

L2 Experience Mediates The Relation Between Mainstream Acculturation Orientation And Self-Assessed L2 Competence Among Migrants

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Abstract

Understanding the mechanisms underlying the development of migrants' second language (L2) competence in naturalistic settings is a pressing concern for receiving societies. Several studies have established a positive relation between people's self-positioning with respect to the L2 ethnolinguistic group and their L2 competence, but the mechanisms underlying this relation are relatively unexplored. Using path analysis, this study investigates the hypothesis that migrants' experience with the L2 mediates the positive association between mainstream cultural orientation and self-assessed L2 competence among 123 multicultural recent immigrant students to Montreal, Quebec. As such, this study applies notions from L2 motivation and sociocultural L2 learning to an acculturation context. This study also unpacks L2 experience by examining L2 use and L2 social contact (namely, friendships in the mainstream group) separately. In addition, this study takes into account the important role of the social context by selecting a setting that maximizes the centrality of individual differences in cultural orientations. The hypotheses were fully supported: model fit for the hypothesized model was excellent and better than for alternative models.

Keywords: Second language acquisition; L2 experience; acculturation; cultural orientation; naturalistic settings; social contact; path analysis

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Introduction

Many migrants settling in a new country face the important task of learning a new language (L2). Given increasing levels of international migration and given that L2 competence is a critical predictor of adjustment outcomes (Chiswick and Miller 1999; Ng et al. 2011), understanding how migrants develop L2 competence is a pressing concern. Recent perspectives on second language acquisition (SLA) underscore the importance of social factors in this process (Block 2003, Firth and Wagner 2007, Ortega 2011) and several studies have established a positive relation between people's self positioning with respect to the L2 ethnolinguistic group and their L2 competence (e.g., Coupland et al. 2005; Segalowitz et al. 2009). However, much of this work examined long standing linguistic minorities or formal language learning settings, and the mechanisms underlying this relation are relatively unexplored among acculturating migrants. Some researchers have suggested that language experience in the L2 speech community mediates this relation between L2 self-positioning and competence (Segalowitz et al. 2009). This overarching hypothesis, illustrated in Figure 1, is consistent with research on L2 motivation (Clément 1980; Dörnyei et al. 2006; MacIntyre et al. 1998) and with sociocultural approaches to second language learning (Lantolf 2000).

Using path analysis, a special case of structural equation modeling used to describe the relations among a set of observed variables, the present work examines the mediating role of migrants' experience in the mainstream L2 in the link between their orientation toward the L2 ethnolinguistic group and their self-assessed L2 competence. This study contributes to work on second language acquisition (SLA) in naturalistic settings and bridges research on L2 learning and on acculturation. In addition, this study unpacks the role of language experience by distinguishing between social relationships (here, friendships) and general language use, and by controlling for characteristics of the social context.

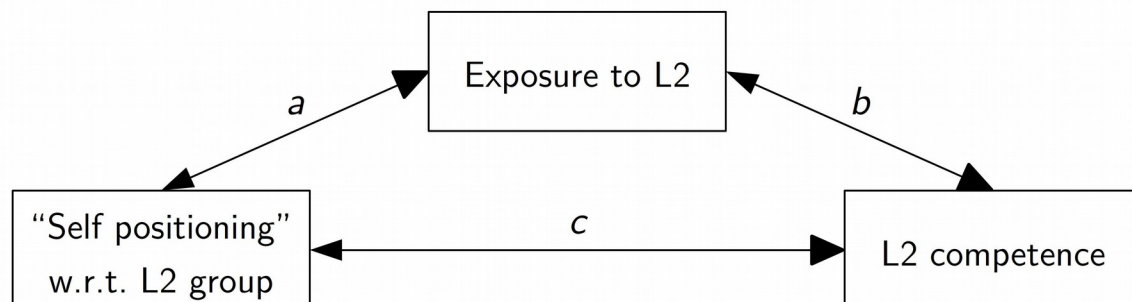


Figure 1 | Guiding conceptual model.

w.r.t. = "with respect to".

