

# “I’m a salesman and my client is China”: Language learning motivation, multicultural attitudes, and multilingualism among university students in Kazakhstan and Uzbekistan

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## ABSTRACT

The Central Asian republics represent an interesting yet little-studied space for researching the interplay between language learning motivation (LLM), multiculturalism, and multilingualism given their cultural and linguistic diversity and official promotion of multilingualism and positive multicultural attitudes through language learning initiatives in schools and universities. This article reports on a questionnaire study that investigated the LLM of 235 university students in Kazakhstan and Uzbekistan, including their integrativeness and international posture. The students were learning Arabic, Chinese, English, French, German, Japanese, Russian, Spanish, and Turkish, with a majority of them learning two or more languages concurrently. The study also explored their views regarding the benefits of being multilingual and the extent to which their level of multilingualism, both formally and natively acquired, affected their multicultural attitudes and levels of prejudice towards outgroups. The findings revealed statistically significant gender differences in how the participants viewed the benefits of being multilingual, as well as statistically significant relationships between their levels of natively acquired multilingualism and their multicultural attitudes and levels of prejudice towards outgroups. International posture and integrativeness, meanwhile, were found to be distinct concepts with little overlap.

## 1. Introduction

A growing number of countries around the world, including in Europe (Calafato, 2020a; Minobr, 2021; Raud & Orekhova, 2020) and Asia (Calafato & Tang, 2019a; Gao & Zheng, 2019; Liddicoat, 2019; Syzdykbayeva, 2016), have implemented language learning initiatives in schools and universities to promote multilingualism and positive multicultural attitudes among younger generations. The reasons for promoting multilingualism are myriad. For the individual, being multilingual can bring better job prospects, a wider circle of friends and acquaintances, and even lead to therapeutic and neurological benefits (Kroll & Dussias, 2017). For a country, a multilingual population can burnish its reputation internationally, helping it forge multi-faceted partnerships with other countries and boosting its competitiveness in global trade. In Norway, for example, the foreign language curriculum for schools states that “we need to communicate in several languages in a globalized world” and that “formal and informal communication locally, nationally, and internationally requires language skills and knowledge of other cultures and lifestyles” (Utdanningsdirektoratet, 2020). In the United Arab Emirates, the government, aiming to meet the growing demand for multilingual individuals in a globalized world, has implemented dual medium of instruction in Arabic and English in some public schools while students have the opportunity to study multiple

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foreign languages in the country's numerous private schools (Calafato & Tang, 2019a, 2019b). In Central Asia, which constitutes the focus of this study, the governments of Kazakhstan and Uzbekistan have sought to promote multilingualism and positive multicultural attitudes among their populations by implementing policies in secondary and tertiary education that require students to learn three languages at a minimum (Liddicoat, 2019; Reagan, 2019).

Yet, while several countries have implemented language learning initiatives in schools and universities to promote multilingualism and positive multicultural attitudes among their populations, there remain several gaps in our knowledge concerning how students have responded to these initiatives, including what motivates them to learn multiple languages and how this learning affects their multicultural attitudes. Firstly, much of the research on the promotion of multilingualism via language learning initiatives has concentrated on the European context (see Calafato, 2019), whereas far less research exists on other regions of the world, especially Central Asia, where governments, as already mentioned, are likewise promoting multilingualism and positive multicultural attitudes among their populations through language learning initiatives (Djuraeva, 2021; Yeskeldiyeva & Tazhibayeva, 2015). And while studies indicate that students tend to view multilingualism as an asset (Calafato & Tang, 2019a; Hillmarsson-Dunn & Mitchell, 2011; Yeskeldiyeva & Tazhibayeva, 2015), they have seldom delved deeply into the specific benefits (e.g., social, professional, etc.) that students associate with knowing multiple languages. Secondly, most studies have investigated how multilingualism can boost students' ability to learn additional languages (Dmitrenko, 2017; Kroll & Bialystok, 2013) without focusing on how it may affect their multicultural attitudes, which constitute an important component of the language learning initiatives implemented by governments in support of multilingualism. Indeed, multilingualism can affect an individual both linguistically *and* psychologically, including the extent to which they appreciate other cultures and harbor prejudice towards outgroups (Mepham & Martinovic, 2018), and so it is important to explore its psychological effects alongside its linguistic impact. Thirdly, many studies tend to be single-language projects, mostly on the learning of English, despite students learning one or more languages alongside English as part of government initiatives to promote multilingualism (Calafato, 2019; Calafato & Tang, 2019b; Wright et al., 2015). The result is an incomplete picture of the language learning experiences of students involved in such initiatives and their attitudes towards multilingualism.

This article reports on a questionnaire study that sought to address the abovementioned gaps in our knowledge by investigating the language learning motivation (LLM) of university students learning multiple languages in Kazakhstan and Uzbekistan, their views regarding the benefits of being multilingual, and the relationships between their level of multilingualism and their multicultural attitudes and prejudice towards outgroups. The study's originality lies, firstly, in its exploration of these themes in two Central Asian countries that have received little attention to date, yet where students learn multiple languages as part of the two countries' push to promote multilingualism and positive multicultural attitudes among their populations (see Section 2.2.). Secondly, the study explored the motivations of university students to learn multiple languages, oftentimes simultaneously, with these comprising Arabic, Chinese, English, French, German, Japanese, Russian, Spanish, and Turkish. Lastly, in contrast to previous studies on the psychological effects of multilingualism, this study adopted the view that multilingualism is not monolithic and exists in different forms depending on how individuals acquired their languages, and that attitudes towards multilingualism and multiculturalism can be influenced by diverse sociobiographical variables like age, gender, and nationality. These variables were explored as part of the study's focus and provided a fuller picture of how participants viewed the benefits of being multilingual, their motivations to learn multiple languages, and the extent to which their multilingualism affected their multicultural attitudes and prejudice towards outgroups.

## 2. Multicultural attitudes and multilingualism

While multilingualism has multiple definitions (for a discussion, see Cenoz, 2013), this study defines it as an individual's knowledge and use of more than one distinct language (i.e., a national or official language). Such a definition closely mirrors the concept of multilingualism as promoted by various governments through language learning initiatives in schools and universities worldwide (Gao & Zheng, 2019; Raud & Orekhova, 2020), including in Kazakhstan and Uzbekistan (Liddicoat, 2019; Yeskeldiyeva & Tazhibayeva, 2015). As already mentioned, most studies have explored how multilingualism helps students learn new languages more effectively (Dmitrenko, 2017; Hirosh & Degani, 2018). However, multilingualism may also affect students psychologically, including their emotions, identity (Tannenbaum & Tseng, 2015), and personality (Dewaele & Botes, 2020; Dewaele & van Oudenhoven, 2009). Discussing the psychological effects of multilingualism, Duff (2015, p. 62) draws on language socialization theory to note that individuals "may be socialized into new identities, communities, practices, and dispositions through mutual engagement in particular linguistic and literacy activities ... at home, in educational institutions and workplaces, and in other face-to-face and virtual communities". These effects have seldom been investigated in relation to the learning of multiple languages in schools and universities, although they have been documented in wider society, overwhelmingly in Europe, where the learning of multiple languages is actively promoted (European Council, 2019). For example, Medrano (2018, p. 430) found a strong correlation between multilingualism and European identification, noting that "learning languages widens people's life and mental horizons and facilitates the development of cosmopolitan identifications".

