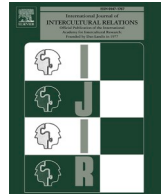




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Striving to reach the “native speaker standard”: A growth belief may mitigate some deleterious effects of social comparison in migrants

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ABSTRACT

While upward social comparison can inspire and provide information for self-improvement, it can also threaten one's self-confidence. This study examines how upward comparisons with “native speakers” relate to self-confidence and adaptation of migrant students who speak English as a second language, and the role of language mindsets in this process. Study 1 ($n = 322$) showed that the majority of migrant university students (67 %) tend to compare themselves with native speakers or people with higher levels of English proficiency (i.e., upward comparison), but those with fixed (vs. growth) mindsets were less likely to do so. Study 2 ($n = 101$) showed that when migrant students compared to native speakers (vs. control), they reported lower level of confidence. However, some negative effects of social comparison were buffered by growth mindsets, such that people with growth (vs. fixed) mindsets were less anxious and more confident to adapt to their academic environment. These findings suggest the “native speaker standard” has detrimental effects on linguistic-minority students' language, social, and academic adaptations, but a growth mindset might mitigate some of these negative effects.

Introduction

“Comparing to myself with my fluent classmates, I thought I looked stupid in class because during class discussions I would not express myself clearly in English, even I have good ideas.”

– An international graduate student studying in Canada (Liu, 2011).

“I'm anxious, thinking what if I look stupid to *native English teachers*...”

– An English language teacher in South Korea (Lee et al., 2017).

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“My English is not bad and I do quite well in meetings with colleagues from France, Poland, the Netherlands, Spain, etc., but the problems start when a *true English speaker* is present.....I find myself justifying myself much more in those interactions.”

– Employee in an international company (Neeley, 2013).

Upward social comparisons involve comparing oneself to others who are better off in a particular domain. Upward comparison can serve as a source of inspiration, goal setting, and self-improvement, but it can also threaten one's ego, leading to negative emotions such as anxiety and decreased self-confidence (Taylor & Lobel, 1989). Certain situations, such as being surrounded by better-off others or in an unfamiliar environment, can make people more susceptible and sensitive to upward social comparisons (Lockwood et al., 2012). This is especially relevant for migrant university students who use English as a second language in North America. These linguistic-minority students are relatively new to the sociocultural environment and are surrounded by presumably more proficient speakers of the target language. As depicted in the above quotes, if comparing oneself to native speakers can have negative implications for migrants' emotional well-being, why do people nonetheless engage in it? We argue that one factor that might mitigate how migrant students experience upward comparison is their growth language mindsets, or beliefs that language learning ability can be improved. With a growth language mindset, migrant students may be more likely to utilize upward comparison as an opportunity for improvement and learning, rather than as a threat to their self-confidence. Drawing on social comparison theory and mindset theory, we aim to understand whether migrants' mindsets predict their social comparison tendency. We will further examine whether growth mindsets buffer the potential negative effects of comparing oneself to “native speakers” on one's language anxiety and confidence.

Social comparisons

Social comparison is an automatic process that people use to efficiently gain information to calibrate their understanding of themselves (Festinger, 1954; Gilbert et al., 1995; Suls et al., 2002). This fundamental psychological process influences our everyday experiences and can occur in various domains of life (e.g., social status, appearance, and academic ability) and contexts (e.g., school, work, and social media; Marsh et al., 2020). Social comparisons can happen in both downward and upward directions. Downward comparisons involve evaluating oneself as more competent than the target, which can boost self-worth through self-enhancement. In contrast, upward social comparison can negatively impact confidence, particularly when individuals compare themselves with unattainable standards. Despite the potentially negative consequences on self-appraisal, people tend to engage in upward comparison more frequently than downward comparison (see Gerber et al., 2018 for a meta-analysis). This tendency can be explained in part by the belief that comparing to a more successful person can provide more useful information for goal setting. This comparison may motivate one to learn from those people, to improve themselves, and to work harder to reach a desired goal (Taylor & Lobel, 1989). In addition, people are motivated to identify and fit in with advantageous groups; this process also involves upward social comparison (Tajfel, 1982). Therefore, people prefer upward social comparison, as long as they do not have to publicly reveal their inferiority in the process (Buunk & Gibbons, 2007).

Upward (vs. downward) comparison only sometimes results in negative self-evaluations. Upward comparison preference and its negative effects may be lessened, at least in part, by how one interprets whether the comparison goal is attainable or not (Elliot et al., 2021). When the comparison is not achievable, upward comparison can lead to negative emotions, such as reduced confidence and increased anxiety, ultimately resulting in decreased motivation and effort (Lockwood & Kunda, 1997). In contrast, when individuals believe they can attain the desired goal, upward social comparisons may enhance motivation (Lockwood & Kunda, 1997). These mixed effects of upward social comparison underscore the complexity of the nature and impact of social comparison on individuals' psychological well-being (Suls et al., 2002).

Mindsets and social comparisons

One key individual difference that can influence the expectations of whether an upward comparison goal is achievable is mindsets. People's mindsets can guide them to make meaning of social situations (Burnette et al., 2023; Dweck & Yeager, 2019; Lou & Noels, 2023). When people believe their ability is unchangeable (fixed mindset), they tend to attribute exceptional performance in a particular domain to innate ability. Consequently, the goal associated with upward social comparison may be perceived as beyond their capacity. In contrast, when people believe their ability can be improved with effort and strategies (i.e., growth mindsets), they may be more likely to view the goal from more successful/advantageous others as something they can strive for (Lockwood & Kunda, 1997).

In addition, mindset can shape how people feel about challenges and potential failures when engaging in social comparison. People who endorse fixed mindsets are more likely to prioritize maintaining a positive self-image and avoiding failures (i.e., ego or performance goals; Nicholls, 1984; Dweck, 2006; Lee & Seo, 2019; Lou & Noels, 2016). As such, their desire for superiority can drive them to compare to others who are worse off to gain a sense of comfort or relief (Lee et al., 2021; Nicholls et al., 1989; Nussbaum & Dweck, 2008). In contrast, people who endorse growth mindsets tend to focus on the task and improvement (i.e., task or mastery goals; Nicholls, 1984; Dweck, 2006) and are more likely to seek challenges and view them as opportunities to enhance their skills. They may perceive upward comparison information as resources and inspiration for self-improvement. Therefore, people with growth (vs. fixed) mindsets may be more likely to engage in and feel less threatened by upward comparisons.