Language and Migration

Upon settling in a new country, migrants experience extensive changes, including for example learning new cultural traditions, forming new relationships, or renegotiating social identities. To a large extent, this process of acculturation takes place in the language of the mainstream groupⁱ, an L2 for a majority of migrants. As such, L2

i Hereafter, "L2 ethnolinguistic group", "mainstream cultural group", and "mainstream ethnolinguistic group" are used interchangeably with the understanding that they represent convenience labels for the majority of situations where cultural and linguistic communities largely overlap and that they would not adequately characterize more complex culturally hybrid and multilingual cases.

competence is critical for migrants' successful adjustment in the new mainstream society: it is a key predictor of economic success (Chiswick and Miller 1999) and health (Ng et al. 2011). Because of the centrality of language in acculturation processes, it is crucial to better understand how migrants become competent speakers of the mainstream language. Many receiving societies offer basic language courses to new migrants (e.g., “*cours de francisation*” in Quebec, or “*Inburgering Vlaanderen*” in Flanders), but the development of language skills beyond initial proficiency often takes place in naturalistic settings, i.e., “on the job” or “on the street”. Unfortunately, there is a dearth of research on second language learning among adult migrants in naturalistic settings (Norton 2013) – the focus of this work – as the majority of SLA theoretical and empirical work has focused on formal settings.

L2 learning outcomes comprise a variety of related constructs, including from example L2 fluency, accent, grammaticality, or confidence. This work examines migrants' self-assessed L2 competence, defined here as a combination of self-reported proficiency in the L2 and comfort in using it. Self-assessed L2 competence is construed as one facet, rather than as an index of L2 learning outcomes. There were three reasons for this choice. First, self-reported language proficiency is highly correlated with proficiency as measured by standardized tests (Marian et al. 2007). For example, Park & Lee (2005) found that L2 self-confidence was associated with oral performance. Second, as argued by Clément et al. (2003), one's self-assessed L2 competence exerts more leverage on language behaviours and communication attempts than competence measured by standardized tests. Third, because of the inclusion of an affective component, the present conceptualization of L2 competence resembles L2 confidence (a combination of self-assessed L2 skills and language anxiety; Clément 1980). This conceptual closeness is important given that this study builds to some extent on Clément's sociocontextual model (Clément 1980; Clément and Kruidenier 1985), which focuses on L2 confidence.

Self Positioning and L2 Competence

Recent theories in SLA underscore that second language learning is fundamentally a socially mediated process (Lantolf 2000), and intricately linked to its social and cultural context (Pavlenko and Blackledge 2004). Accordingly, studies have shown that L2 learning is tied to a cluster of variables including identification with, attitudes toward, motivation for engagement in, and orientation toward the L2 ethnolinguistic group (relation *c* in Figure 1). Although non-identical and reflecting a range of conceptual approaches, these variables all partake of a learner's positioning of the self with respect to the L2 ethnolinguistic group.

Of these “self positioning” variables – a loose convenience label – identity is the most studied. Past research has shown that stronger identification with the L2 ethnolinguistic group is associated with better L2 outcomes in a wide variety of contexts, including Francophones in Quebec (Gatbonton and Trofimovich 2008, 2011), Finnish adolescents in Sweden (Henning-Lindblom and Liebkind 2007), Welsh learners in Wales (Coupland et al. 2005), Kurds in Turkey (Polat and Schallert 2003), or Chinese migrants in Canada (Noels et al. 1996). In a related vein, building on the seminal work of Gardner and Lambert (1959) in Canada, studies have shown repeatedly that an integrative motivation – a combination of integrativeness, or “a positive affective predisposition towards the second language community” (Clément and Kruidenier 1985: 24), willingness to identify with the L2 group, and motivation to learn the L2 (Gardner 2001) – was predictive of L2 learning (see Masgoret and Gardner 2003 for a meta-analysis).

In summary, existing research provides clear evidence that positioning oneself in a way that is favorably disposed toward the L2 ethnolinguistic group is associated with positive L2 learning outcomes. Less work, however, has focused on the mechanisms underlying this link, especially in an immigration context.

Experience with the L2 as a Mechanism?