The widening of people's mental horizons through learning languages can also lead to them adopting more positive multicultural attitudes (i.e., greater appreciation and acceptance of individual and group differences; see Munroe & Pearson, 2006) and being less prejudiced against outgroups (Servidio et al., 2021; Whitley & Webster, 2019). In this respect, the bicultural identity integration paradigm (Benet-Martínez & Haritatos, 2005) serves as a useful framework to conceptualize how this might occur, with Benet-Martínez and Haritatos (2005) noting that being proficient in multiple languages can lead to individuals seeing a reduced distance between groups and developing a blended identity. These linkages have likewise been noted by the European Council (2019) and, as already mentioned, constitute an important goal for countries like Kazakhstan, Uzbekistan, and others that are promoting the learning of multiple languages in schools and universities (e.g., Liddicoat, 2019; Minobr, 2021; Utdanningsdirektoratet, 2020). The desire to

promote positive multicultural attitudes alongside multilingualism is understandable seeing as how these countries, in addition to navigating a globalized world, house diverse cultural, ethnic, linguistic, and social groups, with the ensuing need to ensure intergroup harmony and understanding. Empirically, the findings from several studies report a positive link between multilingualism and some aspects of multicultural attitudes. For example, [Dewaele and van Oudenhoven \(2009\)](#), in their study of 79 secondary school multilingual and incipient bilingual students in London, found that the multilingual cohort scored statistically significantly higher on the measure for open-mindedness in the Multicultural Personality Questionnaire (MPQ). [Dewaele and Botes \(2020\)](#) similarly found a positive relationship between the participants' levels of multilingualism and their MPQ scores, especially those for open-mindedness. They reasoned that "multilinguals know from very early on that their own linguistic, cultural values and practices may not be shared by the people with whom they interact", which "could lead to self-reflection and ultimately to acceptance that different people may have different values" (p. 820).

The positive links between multilingualism and certain aspects of multicultural attitudes (mostly open-mindedness) reported in some studies notwithstanding (see also [Ponterotto, 2008](#)), there are several issues concerning how the relationship between these two elements has been explored in studies until now. Specifically, there has been an overreliance on the MPQ, a lack of differentiation between various types of multilingualism (see [Cenoz, 2013](#)), little engagement with multilingualism's ability to reduce prejudice towards outgroups, and limited attention given to the effects of sociobiographical variables like age, gender, and nationality. The MPQ was originally developed to evaluate the ability of corporate staff to work in multicultural settings and shares much in common with more general personality trait measures like the Big Five ([Rushton & Irwing, 2009](#)), which was found to be a weak predictor of multicultural ability ([Ashton, 1998](#)). More recently, a growing number of studies (e.g., [Solhaug & Kristensen, 2020](#); [Stampolaki, 2018](#)) have used newer measures, for instance, the Munroe Multicultural Attitude Scale (MASQUE) ([Munroe & Pearson, 2006](#)), which was designed to measure multicultural attitudes with specifically educational settings in mind. As for the need to distinguish between different types of multilingualism, it is worth remembering that multilingualism is as much about learning multiple languages as it is about being socialized into different identities, practices, and dispositions through those languages ([Duff, 2015](#)). Therefore, the socialization experienced by an individual who learned multiple languages natively (or early in life) would differ from that experienced by someone who became multilingual later on, likely leading to behavioral differences between the two. This claim is given credence by the findings from studies like [Fava et al. \(2011\)](#) and [Weikum et al. \(2013\)](#) where significant differences in visual language discrimination and brain organization were found between early and late multilinguals.

Finally, in contrast to the number of studies on the effects of multilingualism on multicultural attitudes (e.g., [Dewaele & Botes, 2020](#); [Dewaele & van Oudenhoven, 2009](#)), few studies (e.g., [Luo & Wei, 2021](#); [Servidio et al., 2021](#)) have been conducted on the effects of multilingualism on some form of prejudice. Prejudice can be described as a product of "ideologies that promote or maintain group inequality", for example, ethnic prejudice, sexism, and cultural elitism ([Pratto et al., 1994](#), p. 741). These manifestations of prejudice can be explained using the social dominance orientation concept ([Pratto et al., 1994](#)), which posits that individuals who desire one group to dominate other groups or see some groups as superior to others will evince high levels of prejudice, regardless of whether the groups are cultural, ethnic, linguistic, or social in nature. Studies that have investigated the correlations between prejudice and positive multicultural attitudes report mixed findings, ranging from statistically significant negative correlations between the two to statistically insignificant positive or negative correlations. Regardless of their statistical significance, the correlations have generally been weak, with most studies reporting a small effect size ([Kauff et al., 2013](#); [Whitley & Webster, 2019](#)). The implication is that positive multicultural attitudes do not always correlate with levels of prejudice and so it might be useful to explore these two as separate variables when conducting research. As already mentioned, an important goal for countries promoting multilingualism among their populations is that it will also lead to positive psychological effects (e.g., [European Council, 2019](#); [Syzykabayeva, 2016](#)). It would, thus, benefit policymakers and educational institutions in these countries to know the extent to which multilingualism leads not only to positive multicultural attitudes but also to reduced levels of prejudice.

### 2.1. Language learning motivation

Despite many countries promoting multilingualism and positive multicultural attitudes among school and university students through language learning initiatives ([Liddicoat & Kirkpatrick, 2020](#); [Minobr, 2021](#); [Syzykabayeva, 2016](#)), few studies have investigated what benefits these students associate with being multilingual ([Calafato & Tang, 2019a, 2019b](#); [Wang & Kirkpatrick, 2020](#)), whether their motivations to learn languages reflect the goals of said initiatives ([Syzykabayeva, 2016](#); [Yeskeldiyeva & Tazhibayeva, 2015](#)), and the extent to which sociobiographical variables (e.g., gender, nationality, etc.) play a role in this respect ([Al-Hoorie, 2018](#)). Some frameworks are also overrepresented in LLM studies when compared to others, for example, the Second Language Motivational Self System (L2MSS) ([Dörnyei, 2009](#)), which suffers from issues of predictive validity and "conceptual clutter" ([Al-Hoorie, 2018](#), p. 738; see also [Calafato, 2020b](#); [Oakes & Howard, 2019](#)), its innovative approach to conceptualizing LLM as comprising distinct selves notwithstanding. Concepts like integrativeness ([Gardner & Lambert, 1972](#)) and international posture ([Yashima, 2009](#)), as well as [Nakamura's \(2019\)](#) domain-based framework (more on these below), may prove more useful in the study of LLM, especially in contexts where the government is promoting multilingualism and positive multicultural attitudes through language learning initiatives in schools and universities. Moreover, with school and university students regularly learning multiple languages, it is surprising that only a few studies have investigated their LLM across languages ([Calafato & Tang, 2019a, 2019b](#); [Sugita McEown et al., 2017](#)). Taken together, these issues mean that policymakers and educational institutions have limited information to accurately measure the success of their multilingual initiatives and, if needed, make adjustments that would lead to more effective outcomes.

### 2.1.1. Concepts and frameworks: Domains, integrativeness, and international posture

This study investigated the relationships between multilingualism, positive multicultural attitudes, and prejudice among university students in Kazakhstan and Uzbekistan, as well as their motivations to learn languages and their views concerning the benefits of being multilingual. As a result, it drew on the concepts of integrativeness (Gardner & Lambert, 1972), international posture (Yashima, 2009), and life domains (Nakamura, 2019). These concepts and frameworks, when used together, provide us with deeper insights into the level of engagement that the students desire with linguistic outgroups, which feeds into the psychological effects of multilingualism, and their complex motivations for learning multiple languages. Such an approach also helps us avoid the conceptual issues present in the L2MSS framework and its focus on multiple selves (see Al-Hoorie, 2018). For example, Nakamura's (2019, p. 111) domain-based framework shifts the focus away from particular selves and places it squarely on "learners' very specific and personalized reasons to learn" languages. It accomplishes this by linking LLM to the number of life domains (e.g., education, employment, and religion) in which learners plan to use the languages they learn (for examples of coding schema, see Nakamura, 2019). In this way, each language acquires a distinct profile consisting of one or more motivational factors tied to specific life domains. The framework can be used to measure motivational intensity to the extent that the more domains that a language is tied to (i.e., the more diffuse its profile), the greater the motivation to not only learn said language but also to master a greater diversity of speech genres in it. This is something that other frameworks like the L2MSS do not address. Speech genres concern how we use language in different contexts and to accomplish different functions (e.g., at university, with friends and family, etc.). For instance, a student who learns a language for both education- and tourism-related purposes will likely work towards acquiring both academic and everyday proficiency in it, whereas someone who plans to use it solely for tourism may only choose to acquire everyday proficiency.