Social comparison in the context of migration and language learning

Social contexts are also crucial in shaping the experiences of social comparisons. People who find themselves in unfamiliar environments tend to be more susceptible and sensitive to social comparison (Lockwood et al., 2012). When people are uncertain about themselves and their abilities, they tend to try to unobtrusively fit in with the new environment. In this research, we focus on the context of migrants at the university who are relatively new to the socio-cultural environment, including the educational system and language environment. As migrants integrate into the new environment, they often engage in social comparison with the local population to adapt to the new standards (Gelatt, 2013). Unfortunately, due to a combination of a lack of cultural knowledge, their experiences being not transferable, and structural inequality, migrants tend to rank themselves lower in social positions when comparing themselves to the locals (Faist & Bilecen, 2015). Migrants may engage in comparison with others across different domains, such as social, job status, and income (Gelatt, 2013; Melzer & Muffels, 2017). However, there has been little research on migrants' social comparisons in language learning, despite the fact that the target language skills are one of the most important predictors of integration and social well-being (Wilson et al., 2013). In this study, we investigate not only to whom migrants predominantly compare themselves in terms of language ability, but also the implications of these comparisons for emotional well-being and social adaptation.

Upward social comparison can be a powerful motivator for language learners and provide information to improve language skills (Muir et al., 2021). In fact, many language learners consider "native speakers" as their linguistic role models or desirable standard against which they evaluate their ability (He & Zhang, 2010; Muir et al., 2021). Although the term native speaker is commonly used as an idealized norm among language learners, the "native speaker standard" is ambiguous and changes depending on time and geographical location, as there are many dialects and varieties of languages (Bylin & Tingsell, 2022; Cook, 2016). Moreover, even native speakers' speech does not conform to idealized standards and is perceived so by other native speakers (Chaeng et al., 2021; Davies, 2003). Therefore, if for no other reason, it is unlikely that people compare themselves with single individuals with a clearly graded language level, but rather some relatively vague normative understanding of what native speakers do and how they sound.

However, this normative native speaker ideology can perpetuate the unequal power dynamics between native vs. non-native speakers and the deficit assumptions about non-native speakers' language ability and their social status (Cook, 2016; Dewaele et al., 2021; Kamhi-Stein, 2016). Therefore, this upward comparison process may undermine migrants' motivation and confidence, such as increased anxiety and reduced confidence. In turn, language anxiety and lack of confidence may lead to social avoidance and decreased cultural adaptation (Lou & Noels, 2020; Ozdemir & Papi, 2022).

Given that upward comparison is an inherent aspect of the adaptation process for many migrants, it is important to investigate the factors that can buffer the potential negative effects of upward comparison. Growth language mindsets (beliefs that language learning ability can be improved) may help migrant students develop a sense of mastery in the face of difficulties (Camacho et al., 2022; Elahi Shirvan et al., 2024; Lou & Zarrinabadi, 2022; Zarrinabadi et al., 2021). Moreover, language learners who believe that their competence can improve feel less anxious and more confident to adapt to the new cultural environment when interacting with native speakers (Lou & Noels, 2019, 2020), a situation that could spontaneously prompt upward comparison. Therefore, we hypothesized that migrant students' growth (vs. fixed) mindsets predict their likelihood of engaging in upward comparison (in Study 1) and buffer the potential negative impacts of such comparison on language anxiety, language confidence, and adaptation expectation (in Study 2).

The present research

Two central inquiries in social comparison research are (1) to whom people compare themselves, and (2) how social comparisons influence the self. However, there has been limited understanding regarding how social comparisons influence migrants' language learning and integration. In this research, we explore whether migrants' mindsets (1) predicted the tendency toward upward social comparison and (2) moderate the negative consequences of upward comparison.

Study 1 focused on the first inquiry and examines the individual differences in migrant students' mindsets and their tendency to compare their English abilities. Based on previous research on migration and social comparisons, we hypothesize that migrant students are likely to compare themselves with native speakers (i.e., upward social comparison). Furthermore, drawing on mindset theory, we hypothesized migrant students with fixed (vs. growth) mindsets are less likely to compare to better-off persons.

Study 2 focused on the second inquiry by examining the effects of upward (vs. control) comparison. Previous research suggests that engaging in upward comparison may result in heightened levels of anxiety and diminished confidence (Lockwood & Kunda, 1997). Therefore, we hypothesize that migrant students who engage in upward comparison (i.e., compare themselves to native speakers of English) may experience more language-related anxiety and reduced confidence in both language usage and adaptation to their new environment. Furthermore, drawing on mindset theory, we hypothesized that language mindsets may buffer the negative effect of upward social comparison.

Study 1

Method

Participants and procedure

The research was approved by the University's research ethics board. An online survey was sent out to all the students in a participant pool, but only students who fit the selection criterion (i.e., students who identified as migrants who lived in Canada for 10 years or less and that English is their second language) were included in the analyses. The final sample included 178 international

students and 144 immigrants ($N = 322$; 120 men; 195 women; 7 non-binary or missing; $M_{\text{age}} = 19.78$ years, $SD = 2.39$; $M_{\text{Length of Residence}} = 4.71$, $SD = 3.44$). Most participants were from Asia (China 45.6 %; South Korea 9 %; India 6.8 %; Philippines 4.3 %; Pakistan 3.4 %; others 30.9 %).

Measures

The items for the below measures are included in the online supplement.

Language mindsets. The participants responded to the Language Mindset Inventory (18 items; e.g., “People can’t really learn a new language after they reach adulthood”) on a 6-point scale, with 1 being strongly disagree and 6 being strongly agreed (Lou & Noels, 2017). Items of growth mindset were reverse-coded, so that a higher score of the mean score represented a stronger endorsement of fixed (vs. growth) mindsets (Cronbach’s $\alpha = .88$).

Social comparison target. Participants were asked, “In everyday life, when you evaluate your English ability, who do you most likely compare yourself to?” And they responded by choosing one of the options: 1 = Person/people in your home country; 2 = immigrant(s) or international student(s) in Canada; 3 = local Canadian(s).

Social comparison orientations. In a separate question, participants were asked, “In everyday life, when I evaluate my English ability, I compare myself to someone or a group of people whose English is” on a 7-point scale (1 = “much worse than mine” to 7 = “much better than mine”). A higher score represents a stronger upward (vs. downward) comparison tendency.

