central role in the proceedings. Such cases underscore the importance of understanding how customs officers interpret behaviour through cultural lenses and how these interpretations are later scrutinised in legal forums. Additionally, qualitative methods such as interviews with officers or ethnographic case studies of border interactions could provide deeper insight into how intercultural competence is enacted, or challenged, in practice. As Creswell and Plano Clark (2018) argue, mixed-methods designs are particularly effective for exploring the intersection of belief, behaviour and institutional context. Incorporating these approaches would allow future studies to move beyond attitudinal measures and examine how intercultural competence shapes enforcement decisions, procedural fairness and traveller experiences.

5. Conclusion

This study set out to examine how customs officer students in Norway engage with the complex demands of intercultural competence in border control environments. By exploring the relationship between students' bias awareness, reliance on first impressions, beliefs about the value of intercultural competence, and self-reported communication confidence, the study offers an evidence-based contribution to the emerging literature on intercultural professional development in customs education.

The findings demonstrate that while students who value intercultural competence report greater awareness of their own cultural biases, this awareness does not predict lower reliance on first impressions during border risk assessments, nor does it guarantee confidence in intercultural communication. Instead, practical experience emerged as the strongest predictor of communication confidence, underscoring the centrality of experiential learning to behavioural readiness. These results resonate with theoretical models that highlight the gap between reflective insight and real-time action, particularly in high-stakes professional settings where decisions are shaped by both cognitive processes and organisational context. Furthermore, the study reveals that intercultural attitudes and self-awareness are necessary but insufficient conditions for competent performance. Institutional structures, training environments and the accumulation of real-world experiences are equally vital for transforming knowledge and values into confident, ethical behaviour at the border.

These findings suggest that customs education must move beyond awareness-based instruction to embed iterative, experience-based and reflective learning into the core of professional training. They also point to the need for organisational cultures that support deliberation, feedback and

continuous development. Policy reforms that promote simulation-based learning, structured debriefings and critical reflection practices may help to institutionalise intercultural competence as a lived standard rather than a rhetorical aim.

Although limited by self-reported measures and a context-specific sample, this study contributes meaningfully to a growing understanding of how future customs officers can be better equipped to meet the intercultural and ethical demands of their profession. Future research should explore the role of implicit biases, institutional routines and behavioural performance assessments in shaping intercultural judgement and communication in customs work. Ultimately, a more holistic and practice-informed approach to intercultural competence will not only benefit officers-in-training but also contribute to a more equitable and effective model of border governance.

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