In addition to Nakamura's (2019) framework, the study also explored integrativeness as a variable. In this study, integrativeness is defined as the extent to which an individual learns a language to draw close to or even assimilate with the community or communities where the target language is spoken (Gardner & Lambert, 1972). A student who exhibits high integrative potential is likely to strongly identify with speakers of the target language and develop a greater appreciation for their culture than someone who exhibits low integrative potential. Integrativeness is a precursor to motivation (Nicol & De France, 2020) and may vary from language to language in situations where students are learning multiple languages. However, few studies have explored LLM or its precursors, including integrativeness, in those learning multiple languages (see Section 2.1.). In countries like Kazakhstan and Uzbekistan, where the government promotes multilingualism and positive multicultural attitudes through language learning initiatives in schools and universities (Liddicoat, 2019; Syzdykbayeva, 2016), investigating the integrative potential of students would provide insights regarding how they plan to engage with members of the multiple languages they are learning. At the same time, there are issues with how integrativeness has been measured in studies (for an overview, see Gearing & Roger, 2019), with some researchers diluting the concept by adding elements like a desire to travel overseas and understand books and movies to their integrativeness scales (e.g., Warden & Lin, 2000). These additions may have little to do with an individual's desire to integrate with speakers of a language and may be one reason why some studies have reported that integrativeness was not a strong factor in motivating students to learn languages (e.g., Kormos & Csizér, 2008; Warden & Lin, 2000).

More recently, Nicol and De France (2020) found that integrativeness correlated negatively and statistically significantly with prejudice, which might represent a novel yet effective way to measure integrativeness. This, to some extent, was done in the study by Servidio et al. (2021), where they investigated correlations between multilingualism and ethnic prejudice using the scales by Pettigrew and Meertens (1995). These scales, in addition to possessing adequate reliability, explicitly explore the extent to which individuals see cultural differences between themselves and others and their willingness to draw closer to them (i.e., intimacy), an important aspect of the integrativeness concept. Measuring integrativeness in this way could provide more precise data regarding the extent to which students seek to integrate with speakers of the languages they are learning than has been reported by studies until now. Such an approach would also furnish us with additional information regarding how positively or negatively the students view certain communities. At the same time, there may be reasons other than prejudice for why language learners do not want to integrate with speakers of the target language. For instance, they may simply want to be friends with them or interact with them in a professional capacity. Some writers have also opined that integrativeness is no longer a relevant concept for language learning due to the forces of globalization, citing the example of English and its status as a global lingua franca (e.g., Lamb, 2004). These views have given rise to the concept of international posture, which some consider an offshoot of integrativeness (Botes et al., 2020). Simply defined, international posture represents learners' "interest in foreign or international affairs, willingness to go overseas to stay or work, readiness to interact with intercultural partners, and openness or a non-ethnocentric attitude toward different cultures" (Yashima, 2002, p. 57).

International posture differs from integrativeness in that it covers specifically traveling overseas for work or stay, as well as a desire to interact with outgroups without wanting to integrate or assimilate with them. Explaining her conceptualization of international posture, which she developed specifically for the learning of English, Yashima (2009, p. 145) noted that while "many Japanese learners wish to interact with native speakers of English, they are not particularly interested in identifying with them". As such, international posture reflects a weaker engagement with members of the target language, in motivational terms, when compared to integrativeness. If used alongside integrativeness, it can provide multifaceted insights into what motivates individuals to learn languages and how they intend to interact with members of the target language community (or communities). This information would interest policymakers both in countries where the target language is being learned but also in those where the target language is natively spoken. At present, few studies (e.g., Kormos & Csizér, 2008; Munezane, 2013) have explored the two concepts side by side. On its own (i.e., without the inclusion of a separate measure for integrativeness), international posture has been used as a variable in several LLM studies (for a review, see Botes et al., 2020), mostly concerning the learning of English, which is understandable since the concept was originally developed as a response to the lack of integrativeness exhibited by some learners of English. Indeed, a very limited number of studies have explored the international posture of learners of languages other than English (LOTes), for example, Arabic (Kong et al., 2018),

Chinese (Lee, 2018), and German and Italian (Amorati, 2020).

### 2.1.2. Sociobiographical variables

Despite sociobiographical variables (e.g., age, gender, nationality, etc.) being “core independent variables in most sociolinguistic and sociopsychological research” (Dewaele et al., 2008, p. 918), they have rarely been studied in relation to the learning of multiple languages, including in countries where the government promotes multilingualism and positive multicultural attitudes through language learning initiatives in schools and universities. This is despite evidence that populations in some countries have less positive attitudes towards multilingualism than do those in other countries (Edwards, 1994). Gender is an especially rarely studied area when it comes to research on multilingualism (Wei, 2013), and little is known about whether gender influences how individuals view the benefits of being multilingual. Some studies indicate that females have more positive attitudes towards multilingualism (Calafato & Tang, 2019a; Pulinx et al., 2017), evince statistically significantly higher intrinsic engagement, and possess stronger mental imagery about their goals than do males (Calafato & Tang, 2019a; Yashima et al., 2017; You et al., 2016). They also tend to score higher on measures of personality, particularly on cultural empathy and social initiative (Dewaele & Stavans, 2014; Henry, 2010) and their personality and emotions appear to be more strongly affected by languages (Tannenbaum & Tseng, 2015; see also; Chaplin & Aldao, 2013). According to a few studies, variations may be linked to contextual factors, with gender differences more pronounced in some cultures than in others. For example, in the United Arab Emirates, where traditional gender roles can dominate, females can evince stronger motivation to become multilingual than do males because they see it as financially and socially emancipatory (Calafato & Tang, 2019a). Similarly, discussing the situation in Japan, Takahashi (2012, p. 427) notes that learning English is “presented as a ‘weapon’ for Japanese women to cope with or move away from chauvinistic Japan, towards a more modern Western world of gender equality”.

## 2.2. Multilingualism in the Central Asian republics

Kazakhstan and Uzbekistan are super-diverse societies to the extent that they are home to over 100 ethnicities (Reagan, 2019). Multilingualism is a common sight in the big cities, and schools offer education in several languages, including Russian, Kazakh, Kyrgyz, Tajik, Karakalpak, and Uzbek. Both countries have a single official language (i.e., Kazakh and Uzbek respectively). Russian, which many speak as a first or second language, is seen as the language for interethnic communication in Kazakhstan and is now mostly taught as a foreign language in Uzbekistan (Djuraeva, 2021; Spechler, 2007). The two countries have a decidedly trilingual approach to language instruction in primary, secondary, and tertiary education. In Uzbekistan, students begin learning foreign languages starting in primary school, usually English, which is a required subject alongside Russian and Uzbek (Liddicoat & Kirkpatrick, 2020). According to Hasanova (2016), in addition to these languages, students can expect to learn some French, German, or even Hebrew. Institutions of higher education in Uzbekistan use English, Russian, and Uzbek as their working languages, and Russian courses are mandatory for all students, who are also required to study an additional foreign language, generally from among English, German, French, or Spanish (Hasanova, 2016). In Kazakhstan, all students must study English, Kazakh, and Russian starting from primary school (Liddicoat & Kirkpatrick, 2020), and the working languages in institutions of higher education in the country are Kazakh and Russian, although many programs require advanced proficiency in English, for which students must take additional exams (Tussupbekova et al., 2018). Learning a second foreign language is optional in Kazakh universities, although studies indicate that a growing number of students now study Arabic, Chinese, and Turkish (Sinyachkin & Sinyachkina, 2018). The multilingual approach to language education implemented by the Kazakh government finds strong support among university students, with Yeskeldiyeva and Tazhibayeva (2015) reporting that 67.60% of the university students they surveyed preferred a trilingual instruction format over a monolingual one (i.e., instruction in only English, Kazakh, or Russian). These insights notwithstanding, few if any studies have been done on what motivates students to learn multiple languages in Kazakhstan and Uzbekistan, how their multilingualism affects their multicultural attitudes, and what specific benefits they associate with being multilingual.