Results

Social comparison targets and orientations

The participants indicated a strong preference for the comparison targets ($\chi^2(2) = 97.94$, $p < .001$). Regarding the comparison target (Fig. 1a), most participants (55.9 %) tended to compare themselves to local Canadians, rather than other migrants (33.2 %) or people from their home country (10.9 %). Regarding the comparison orientations (Fig. 1b), most students (67.1 %) engaged in upward comparison (scored 5–7), while some (24.5 %) compared themselves to people with the same level (scored 4) and only a small proportion (8.4 %) engaged in downward comparison (scored 1 to 3).

Next, we examined the link between comparison targets and orientations. We conducted a Kruskal-Wallis one-way analysis of variance, which is a nonparametric equivalence of an ANOVA. The result showed a significant difference among those who compared to different targets, $H(2) = 52.56$, $p < .001$. Specifically, a post-hoc Dunn test (adjusted by the Bonferroni correction) indicated that students who tended to compare themselves to local Canadians ($M = 5.75$, $SD = 1.31$) scored significantly higher on the upward social comparison tendency than those who compared themselves to other migrants ($M = 4.81$, $SD = 1.21$), $p < .001$, or people in home country ($M = 4.43$, $SD = 1.15$), $p < .001$. However, no significant differences were found between those who compared themselves to migrants and those who compared themselves to people in their home country, $p = .430$.

Mindsets and social comparison

As shown in Fig. 2a, the results of an ANOVA showed that students with different targets of comparison scored differently on their mindsets, $F(2, 319) = 11.41$, $p < .001$, $\eta^2 = .067$ (95 %CI = [.021, .122]). Specifically, the post-hoc Tukey tests showed that participants who compared to local Canadians ($M = 2.97$, $SD = 0.71$) also scored lower on fixed (vs. growth) mindsets than those who compared themselves to migrants ($M = 3.24$, $SD = 0.56$) and people in home country ($M = 3.46$, $SD = 0.56$).

Regarding the association between mindsets and comparison orientations (Fig. 2b), the Spearman correlation (nonparametric test) showed that those who endorsed stronger fixed (vs. growth) mindsets were also less likely to engage in upward comparison, $r = -.17$, $p = .003$.¹

Study 2

Study 1 addressed to whom migrant students compare themselves, showing that most migrant students tend to engage in upward comparison regarding their English language proficiency. Importantly, students who held fixed (vs. growth) mindsets were less likely to engage in upward comparison. What might explain this difference? It is possible that upward comparison may have different effects depending on migrants’ mindsets about their language ability. To address this inquiry, Study 2 focuses on the effects of upward social comparison, prompting migrant students to compare themselves to native speakers. Specifically, we investigated whether growth mindsets buffer the negative effects of upward comparison on language anxiety, language confidence, and adaptation expectation.

Method

Participants

The participants were a different sample of students ($n = 101$) from the same university, including 61 international students and 40 immigrants (37 men; 64 women; $M_{\text{Length of Residence}} = 3.31$, $SD = 2.82$). Similar to Study 1, most participants were from Asian countries

¹ We explored whether controlling for length of residence in the country would change the results and found that the partial correlational coefficient remained significant ($r = -.17$, $p = .002$). Thus, the relation between mindset and upward comparison was not impacted by the duration of exposure to the ethnolinguistic community.

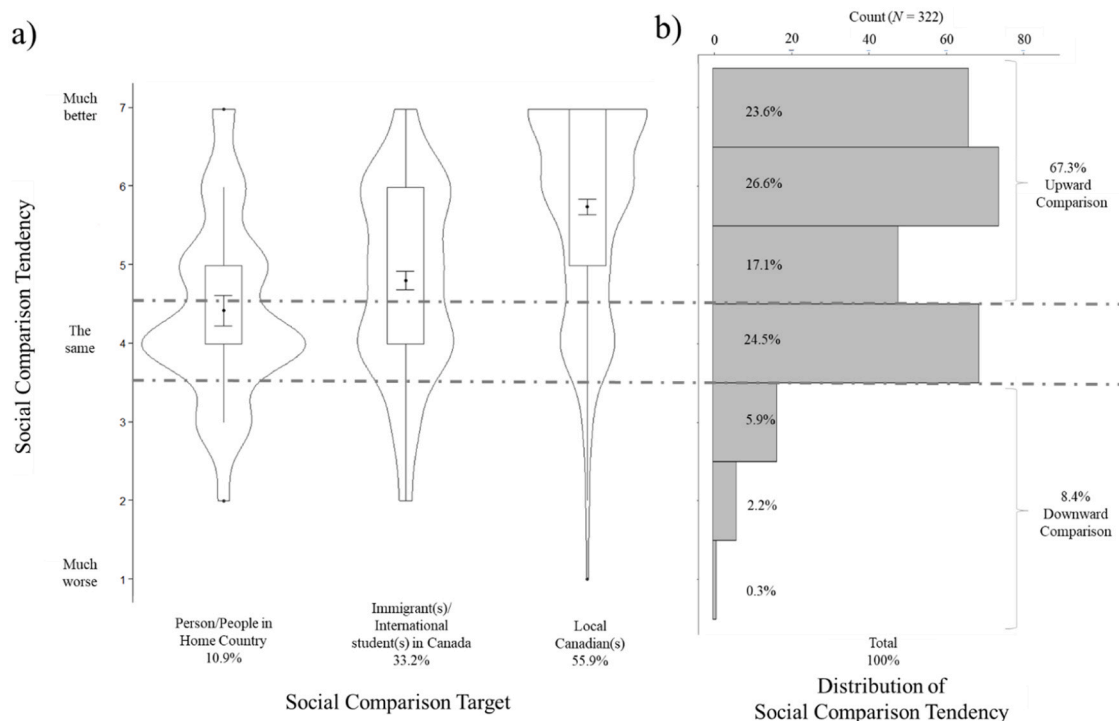


Fig. 1. Distribution of Social comparison orientations divided by comparison target (1a; violin plot) and the total count (1b; histogram).