### 2.3. Research questions

The super-diverse nature of Kazakhstan and Uzbekistan, as well as their promotion of multilingualism and positive multicultural attitudes through language learning initiatives in schools and universities, make them important sites of inquiry concerning the interplay between multilingualism, LLM, prejudice, and multicultural attitudes. To shed more light on this interplay, this study explored the following questions as part of its research focus:

- How does the participants’ LLM differ based on the languages they study?
  - What role do integrativeness and international posture play in their LLM?
  - Is there a link between integrativeness and international posture?
- How do the participants view the benefits of being multilingual?
  - To what extent do sociobiographical variables like gender affect their views?
- To what extent are the participants’ multicultural attitudes and levels of prejudice affected by their multilingualism?

### 3. Methods and instruments

#### 3.1. Participants

Two hundred and thirty-five students, with a mean age of 21.57 ( $Mdn = 20$ ,  $SD = 4.44$ ), attending universities in Kazakhstan and Uzbekistan participated in the study. Table 1 provides a breakdown of the participants based on gender per country.

The universities were located in Samarkand and Tashkent in Uzbekistan while those in Kazakhstan were located in the cities of Almaty, Astana, and Karaganda. One hundred and fifteen participants (48.94%) reported having only one first language (L1), 112 (47.66%) reported two L1s, and eight (3.40%) reported three L1s. One hundred and forty-seven participants (62.55%) reported Russian as an L1, whereas 125 (53.19%) reported Kazakh, 70 (29.79%) reported Uzbek, 10 (4.25%) reported Tajik, seven (2.98%) reported Kyrgyz, and two (0.85%) reported Chinese as an L1. Fig. 1 illustrates the languages that the participants reported learning.

Sixty-one participants (25.96%) reported studying one language, 79 (33.62%) reported studying two, 57 (24.25%) reported studying three, and 38 (16.17%) reported studying four or more languages. The study used random sampling to recruit participants for the study. A list of universities in Uzbekistan and Kazakhstan where foreign languages are taught was drawn up using online education portals, after which teaching staff at the universities were contacted via email for help with recruitment. The email contained an invitation letter and information sheet describing the goals of the study, the questionnaire used for data collection, the participants' rights if they chose to participate in the study (including guarantees of anonymity and confidentiality), and a link to the questionnaire (for a description of the questionnaire, see Section 3.2.; see also Appendix B). The participants were not asked about their overall course of study, although they were asked to state their reasons for studying the languages they had reported.

#### 3.2. Data collection

Data was collected for the study via an online questionnaire that remained accessible to potential participants over six weeks. The questionnaire, which allowed the participants to switch between English and Russian in real-time, consisted of a total of 74 items (all data collection instruments used in the present study will be freely downloadable on the IRIS Database; [iris-database.org](https://iris-database.org)). The items were a mix of open-ended questions, multiple-choice questions (biographical information), and 5-point Likert scales. The open-ended questions asked the participants to state why they were studying the languages they reported and to list the languages they felt enjoyed the greatest prestige in their respective countries. Table 2 provides additional details regarding the questionnaire's various sections, content per section, sample items, and scales, including Cronbach's alpha ( $\alpha$ ) and McDonald's omega ( $\omega$ ) coefficients for the scales. Omega is reported alongside alpha as a supplementary, some might say better, measure of reliability and represents a break away from the practice of only reporting alpha, which does not give an accurate picture of the reliability of a given measure (Dunn et al., 2014).

For the integrativeness scale, the study adapted items from the cultural differences and intimacy subscales developed by Pettigrew and Meertens (1995) that measure blatant and subtle prejudice. These subscales were selected because it was felt they more accurately measured how likely the participants were to integrate with speakers of the languages they were learning (Nicol & De France, 2020) than other scales that purport to measure integrativeness yet appear to explore mostly generic motivational factors (*I would not mind having them join my family through marriage if they had a similar economic background to mine* and *I would not mind working under them if they were suitably qualified* are examples of items from the subscales that were included). The international posture scale drew on the one developed by Yashima (2009), focusing specifically on intergroup approach tendencies, interest in international activities, and a desire to communicate something to the world, albeit using a shortened format. The participants' levels of prejudice were measured using a truncated version of the Social Dominance Orientation (SDO) Scale (Pratto et al., 1994). For assessing the participants' multicultural attitudes, the study used the Munroe Multicultural Attitude Scale (MASQUE) (Munroe & Pearson, 2006). The participants' views about the benefits of being multilingual were measured using an adapted version of the beliefs about multilingualism scale from Calafato (2020a) and Calafato and Tang (2019a). The benefits of multilingualism scale consisted of three subscales: job, social, and cognitive and neurological benefits. Items related to job-specific benefits included becoming more competitive in the job market, earning a higher salary, or finding more rewarding employment. Items in the social subscale contained references to making more friends, understanding other cultures, and making travel more enjoyable, among other things. The cognitive and neurological subscale included items that covered heightened analytical abilities, memory, pragmatic knowledge, creativity, and adaptability.

#### 3.3. Data analysis

Data from the Likert items were analyzed with the help of SPSS 28 and JASP statistical software. When performing the statistical procedures, the data were checked to ensure that they met the assumptions required for running said procedures, including testing for the absence of outliers, homogeneity of variance, no multicollinearity, and independence of observation. The one-way ANOVA was

**Table 1**  
Sample distribution across both countries.

		Female	Male	Other	Total
Country	Kazakhstan	125	27	1	153
	Uzbekistan	56	25	1	82
Total		181	52	2	235

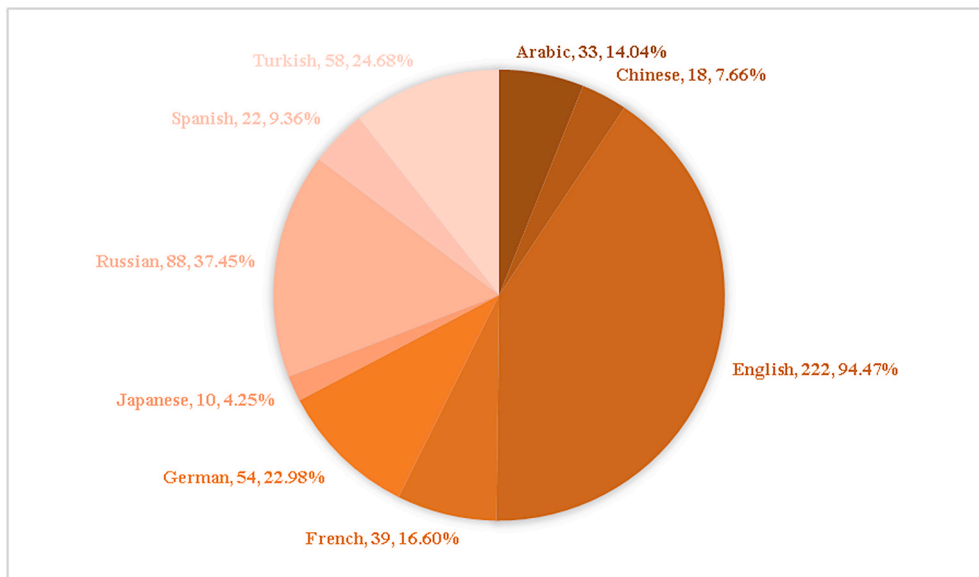


Fig. 1. The languages the participants reported learning.