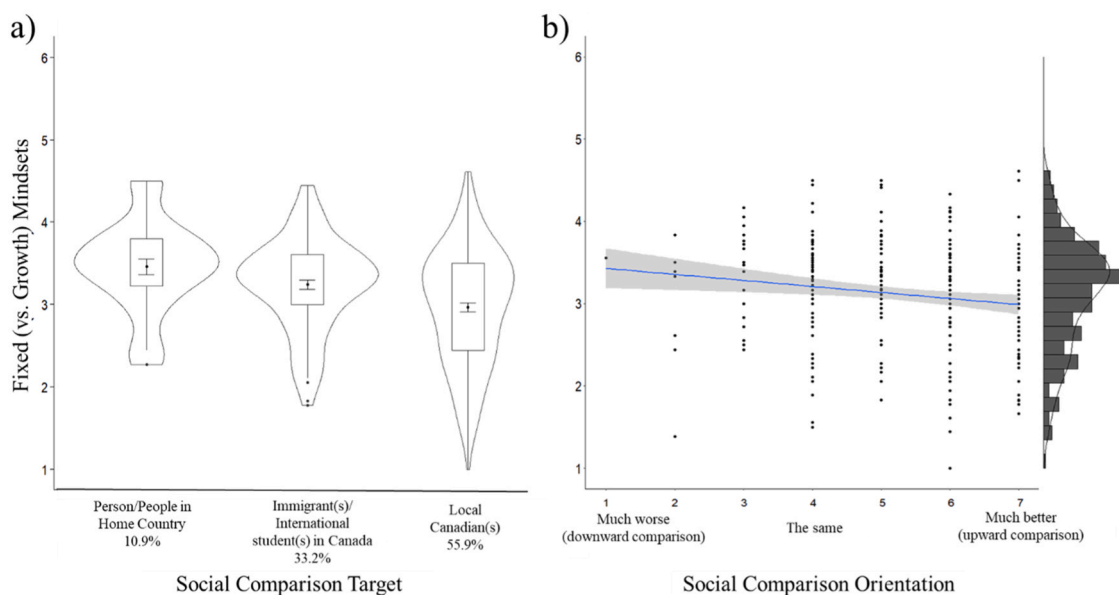


Fig. 2. Social comparison target (2a) and social comparison orientation (2b) are negatively associated with fixed (vs. growth) mindsets.

(China 61.4 %; Philippines 6.9 %; South Korea 5.9 %; India 4 %; others 21.8 %).

Procedure

The participants were asked to report their language mindsets (same items as Study 1) on a mass-testing online questionnaire, which took place approximately 2 to 3 months before the experiment. Subsequently, they were invited to participate in the lab experiment, in which they were randomly assigned to either the upward comparison condition ($n = 50$) or the no comparison condition ($n = 51$), and then they completed an online questionnaire (see below materials). The participants received partial course credit

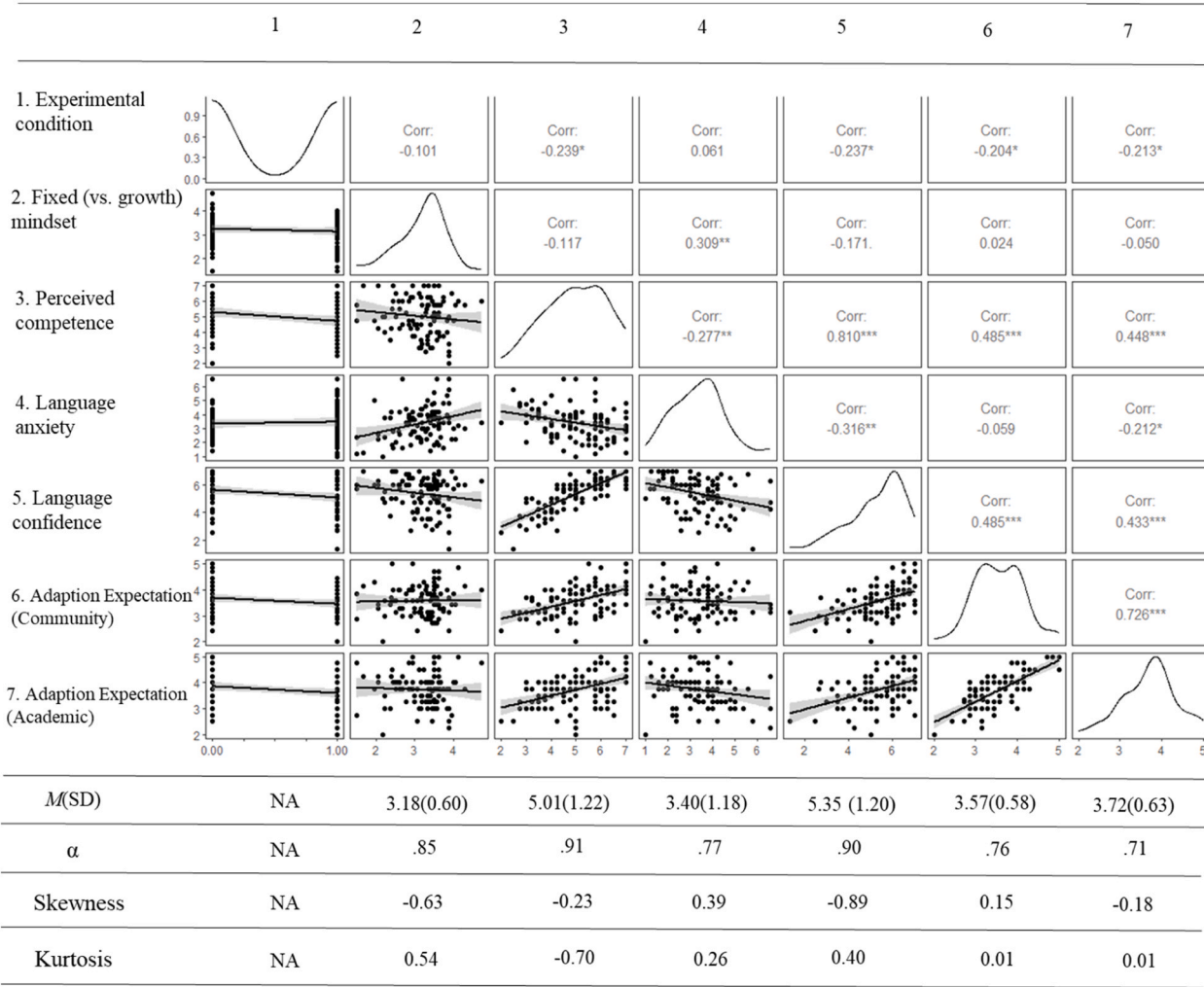


Fig. 3. Study 2: Descriptive and correlational analyses of variables. Note. Experimental condition (1 = upward comparison; 0 = no comparison). Plot was used based on “ggpairs” function within the GGally package (Schloerke et al., 2018). The distribution for each variable is presented on the diagonal; the correlation coefficient (corr) is above the diagonal (*** $p < .001$, ** $p < .01$, * $p < .05$); and the scatter plot is below the diagonal.

as compensation.

Materials

Manipulation (perceived language competence with or without comparison). Participants were divided into two groups and read different instructions. They were asked to rate their perceived language competence based on four basic aspects of language skill (reading, writing, speaking, and understanding spoken English). In the upward comparison condition, participants were instructed to rate their English competence “by comparing to native English speakers in Canada.” For the control condition, participants simply rated their language skills without any comparison prompt. Participants rated their responses ranging from “1 = not at all” to “7 = completely proficient”. A higher score represents a perception of a higher level of English competence ($\alpha = .91$). If this manipulation is effective, participants in the upward comparison condition will rate their English level lower than those in the control condition.

Language anxiety. We adapted five items from the Foreign Language Classroom Anxiety Scale (FLCAS; Horwitz, 1986) that specifically focused on social judgment and rejection. Examples include, “I am afraid other students will laugh at me when I speak English” and “I am worried that native speakers would find my English strange.” Participants were asked to rate their agreement on a 7-point scale, with 1 indicating strongly disagree and 7 being strongly agree ($\alpha = .77$).

Language-use confidence. We used the Language Confidence Scale (Clément, Baker, & MacIntyre, 2003; Clément, Dörnyei, & Noels, 1994), specifically four items related to language usage to measure participants’ language confidence. Sample items include, “I’m sure I could speak English well in almost any circumstances” and “Personally, I believe that I know enough English to speak correctly.” The participants were asked to indicate their agreement on a 7-point scale (1 = strongly disagree to 7 = strongly agree). A higher mean score on these items suggested a higher level of language use confidence ($\alpha = .90$).

Sociocultural adaption expectations. An adapted version of the Socio-Cultural Adaptation Scale (SCAS; Ward & Kennedy, 1999) assessed how well the participants believed they would adapt to their new sociocultural environment. The participants were asked to rate their anticipated level of adaptation (“thinking about your competence in the next year, and rate how competent you will be in the future in the following items”) on a 5-point scale (1 = not at all competent to 5 = extremely competent). Specifically, seven items were about their adaption to the community environment (e.g., “finding my way around”, “obtaining community services I require;” “dealing with the bureaucracy”; $\alpha = .76$) and four items were about adaptation to the academic environment (e.g., “Managing my academic responsibilities;” “Working effectively with other students;” $\alpha = .71$).

Table 1

Study 2: Multiple linear regression: Experimental condition, language mindsets, and their interaction on different outcomes.

Outcome	Model	Predictor	<i>b</i>	<i>SE</i>	<i>t</i>	<i>p</i>	95 %CI	<i>R</i> ²
(a) Language anxiety								
	Model 1	Experimental condition	0.219	0.226	0.969	.335	[-0.230, 0.668]	.104**
		Language mindsets	0.628	0.190	3.308***	.001	[0.251, 1.004]	
	Model 2	Experimental condition	0.219	0.220	0.998	.321	[-0.217, 0.655]	.164***
		Language mindsets	0.618	0.184	3.353***	.001	[0.252, 0.983]	
		Condition × Mindset	0.973	0.368	2.640**	.010	[0.242, 1.704]	
(b) Language confidence								
	Model 1	Experimental condition	-0.615	0.231	-2.662**	.009	[-1.073, -0.157]	.095**
		Language mindsets	-0.394	0.194	-2.035*	.045	[-0.779, -0.010]	
	Model 2	Experimental condition	-0.615	0.232	-2.656**	.009	[-1.075, -0.155]	.099*
		Language mindsets	-0.391	0.194	-2.015*	.047	[-0.777, -0.006]	
		Condition × Mindset	-0.274	0.388	-0.706	.482	[-1.045, 0.497]	
(c) Adaptation expectation (community)								
	Model 1	Experimental condition	-0.233	0.114	-2.040*	.044	[-0.460, -0.006]	.042
		Language mindsets	0.005	0.096	0.053	.958	[-0.185, 0.195]	
	Model 2	Experimental condition	-0.233	0.114	-2.038*	.044	[-0.460, -0.006]	.052
		Language mindsets	0.007	0.096	0.070	.944	[-0.184, 0.197]	
		Condition × Mindset	-0.193	0.192	-1.004	.318	[-0.573, 0.188]	
(d) Adaptation expectation (academic)								
	Model 1	Experimental condition	-0.277	0.125	-2.211*	.029	[-0.525, -0.028]	.050
		Language mindsets	-0.074	0.105	-0.706	.482	[-0.282, 0.134]	
	Model 2	Experimental condition	-0.276	0.123	-2.246*	.027	[-0.520, -0.032]	.092*
		Language mindsets	-0.070	0.103	-0.681	.497	[-0.275, 0.134]	
		Condition × Mindset	-0.435	0.206	-2.111*	.037	[-0.844, -0.026]	

Note. Experimental condition (0 = Control condition; 1 = Upward comparison); CI = confidence interval. All assumptions for linear regression were reasonably met and no multicollinearity was found. Model 1 focuses on the main effect (without interaction) and Model 2 includes the interaction term. Here, we found significant interaction effects between mindset and social comparison on (a) language anxiety and (d) adaption expectation (academic), but not on (b) language confidence or (c) adaption expectation (community). These effects remained significant after controlling for gender, perceived competence, and length of residence (see [online supplement Table S1](#)).

Results

Manipulation check

The study manipulation contrasts two groups, one prompted that they should compare their English competence to native speakers and the other having no prompt about comparison. Therefore, we use their perceived English competence as manipulation check. Fig. 3 displays the descriptive analyses. The results from an independent *t*-test showed that migrant students in the upward comparison condition rated their English competence ($M = 4.72$, $SD = 1.20$) lower than participants in the no comparison condition ($M = 5.30$, $SD = 1.18$), $t(99) = 2.45$, $p = .016$, Cohen's $d = 0.49$. This difference indicated that the manipulation was effective. Moreover, there is no significant interaction effect between manipulation conditions and mindset on the manipulation check ($b = -0.06$, $SE = 0.40$, $t = -0.15$, $p = .882$), suggesting the manipulation effect on perceived English competence was not affected by language mindsets.