**Table 2**  
Questionnaire layout, items, scales, and reliability test results.

Section	Content	Item type	n	Sample item(s)	Scale(s)	n	$\omega$	$\alpha$
1	Biographical information	Multiple-choice and open-ended questions	3	2. Please state your age. 3. Please state your gender.	-	-	-	-
2	Language background	Multiple-choice and open-ended questions	5	5. What languages are you studying?	-	-	-	-
3	Language learning motivation	5-point Likert items and open-ended questions	29	9.1. I am learning _ to work with people who speak the language. 9.6. Share my culture with speakers of _. 9.7. Establish good relations between my country and countries where _ is spoken. 11. Are there any other reasons why you are learning _? 12.3. Superior groups should dominate inferior groups. 13.1. Concerning native speakers of _, their values and morals are very different from my own.	International posture SDO Integrativeness	7 8 6	.90 .91 .88	.90 .91 .86
4	Multilingualism and multiculturalism	5-point Likert items	37	14.1. Learning several languages is important because it makes me understand other cultures. 18.1. I do not understand why people of other cultures act the way they do. 19.5. I respectfully help others to offset language barriers that prevent communication	MASQUE Multilingualism • Job benefits • Social benefits • Cognitive and neurological benefits	18 19 3 8 8	.81 .91 .83 .83 .81	.79 .91 .83 .83 .81

Note. SDO = Social Dominance Orientation Scale; MASQUE = Munroe Multicultural Attitude Scale.

performed to check for statistically significant differences in the participants’ integrative potential, international posture, multicultural attitudes, SDO (scores were reversed for analysis), and views about the benefits of being multilingual based on country, gender, and level of natively and formally acquired multilingualism (i.e., the number of languages studied). In instances where unequal variance between the groups was found, the study used Welch’s ANOVA to check for statistically significant differences. The data underwent multinomial regression to ascertain the extent to which the participants’ multilingualism affected their multicultural attitudes and SDO. Paired t-tests were conducted to determine differences between the participants’ integrative potential and international posture while Pearson correlation was carried out to understand the extent to which the two concepts correlated. An alpha level of .05 was applied to all tests. Hedges’ *g* is reported alongside all significant *p* values, with a score of 0.4 signifying a small effect size, a score of 0.7 signaling a medium effect size, and 1 representing a large effect size (Plonsky & Oswald, 2014). Observed power ( $1-\beta$ ) was also

computed for the tests, as is recommended when interpreting nonsignificant results (American Psychological Association, 2010). Participant responses to the open-ended questions were analyzed using a thematic approach (Braun & Clarke, 2006). The responses were overwhelmingly in English or Russian, although a few participants responded in the languages they were learning, for instance, French and Turkish. The non-English responses were translated into English before coding began. The participants' responses underwent multiple readings to develop a set of initial codes that were then developed into themes. These themes were then checked against the entire data set and subsequently finalized (for examples of the coding process, see Appendix A).

#### 4. Findings

The questionnaire contained an open-ended question that asked the participants to discuss their motivations for learning the languages they had reported. Table 3 provides their coded responses per language.

The data indicated that each language had a somewhat distinct profile. For example, the chance to boost one's work and career opportunities was a prominent motivational factor in a large percentage of responses concerning the learning of English (25.62%) and German (21.74%). Several responses described English (16.82%) and Russian (35.62%) as being widely spoken locally, regionally, or, in the case of English, globally (i.e., as a lingua franca), which made learning these languages important if one wanted to communicate with other people. English (15.70%) and Russian (16.44%) were also referenced concerning their ability to ensure a generally prosperous and secure future for those who learned them. In contrast, the participants' motivations for learning other languages were often more intrinsic. For instance, many responses (46.15%) linked the participants' motivation to learn Japanese to their interest in Japanese animation (e.g., watching Japanese anime, reading manga, etc.). Regarding French, several responses (27.50%) emphasized its many attractive qualities (e.g., the participants liked the way it sounded or they thought it was a romantic language), whereas the learning of Spanish (30.43%) and Turkish (30.36%) was strongly tied to travel (e.g., interacting with Spaniards and Turks while on a summer holiday). Personal motivations were those where the participants simply stated that they were learning a specific language for themselves without offering additional details or, in three cases, because their boyfriend or girlfriend spoke the language. For example, a large percentage of responses mentioned personal (22.60%) or religious (48.39%) reasons for learning Arabic. As for Chinese, many responses (27.78%) linked learning Chinese to the expanding commercial ties between China and Kazakhstan or Uzbekistan, China's investments in the two countries, and how China had acquired prominence in global commerce.

Fig. 2 illustrates the participants' international posture and integrativeness based on the languages they reported studying. The data indicated that the participants' international posture was notably higher than their integrativeness for all languages, although the difference between the two was not as pronounced for Arabic and Turkish when compared to the other languages.

No statistically significant differences were found between the participants regarding their international posture or integrativeness per language based on any variable, including their levels of natively or formally acquired multilingualism. Paired *t*-test results indicated that international posture was statistically significantly higher than integrativeness among the participants for all the languages they reported studying and the effect size was very large throughout, whereas Pearson correlation results indicated that international posture and integrativeness did not statistically significantly correlate for any language except English, and then only negatively and very weakly. Table 4 lists the *t*-test and Pearson correlation results.

Fig. 3 illustrates the participants' views about the benefits of being multilingual based on gender. The data indicated that the female

**Table 3**

The participants' motivations for learning languages.

Language ( <i>n</i> )	Reasons ( <i>n</i> )	Language ( <i>n</i> )	Reasons ( <i>n</i> )	Language ( <i>n</i> )	Reasons ( <i>n</i> )
Arabic (33)	Religion (15)	Chinese (18)	Commerce (5)	English (222)	Work (62)
	Personal (7)		Interesting (5)		Lingua franca (41)
	Interesting (5)		Personal (3)		Future-proofing (38)
	Work (3)		Work (2)		Interesting (30)
	Travel (1)		Future-proofing (2)		Travel (27)
			Travel (1)		Self-development (20)
					Education (14)
					Personal (10)
French (39)	Pretty language (11)	German (54)	Interesting (10)	Japanese (10)	Anime (6)
	Interesting (9)		Work (10)		Travel (4)
	Education (6)		Personal (8)		Personal (2)
	Personal (6)		Education (8)		Interesting (1)
	Work (3)		Travel (5)		
	Future-proofing (2)		Self-development (4)		
	Travel (2)		Future-proofing (1)		
Self-development (1)					
Russian (88)	Lingua franca (26)	Spanish (22)	Interesting (7)	Turkish (58)	Interesting (30)
	Future-proofing (12)		Travel (7)		Travel (17)
	Personal (11)		Personal (4)		Personal (4)
	Work (10)		Work (3)		Education (3)
	Interesting (9)		Self-development (2)		Work (2)
	Self-development (3)				
	Education (1)				
	Travel (1)				



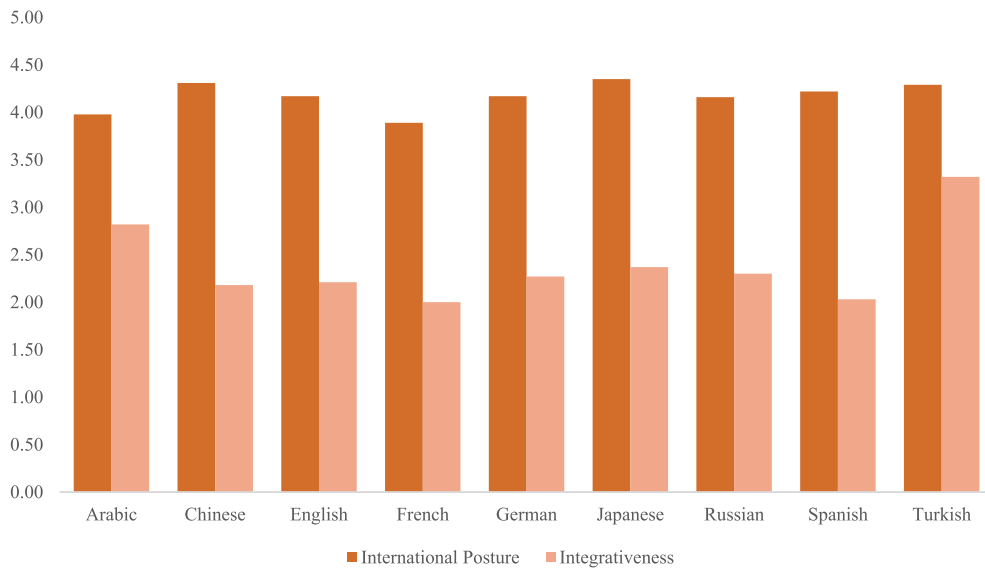


Fig. 2. The participants' international posture and integrativeness per language learned.

Table 4

Paired *t*-test and Pearson correlation results for integrativeness and international posture per language.

	International Posture			Integrativeness			Paired <i>t</i> -test					Pearson correlation			
	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>df</i>	<i>p</i>	<i>g</i>	<i>1-β</i>	<i>n</i>	<i>r</i>	<i>p</i>	<i>1-β</i>
Arabic	33	3.98	.88	33	2.82	.72	6.31	32	<.001	1.43	1.00	33	.15	.418	.13
Chinese	18	4.31	.78	18	2.18	.93	10.01	17	<.001	2.43	1.00	18	.45	.058	.47
English	221	4.17	.82	221	2.21	.79	22.92	220	<.001	2.43	1.00	221	-.25	<.001	.97
French	36	3.89	.89	36	2.00	.70	8.86	35	<.001	2.34	1.00	36	-.28	.099	.38
German	54	4.17	.78	54	2.26	.95	12.05	53	<.001	2.17	1.00	54	.11	.441	.12
Japanese	9	4.35	.74	9	2.37	1.20	3.77	8	<.001	1.89	.99	9	-.27	.484	.09
Russian	85	4.16	.84	85	2.30	.94	12.63	84	<.001	2.08	1.00	85	-.17	.129	.34
Spanish	21	4.22	.92	21	2.03	.90	7.61	20	<.001	2.36	1.00	21	-.05	.830	.04
Turkish	57	4.29	.62	57	3.32	.85	7.22	56	<.001	1.30	1.00	57	.08	.570	.08

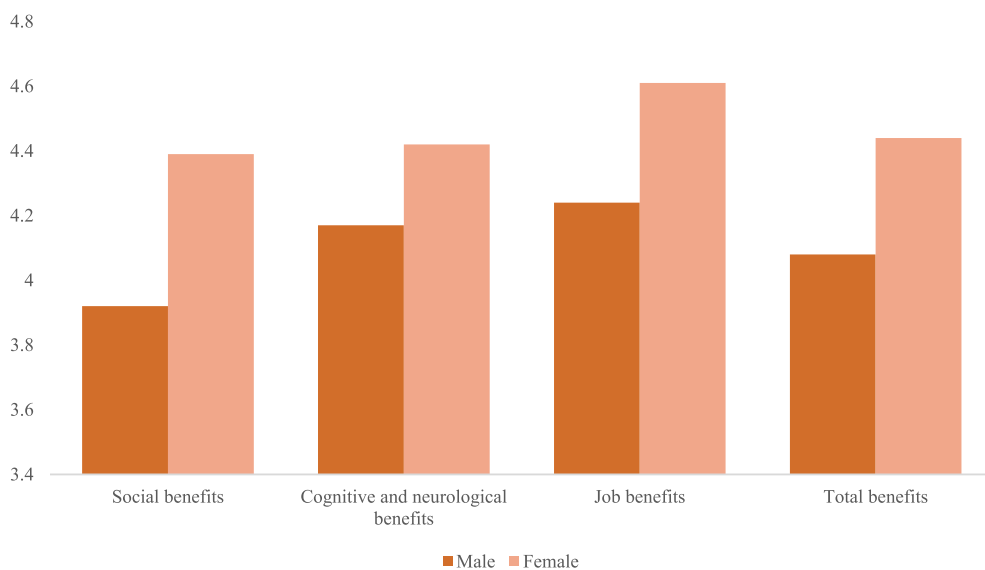


Fig. 3. The participants' views about the benefits of being multilingual.

participants were more positive about the benefits of being multilingual than were the male participants, regardless of whether the benefits were social, job-related, or cognitive and neurological.

Levene's test revealed that the variances for social benefits [ $F(1,225) = 2.18, p = .141$ ], cognitive and neurological benefits [ $F(1,225) = 1.41, p = .237$ ], and total benefits [ $F(1,225) = 2.25, p = .135$ ] based on gender were equal, whereas the variances were unequal for job benefits [ $F(1,225) = 14.84, p < .001$ ]. ANOVA test results indicated that the differences between the male and female participants were statistically significant overall [ $F(1, 225) = 18.20, p < .001, g = .67, 1-\beta = .99$ ], as well as for each subcategory, that is, social benefits [ $F(1, 225) = 24.76, p < .001, g = .78, 1-\beta = 1.00$ ], cognitive and neurological benefits [ $F(1, 225) = 7.46, p = .007, g = .43, 1-\beta = .78$ ], and job benefits (Welch's ANOVA) [ $F(1, 62.875) = 5.86, p = .018, g = .49, 1-\beta = .88$ ]. The effect size is small to medium. No statistically significant differences were found based on any other variable.

Fig. 4 illustrates the participants' SDO and multicultural attitudes (MASQUE). Generally, the participants exhibited low SDO and mostly positive multicultural attitudes, although the participants from Uzbekistan appeared to have higher SDO and less positive multicultural attitudes than did the participants from Kazakhstan.

Levene's test revealed that the variances for both SDO [ $F(1,233) = 9.79, p = .002$ ] and MASQUE [ $F(1,226) = 10.93, p = .001$ ] were unequal based on country. Welch's ANOVA test results indicated that the participants from Uzbekistan had statistically significantly higher SDO [ $F(1, 135.023) = 16.44, p < .001, g = .60, 1-\beta = 1.00$ ] and less positive multicultural attitudes [ $F(1, 122.448) = 4.04, p = .047, g = .30, 1-\beta = .61$ ] than did the participants from Kazakhstan. The effect size is small. No statistically significant differences were found based on any other variables. Pearson correlation results indicated that the participants' SDO did not statistically significantly correlate with their multicultural attitudes (MASQUE) [ $r(228) = .12, p = .060, 1-\beta = .50$ ].

Finally, multinomial regression was performed to determine the extent to which the participants' multilingualism, both natively and formally acquired, affected their SDO and multicultural attitudes (MASQUE). An analysis of standard residuals indicated the data contained no outliers for the natively (Std. Residual Min =  $-1.36$ , Std. Residual Max =  $1.71$ ) or formally acquired multilingualism (Std. Residual Min =  $-1.34$ , Std. Residual Max =  $3.05$ ) regression models. Tests to ascertain if the data met the assumption of collinearity revealed that multicollinearity was not a concern (SDO, Tolerance =  $.98$ , VIF =  $1.02$ ; MASQUE, Tolerance =  $.98$ , VIF =  $1.02$ ). The results of the regression analysis (see Table 5) indicated that the model concerning both natively [ $\chi^2(376) = 376.38, p = .485$ ] and formally acquired [ $\chi^2(564) = 573.28, p = .384$ ] multilingualism was a good fit for the data (Pearson chi-square) and that the participants' levels of formally acquired multilingualism did not statistically significantly affect their SDO ( $1-\beta = .70$ ) or multicultural attitudes (MASQUE) ( $1-\beta = .69$ ). However, the participants' levels of natively acquired multilingualism statistically significantly affected their SDO ( $1-\beta = .76$ ) and multicultural attitudes ( $1-\beta = .79$ ), with those possessing two L1s evincing statistically significantly less SDO and more positive multicultural attitudes than those with only one L1. Possessing three L1s did not statistically significantly affect the participants' SDO or multicultural attitudes but it should be noted that a very small number of participants ( $n = 8$ ) reported having three L1s.

## 5. Discussion

This study investigated the LLM of university students in Kazakhstan and Uzbekistan who were studying diverse languages, including their integrativeness and international posture per language studied, as well as their views about the benefits of being multilingual and the extent to which their multicultural attitudes and prejudice towards outgroups were affected by their multilingualism. In exploring these themes, the study also took into account the potential effects of sociobiographical variables like gender.