Correlational analyses (see Fig. 3) further showed that perceived competence (manipulation check) was found to be negatively associated with language anxiety and positively associated with language confidence, as well as the expectation to adapt to the community and academic environment. This finding further supports the validity of the manipulation-check measure (i.e., perceived competence).

Do mindsets moderate the effect of upward comparison?

We conducted multiple linear regression analyses to examine whether mindsets moderate the effects of upward comparison (Table 1).

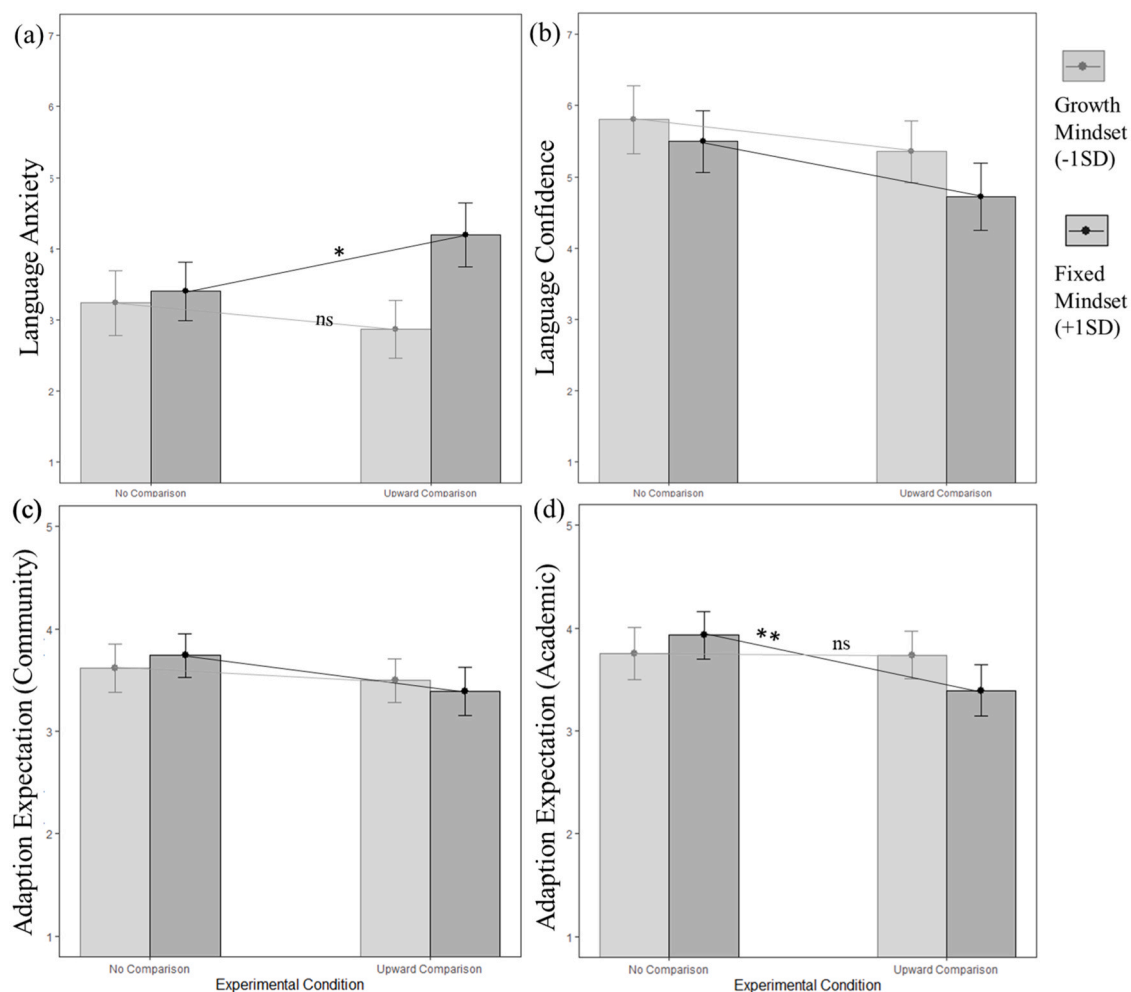


Fig. 4. Study 2: The experimental condition as a function of (a) language anxiety, (b) language confidence, (c) adaptation expectation (community), and (d) adaptation expectation (academic) separately for different levels of mindsets (+1 SD and -1 SD). Note. These figures were plotted using “plot_model” function within the sjPlot package (Lüdtke, 2018). Significant interactions were found on (a) language anxiety and (d) adaptation expectancy in academic settings. Participants with fixed mindsets (+1 SD) in the upward comparison condition reported the highest levels of language anxiety, and lowest adaptation expectancy in their academic environment.

First, we found a significant moderation effect of mindsets on the effect of upward comparison on language anxiety (Fig. 4a). To unpack the significant interaction, we conducted simple slope analyses (Table 2). We found that upward comparison increased language anxiety, but only for participants with a higher level of fixed mindsets (+1 SD). Those who held a higher level of growth mindsets (−1 SD) were not significantly affected by upward comparison.

Second, we did not find a significant interaction between conditions and mindsets on language confidence (Fig. 4b). Instead, we found that both main effects were significant. Participants who engaged in upward comparison (vs. control condition) reported lower levels of confidence, regardless of their mindsets. In addition, participants with higher levels of fixed (vs. growth) mindsets also reported lower confidence, regardless of their conditions.

Third, we also did not find a significant interaction effect on adaptation expectations in the community environment (Fig. 4c). However, we did find a significant main effect of the experimental condition (see Table 1), such that participants in the upward (vs. control) comparison condition reported lower levels of expectation, regardless of their mindsets.

Finally, we found a significant interaction effect on adaptation expectations in the academic environment (Fig. 4d). As shown in Table 2, the result of simple slope analyses showed that upward comparison (vs. control condition) lowered the expectation of academic adaptation only among those with a higher level of fixed mindsets (+1 SD). Migrant students who held a higher level of growth mindsets (−1 SD) were not significantly affected by upward comparison.