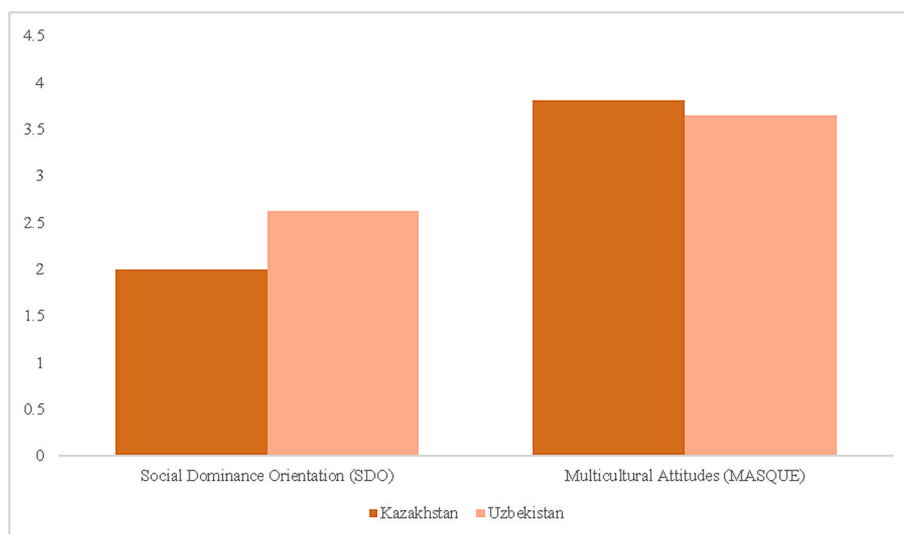


Fig. 4. The participants' SDO and multicultural attitudes per country.

**Table 5**

The extent to which the participants' levels of multilingualism affected their SDO and multicultural attitudes (MASQUE).

Level of formally acquired multilingualism (reference category is one language; <i>n</i> = 60)		$\beta$	<i>p</i>	OR	95% CI for OR	
					Lower Bound	Upper Bound
Two languages ( <i>n</i> = 77)	SDO	-.20	.220	.82	.59	1.13
	MASQUE	.08	.824	1.08	.55	2.10
Three languages ( <i>n</i> = 55)	SDO	.02	.890	1.02	.73	1.43
	MASQUE	-.09	.801	.91	.45	1.85
Four languages ( <i>n</i> = 36)	SDO	.04	.850	1.04	.71	1.51
	MASQUE	-.08	.839	.92	.42	2.04
Level of natively acquired multilingualism (reference category is one language; <i>n</i> = 112)		$\beta$	<i>p</i>	OR	95% CI for OR	
					Lower Bound	Upper Bound
Two languages ( <i>n</i> = 108)	SDO	-.36	.007	.70	.54	.91
	MASQUE	.74	.009	2.09	1.21	3.62
Three languages ( <i>n</i> = 8)	SDO	-.56	.177	.57	.25	1.29
	MASQUE	.62	.432	1.86	.39	8.77

Note. SDO = Social Dominance Orientation Scale; MASQUE = Munroe Multicultural Attitude Scale.

The findings indicated that each language the participants reported learning had a distinct profile that consisted of various motivational factors. For instance, Japanese was strongly associated with Japanese animation, whereas the participants' motivations to learn English and Russian involved future-proofing, lingua franca, and work-related aspects. French, in contrast, was seen as a beautiful language. Each language profile provided a glimpse of the many domains that the languages were tied to (e.g., travel, work, or religion) (Nakamura, 2019), with some languages tied to more domains than others. These ties provide us with insights into the potential motivational durability of the languages the participants were learning, as well as the number of speech genres (Nakamura, 2019) in which they were planning to develop their proficiency per language. For example, in the case of Japanese, its ties to primarily Japanese animation meant that the participants' desire to study the language would be susceptible to sharp drops if they lost interest in Japanese animation since Japanese was not tied to a large number of additional domains that could have served as a buttress. In terms of speech genres, given its ties to Japanese animation, the participants learning Japanese were likely to be more interested in developing their proficiency in colloquial Japanese, including slang, than in developing their knowledge of literary or academic Japanese. Meanwhile, Spanish and Turkish were heavily linked to travel, implying that the participants' motivation to learn these languages would suffer if travel conditions suddenly worsened, for instance, due to a pandemic. In contrast, languages like English, German, and Russian were tied to a greater range of domains, implying more motivational durability, as well as the strong likelihood that the participants would seek to develop proficiency in multiple speech genres in these languages.

As for the participants' integrativeness and international posture per language, the findings revealed that the participants' international posture was statistically significantly higher than their integrativeness for every language studied and that these two elements did not statistically significantly correlate with each other for any language, except for English, and then only weakly. The findings lend support to measuring the two concepts separately, as has been done in a limited number of studies (e.g., Kormos & Csizér, 2008), while also indicating that integrativeness and international posture can fluctuate notably based on the language studied, as was the case with Arabic and Turkish in this study. Indeed, the findings suggest that integrativeness remains a relevant motivational factor for some language learners despite the effects of globalization and that its inclusion in studies alongside other motivational concepts may yield a more comprehensive understanding of all the forces influencing an individual's desire to learn a particular language. The higher levels of integrativeness reported in this study regarding the learning of Arabic and Turkish may have been due to the participants harboring less prejudice against speakers of these languages due to seeing them as being culturally or linguistically closer to themselves than speakers of the other languages they were learning. As Nicol and De France (2020, p. 422) note, "given that integrativeness reflects a willingness to engage with members of another language, it may be strongly shaped by an individual's prejudice toward outgroups". Overall, the findings indicated that while the participants were motivated to learn languages for travel and work purposes, as well as to interact with speakers of these languages, they were unwilling to integrate with them.

The differences between the participants' integrativeness and international posture were starkest concerning Chinese (see Table 4), for which the participants evinced very strong international posture yet the lowest levels of integrativeness out of all the languages they reported studying, except for French and Spanish. Their motivations for learning Chinese, as many of the participants stated, were mostly driven by the expanding economic ties between their respective countries and China, which points to an instrumental approach to learning Chinese and interacting with Chinese speakers that does not include a desire for intimacy and identification. At the same time, the low levels of integrativeness reported per language were not always due to instrumental factors. For instance, concerning French, the findings were particularly interesting in that they revealed that although the participants found the French language beautiful, their desire to integrate with speakers of French was the lowest in absolute terms overall. International posture scores for French were similarly the lowest out of all the languages the participants reported studying. Meanwhile, Russian received notably low scores for integrativeness, perhaps because it, similar to English, was considered a lingua franca by many participants, which reduced the strength of its links to a specific community of speakers in the minds of the participants. In any event, the findings reveal the benefits of adopting a comparative approach to investigating learners' integrativeness and international posture as part of their LLM and combining these with Nakamura's (2019) domain-based framework so that we obtain a wealth of insights into how

comprehensively (i.e., the number of life domains), with whom and in what settings, and with what proficiency learners plan to use the many languages they learn in schools and universities around the world.

Meanwhile, the findings revealed that the participants associated numerous benefits with being multilingual, be these benefits social, cognitive and neurological, or job-related, although there was a stronger tendency to view multilingualism as bringing job-related benefits as opposed to social or cognitive and neurological benefits. Moreover, statistically significant gender differences, with small to medium effect sizes, were found with respect to the participants' views about the benefits of being multilingual. It is worth stressing that gender differences were not found anywhere else, including for international posture, integrativeness, SDO, or multicultural attitudes. This makes it unlikely that the female participants' statistically significantly more positive views about the benefits of being multilingual were a result of the greater cultural and cognitive empathy or open-mindedness that some studies have reported they possess (Dewaele & Stavans, 2014; for a review see; Henry, 2010). As already mentioned, few studies have explored the effects of gender on an individual's views about multilingualism and its benefits (for exceptions, see Calafato & Tang, 2019a; Pulinx et al., 2017), and so there is a dearth of sources to fall back on when attempting to explain the gender differences found in this study. Perhaps the female participants believed more strongly in multilingualism as an emancipatory force (Calafato & Tang, 2019a; Takahashi, 2012), providing them with greater independence and more opportunities in the wake of globalization. They may have seen multilingualism as a way to further develop their interpersonal relationships and social networks through the use of language, thereby gaining access to jobs that require strong interpersonal skills, an area where females may have a distinct advantage over males (Cameron, 2011; Peltokorpi & Froese, 2012).

As for the participants' multicultural attitudes and levels of prejudice, and the extent to which their multilingualism affected these, the findings revealed that the number of languages the participants studied, that is, their formally acquired multilingualism, did not statistically significantly affect their levels of prejudice or multicultural attitudes. However, participants who had two L1s were found to be statistically significantly more likely to harbor less prejudice towards outgroups and more positive multicultural attitudes than those who had only one L1. This does not mean that possessing more L1s inevitably leads to more positive multicultural attitudes and lower levels of prejudice. The study did not explore other factors that may have contributed to these differences, for example, stay abroad experiences. Still, the findings are notable in that they provide empirical support for differentiating between different types of multilingualism (see Cenoz, 2013) when researching its effects on personality and behavior. As already mentioned, such an approach has not been adopted in studies until now. The relationship between the participants' natively acquired multilingualism and their multicultural attitudes and levels of prejudice could be due to the deeper links, temporally, linguistically, and culturally, that they have with their multiple L1s as opposed to their formally acquired languages. As studies have shown, learning languages later in life (i.e., formally acquired multilingualism) can sometimes be for instrumental reasons, especially concerning English (Calafato & Tang, 2019a, 2019b), and could, therefore, prove less effective in influencing an individual's levels of prejudice and multicultural attitudes. Being natively multilingual meant that the participants, at a young age and likely via diverse contexts, were socialized, as Duff (2015) notes, into multiple identities and dispositions, allowing for more positive multicultural attitudes to develop. Dewaele and Botes (2020, p. 820) hint at this when they note that multilinguals accept linguistic and cultural differences from "very early on", implying a native or near-native form of multilingualism. Even so, such explanations remain speculative seeing as this study did not investigate why the participants' natively and formally acquired multilingualism interacted so differently with their multicultural attitudes and levels of prejudice.

## 6. Conclusion and implications

To sum up, the study's findings revealed that each language had a distinct profile linked to diverse life domains in the minds of the participants, with some languages like English and Russian likely enjoying greater motivational durability as a result of the greater number of domain linkages they enjoyed, whereas some like Japanese appeared comparatively more fragile. For policymakers and educational institutions in Kazakhstan and Uzbekistan, these insights should allow them to tailor courses and design language curricula that more accurately reflect students' LLM while simultaneously strengthening the motivational durability of each language on offer. For example, regarding the learning of Japanese, educational institutions and teachers in the two countries could boost their students' interest in other aspects of Japanese media or tie the language to other life domains by, for example, inviting executives from a local subsidiary of a Japanese company to give a presentation on employment prospects for those who learn Japanese. This would ensure that, should the students' interest in Japanese animation wane, they would not become demotivated and leave the course. At the same time, educational institutions should ensure that their Japanese programs include a component on Japanese animation so that students stay motivated and find the programs relevant to their core aims. This similarly applies to those languages where the participants tied their LLM to a large number of domains, for example, English, French, German, and Russian. Here, too, language programs could benefit by more explicitly addressing these domains in their curriculum. Otherwise, students may feel little motivation to continue and their performance might suffer. For researchers, policymakers, and educational institutions in other countries, the findings showcase the benefits of exploring LLM using a life domain-based approach. Such an approach allows educational institutions to more accurately evaluate the language programs they offer, including their motivational durability, and determine the extent to which these satisfy the learning needs of their students.

Pedagogically, a greater focus on domain linkages may require a reassessment and even retooling of teacher competencies through workshops and training programs. In this study, for example, a majority of the participants studying Japanese were motivated to do so due to their interest in Japanese animation, which would require their teachers to possess, among other skills, advanced visual literacy, knowledge of Japanese animation, and enough pedagogical competence to use it systematically as a resource during lessons. Since this study did not assess teachers and their ability to meet the learning needs of their students, as represented by their LLM, it is difficult to

ascertain the extent to which such retooling would be required. However, future research should explore these themes, especially in relation to the learning of LOTEs like Chinese, Japanese and Turkish, which have received relatively little attention in LLM research. Moreover, additional multi-country studies on LLM that use a domain-based approach, specifically targeting instances where individuals are learning multiple languages, would provide insights into nationwide language learning trends and associated motivational factors globally. The obtained data would be of great interest to governments and organizations that are promoting multilingualism and positive multicultural attitudes through language learning initiatives, as well as for governments promoting the learning of their national or official languages in other countries (see Starr, 2009). As for international posture and integrativeness, investigating these through separate measures, as already mentioned, could furnish us with more precise data concerning learners' desired interactions with speakers of the languages they study. This also means experimenting with scales that have not been previously used to measure these concepts but which might prove just as, if not more, effective in encapsulating them, even if indirectly, than those that have been employed to date. The use of the prejudice scales for intimacy and cultural differences developed by Pettigrew and Meertens (1995) in this study is an example of such experimentation.

It would similarly be useful to explore integrativeness and international posture in learners of multiple languages in other countries to ascertain how the two concepts interact. There might be instances where the participants evince integrativeness that exceeds their international posture in intensity. Since most studies have not explored integrativeness and international posture side by side, obtaining a comprehensive understanding of their interactions has not been possible. As for gender differences in the participants' views about the benefits of being multilingual, this is undoubtedly a potentially very fruitful area of research, one that has not received sufficient attention. As multilingualism grows more ubiquitous in families, educational institutions, and even state organs, it becomes vital to understand its relationship with gender so that one obtains a better understanding of how society as a whole will develop going forward. In this respect, further research into gender differences in views about multilingualism at educational institutions would be very welcome to gauge how differently students, teachers, and administrators react to the phenomenon. Such research could involve interventions that assess the effectiveness of certain measures to increase the motivation levels of male or female students to become multilingual in instances where significant gender differences are found. One could also expand the focus to investigate gender differences in how families and state organizations responsible for formulating policies on language education approach multilingualism so that we can develop tools to address these differences. For countries that seek to promote multilingualism and positive multicultural attitudes through language learning initiatives, ensuring that all members of society, regardless of gender, are equally motivated to become multilingual is critical to the success of whatever initiatives they implement.

Finally, for countries that seek to promote positive multicultural attitudes through multilingual initiatives, the findings indicate that they may need to ensure that such initiatives explicitly focus on developing students' awareness *and* appreciation of cultural diversity. In this study, for example, it was discovered that the formal learning of multiple languages did not automatically lead to students adopting more positive multicultural attitudes. In terms of concrete measures, policymakers and educational institutions could strengthen the links between formal language learning and multicultural attitudes by providing students with more opportunities to participate in study abroad programs and cultural exchange events. Course designers may need to revisit language programs to ensure that these more comprehensively cover the cultural aspects of language in a way that goes beyond the merely informational to include content that deeply engages the students on an emotional level. At the same time, educational institutions and teacher educators need to ensure that language teachers, in addition to their technical knowledge of the target language, feel just as comfortable teaching about the target language culture or cultures. Lastly, the statistically significant links between the participants' natively acquired multilingualism and their multicultural attitudes and levels of prejudice require deeper exploration. As already mentioned, studies have generally not differentiated between different types of multilingualism when investigating its influence on the psychological profiles of individuals nor have they investigated prejudice as a separate variable alongside multicultural attitudes. Given that native multilingualism is acquired early in life, the findings could also be construed as supporting earlier acquisition of multiple languages over later acquisition seeing as the latter type of acquisition is often instrumentally motivated and does not appear to statistically significantly affect learners' multicultural attitudes or levels of prejudice. Additional studies that compare the personality traits of early and late multilinguals, for instance, while also accounting for other sociobiographical variables like nationality and gender, as well as setting (e.g., school versus university), would help to shed more light on the psychological effects of multilingualism, with important implications for government initiatives that seek to promote positive multicultural attitudes through language learning in schools and universities.

### 6.1. Limitations

The study used the cultural differences and intimacy subscales developed by Pettigrew and Meertens (1995) to explore integrativeness. These scales have not been widely used for this purpose, although research supports exploring integrativeness via prejudice seeing as how the latter mediates the former and can predict the extent to which learners of a language seek to integrate with its speakers (Nicol & De France, 2020). There was also a large gender imbalance in the participant sample, with many more females than males. In addition, some languages had very few participants, for example, Japanese ( $n = 10$ ) and, to some extent, Chinese and Spanish (see Section 3.1), and so the results for international posture and integrativeness reported for these languages should be approached with caution.

### CRedit author statement

Raees Calafato: Conceptualization, Methodology, Investigation, Data collection and analysis, Software, Writing, Editing.

## Declaration of competing interest

There are no conflicts of interest to declare.

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## Appendix A. Supplementary data

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