Discussion

This research investigated whether migrants' mindsets predicted the tendency toward upward social comparison and its consequences. The findings demonstrated that the orientations and effects of upward comparisons varied depending on migrants' mindsets. Study 1 demonstrated that migrant students in Canada who held growth (vs. fixed) mindsets were more likely to compare themselves to native speakers and engage in upward social comparison. Study 2 examined the potential reasons by asking migrant students to engage in upward comparison (i.e., compare themselves to local Canadians). The results showed that the negative effects of upward comparisons on anxiety and academic adaptation were less salient among those who held growth (vs. fixed) mindsets, even after controlling for participants' gender, their perceived competence in English, and how long they had lived in Canada. However, growth mindsets did not significantly moderate the negative effects of social comparison on migrants' confidence in language use and adaptation to the community environment. Overall, this study suggests that migrant students may use their mindsets to navigate their linguistic environment, and those with growth mindsets may experience less anxiety and feel more confident in adapting to their academic surroundings.

Social comparisons in the migration and language learning context

Social comparison is a key social cognitive process for motivation and learning (Schunk & Usher, 2012; Suls et al., 2002). This research sheds light on the implications of social comparison in the migration context. For many migrants, upward social comparison is a part of their everyday lives as they often interact with people whose language ability is presumably better. Indeed, as shown in Study 1, when asking who they normally compare themselves to, 56 % of migrant students compared themselves to local Canadians in terms of their English skills, and 67 % engaged in upward social comparison in general (regardless of the targets). These findings are consistent with previous literature, which suggests that people tend to compare to better-off others to gain information for goal setting and improvement (Gerber et al., 2018; Suls et al., 2002). However, unlike the classroom learning setting, language is more than "just one academic subject" for immigrants and international students. The cultural ideology and power dynamics of the "native speaker standard" can also incline linguistic-minority members to compare themselves to the dominant group, partly due to social pressure and the desire to assimilate (Bylin & Tingsell, 2022; He & Zhang, 2010; Melzer & Muffels, 2017; Tajfel, 1987).

Apart from the dominant group, other migrants or international students (i.e., intragroup comparison) also serve as important reference points for many migrants' social comparisons (Zagefka & Brown, 2005; Verkuyten, 2018). Study 1 showed that about 33 % tend to compare themselves to other international students and immigrants. Only a small number (11 %) tend to compare themselves to their peers back in their home country, and only about 8 % say that they tend to engage in downward comparison. Together, there is a clear preference for migrants to set local Canadians as a reference point to evaluate their English ability.

Although upward comparisons are prevalent among migrants, many of them experience anxiety and worry that their relatively

Table 2

Study 2: Simple Slope analysis: Condition effect of the experimental condition at values of different levels of mindsets.

Outcome	Level of mindset (moderator)	b	SE	t	p	95%CI
Language anxiety	Growth mindset (−1 SD)	−0.364	0.311	−1.168	.246	[−0.982, 0.254]
	Mean	0.219	0.220	0.998	.321	[−0.217, 0.655]
	Fixed mindset (+1 SD)	0.802	0.311	2.576*	.012	[0.184, 1.420]
Adaptation expectation (academic)	Growth mindset (−1 SD)	−0.015	0.174	−0.088	.930	[−0.362, 0.331]
	Mean	−0.276	0.123	−2.246*	.027	[−0.520, −0.032]
	Fixed mindset (+1 SD)	−0.537	0.174	−3.083**	.003	[−0.883, −0.191]

limited language skills may make them look inadequate to “native” speakers (Neeley, 2013). Our research shows that after engaging in upward social comparison (vs. no comparison), migrant students reported lower levels of perceived competence, confidence, and ability to adapt to Canada in the future. These findings align with previous research on the potential negative emotional consequences of upward comparison in daily life, despite its “usefulness” (Smith, 2000).

Growth mindsets and social comparisons

The tendency and consequences of upward social comparison are not the same for all migrants. Our research identified that students who did not engage in upward comparison also tend to endorse a fixed (vs. growth) mindset about their language ability. These findings are consistent with previous research, which has shown that those who envision growth and improvement in the future are also more likely to engage in upward comparison, whereas those who did not believe they could change were more likely to engage in downward comparison (Lockwood & Kunda, 1997).

But why do students with fixed mindsets tend to avoid upward comparison? In Study 2, our findings revealed that students with fixed (vs. growth) mindsets showed greater tendency to feel threatened by upward comparison, specifically concerning language anxiety and confident to adapt to academic environment. Compared to their counterparts with growth mindsets, students with fixed mindsets experienced more anxiety about using English and were less confident about adapting to their academic settings upon comparing themselves to native English speakers. Therefore, students embracing a growth (vs. fixed) mindset may be more inclined to engage in upward social comparison as they encounter fewer adverse effects.

However, we did not find any evidence to support the idea that growth mindsets moderate the effect of upward comparison on language confidence, suggesting that mindset may not be sufficiently robust to mitigate upward comparison across different types of outcomes. While migrants with growth mindsets may perceive upward comparison information as resources for self-improvement, these goals (especially when compared to native speakers) may still be unattainable, at least in the short term. Therefore, striving to reach the native speaker standard with a growth mindset may not necessarily increase migrant students’ language confidence. Additionally, we observed that language mindsets moderated the effect of comparison on confidence in adapting to the academic environment but not the community environment (e.g., dealing with bureaucracy, and obtaining community service). It is possible that for many migrant students, their peers in the academic environment are their main source of language comparison, which is why language mindsets have a greater influence in these contexts. Nevertheless, students with growth mindsets may find upward social comparison less threatening (e.g., lower anxiety), and thus, they may engage in it more often and benefit from it in the long term.

Implications for intercultural communication and language learning

These findings highlight social comparison as a key psychological process in language learning and intercultural communication, providing insights into the individual differences in second language learning and acculturation. Adjusting to the new cultural environment and educational setting can be a daunting task, as it often involves daily experiences of language anxiety (Ozdemir & Papi, 2022; Sevinç & Dewaele, 2018). This research shows that such language anxiety stems, at least in part, from upward social comparison (to native speakers). Our findings also suggest that language emotions are not static (Larsen-Freeman, 2019; MacIntyre et al., 2020). For instance, students can feel more anxious and disengaged during everyday social interactions as it may automatically induce upward social comparison, as also presented in the quotes in the introduction (Zheng et al., 2020). However, it is important to note that upward social comparison can have both positive and negative effects on learners’ emotions and motivation (Diel et al., 2021; Gerber et al., 2018). While interacting with better-off others can make learners aware of the gap between themselves and their peers, this awareness could potentially motivate learners toward their goal-setting behaviours.

This study provides further evidence that growth mindsets is related to adaptive adaptation processes for migrants (cf. Lou & Noels, 2020). Social comparison tendency can illuminate the intercultural processes among migrants, reflecting with whom they associate the most (Muffels & Headey, 2013). As migrants develop more local connections, they may be more inclined to associate themselves with local peers and identify themselves as part of the new society (Noels et al., 1996; Pekerti et al., 2020). Although upward comparison can have negative implications for their expectation of adaptation, migrants may choose to engage in upward comparison because they may have high hopes to see changes and growth in their future. Indeed, those with growth (vs. fixed) mindsets are more likely to expect academic environment adaptation after upward comparison.

Because of the potential impact of upward social comparison, educators sometimes utilize strategies such as highlighting role models to motivate students. Because the model of “native speaker” often assumes a deficit view of non-native speakers (Dewaele et al., 2021), some scholars argue that the native speaker standard should be completely eschewed in language education, including education for migrants. Indeed, we found that in some circumstances the native speaker standard can lead to negative emotional outcomes among learners. It is therefore important for educators to inform learners about fallacies around “native-speakerism”, such as beliefs that there exists a perfect native-speaker who never makes linguistic errors; that there is a clear and static endpoint to language acquisition rather than viewing language as a continually changing, dynamic facility; or that there exists a universally agreed upon and unchanging standard to be attained.

That said, learners can nonetheless benefit by comparing themselves with those who are more proficient, much like athletes can improve their skills by comparing their performance with that of athletic superstars. Given that the vast majority of the L2 learners tend to engage in upward comparison, and that upward comparison could be useful to motivate some learners, it would be important for educators to appropriately frame the native speaker standard meaningfully to facilitate learners’ motivation and well-being. For example, when teachers highlight a role model, they should complement this comparison with growth-mindset messages to help

learners understand that good speakers are not categorically different from poorer speakers (i.e., people either have it or they do not), but something they can at least approximate and continue to grow into under the right circumstances (see also [Lin-Siegler et al., 2016](#); [Yeager et al., 2016](#)). Moreover, the comparison standard should be realistic and attainable based on the current level of the learner's proficiency ([Diel et al., 2021](#); [Gladstone & Cimpian, 2021](#)).

Future directions

The findings of this study need to be interpreted with caution, considering the study's limitations. First, the current study focused on learning context of migrant university students who are not native speakers of English. In other contexts where English is used a lingua franca (e.g., international business, learning English as a foreign language), language learners may have different language experiences ([Rivers, 2011](#)). Therefore, future studies could investigate the frequency and potential role of mindsets in understanding the interaction and consequences of social comparisons among other language learners. Moreover, within the acculturation context, migrant students' comparison experiences may vary depending on their opportunities and daily experiences (e.g., language discrimination; [Freynet & Clément, 2019](#)). Those who have access to more opportunities and are in a more supportive environment may be more likely to interact with locals and engage in upward comparisons. As migrants adapt to their environment and have different opportunities, the comparison reference group may also change over time. Future longitudinal and daily diary studies could further explore the complexities and dynamics of social interaction, adaptation, and social comparison (e.g., [Doucerain et al., 2023](#); [Thai et al., 2022](#)).

Second, it is important to note that this research did not provide causal evidence that mindsets can reduce anxiety driven by social comparison, as mindsets were not manipulated. It is possible that anxiety play a causal role that leads to avoidance of contact with native speakers, which influences the targets of social comparison – creating a vicious cycle. This would imply that the anxiety plays a central role and should be addressed in interventions. Previous intervention studies, however, have shown that learning about growth mindsets can reduce language anxiety and social anxiety ([Lou & Noels, 2020](#); [Yeager et al., 2022](#)). As upward comparison opportunities regularly occur in daily interactions, it is important to understand how to mitigate any negative consequences. Future intervention studies can further explore the mechanisms by which mindset interventions impact L2 learners' everyday interactions, thereby providing a more comprehensive understanding of the effectiveness of such interventions.

Third, although the current study focused on the effects of comparisons to “native speakers”, we also found that a small percentage of migrants made comparisons to other migrants and peers from their home country. Migrants may also engage in downward comparison as coping mechanisms against the perceived threat of upward comparison. Future studies could investigate how different social comparisons, including the use of different normative standards of language proficiency ([Cheng et al., 2021](#); [Dewaele et al., 2021](#)), can impact learners' motivation and learning experiences.

Finally, we did not include objective assessments for participants' proficiency in English. It is possible that migrants with lower language proficiency may report greater language anxiety, reduced confidence, and challenges in cultural adaptation compared to those with higher proficiency ([Wilczewski & Alon, 2023](#)). Therefore, it is important for future research to account for the effect of objective measures of language proficiency in mindsets and social comparisons.

Conclusions

This research highlights the adverse impact of the “native speaker standard” on migrant students' emotion and the role of growth mindsets in this process. Although upward comparisons may reflect migrants' desire for improvement and upward social mobility, it can lead to lower well-being as they may feel dissatisfied with themselves compared to the locals ([Melzer & Muffels, 2017](#)). This research reveals the prevalent tendency among linguistic-minority students to use “native speakers” as the standard of comparison, even though this reference point can threaten their confidence and adaptation. Furthermore, migrant students' beliefs about the malleability of their language ability (i.e., language mindsets) predicted the tendencies and consequences of upward comparison. Specifically, learners with a fixed mindset are particularly vulnerable to the harmful effects of upward comparison, leading to higher anxiety levels and lower expectations of adaptation. In contrast, endorsing growth mindsets can buffer these negative effects. These findings add to a growing body of research highlighting the potential of fostering a growth-oriented belief for promoting migrants' well-being and adaptation to their new home.

CRedit authorship contribution statement

Nigel Mantou Lou: Writing – original draft, Investigation, Formal analysis, Data curation, Conceptualization. **Kimberly Noels:** Writing – review & editing, Supervision, Conceptualization.

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Appendix A. Supporting information

Supplementary data associated with this article can be found in the online version at [doi:10.1016/j.ijintrel.2024.101990](https://doi.org/10.1016/j.ijintrel.2024.101990).

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