In a recent review, Trofimovich and Turuševa (2015) suggest that learners' experience with the L2 may mediate

this self-positioning-L2 learning association, where “L2 experience” refers to a loose cluster of variables encompassing amount of L2 use, frequency of L2 contact, size of L2 social network, etc. Accordingly, Gatbonton and colleagues (Gatbonton and Trofimovich 2008, Segalowitz et al. 2009, Gatbonton et al. 2011) found that among French speakers in Quebec, the relation between ethnolinguistic affiliation and various aspects of English performance disappeared after controlling for English use. They propose that “a sense of ethnolinguistic affiliation shapes the social niche one inhabits and this in turn determines the type and range of experiences a person might have in hearing and using the target language” (Segalowitz et al. 2009: 174) as a possible rationale for the implied mediating role of L2 use.

This mediation mechanism, illustrated in Figure 1, provides a conceptual framework and overarching hypothesis for the present work. All three constructs – L2 self-positioning, L2 experience, and L2 learning outcomes – are multifaceted and Trofimovich and Turuševa's (2015) review does not address issues of directionality among constructs. Therefore, the next section specifies how “self positioning” is conceptualized here. Next, research on motivational factors in language learning and sociocultural approaches to SLA are used to derive a testable model for path analysis.

Cultural Orientations as Self Positioning

Among self positioning variables, this study focuses on migrants' mainstream cultural orientation, broadly defined as a migrant's wish to adopt the new mainstream culture (Snauwaert et al. 2003). Thus, a positive mainstream cultural orientation encompasses not only migrants' desire for social contact with members of the mainstream group, but also a positive outlook on this cultural tradition. Cultural orientations are at the core of research on acculturation in cross-cultural psychology (Berry 2005). In addition, given that in the case of most migrants, “mainstream cultural group” and “L2 ethnolinguistic group” are synonymous, cultural orientations are also relevant to SLA researchers. In agreement with studies on ethnolinguistic affiliation and on integrative motivation, past work has shown that a more positive mainstream cultural orientation predicts better L2 proficiency (Pisarenko 2006, Jiang et al 2009).

With respect to other self positioning variables mentioned earlier, the mainstream cultural orientation is conceptually quite close to integrativeness or integrative motivation. Indeed, because of its attitudinal and motivational components, mainstream cultural orientation resonates with a “positive affective predisposition towards the second language community” (Clément and Kruidenier 1985: 24) – the definition of integrativeness. In contrast, group identity represents a stronger commitment of the self to a cultural group than cultural orientations. Accordingly, past work has shown that migrants' positive outlook toward the mainstream culture is endorsed much less strongly when operationalized in identity rather than in cultural contact and adoption terms (Snauwaert et al. 2003). Clément et al. (1991) also found that identity was different from cultural orientations.

Thus, this study tests the main hypothesis that *experience with the L2 mediates the relation between migrants' mainstream cultural orientation and self-assessed L2 competence*, using path analysis. The next sections rely on the L2 motivation literature and on the sociocultural SLA literature to ground this hypothesis (relations a and b of Figure 1, respectively).

Self Positioning and L2 Experience (Relation a).

Research on L2 motivational factors has established that a favorable disposition toward the L2 ethnolinguistic group predicts greater L2 use and contact with native speakers of the L2. Clément's sociocontextual model (Clément 1980; Clément and Kruidenier 1985), which has received empirical support over the years, postulates that integrativeness influences positively the quantity and quality of contact with the L2 community. Similarly, for MacIntyre and colleagues, people's L2 use depends to a large degree on their attitudes and motivation toward the L2 group (MacIntyre et al. 1998). Indeed, among English speakers in Canada, greater integrative motivation

(MacIntyre and Charos 1996) was related to more frequent French communication, a relation replicated in a study-abroad context in Spain (Hernández 2010). In a large sample of more than 13,000 learners in Hungary, Dörnyei et al. (2006) also showed that a positive outlook toward L2 ethnolinguistic groups (5 target languages were assessed) predicted participants' choice to use the L2.

Although this research took place in different contexts than the current one, similar mechanisms are just as plausible among migrants and with other self positioning variables than motivation or integrativeness. Indeed, in a longitudinal investigation of diaspora adolescent immigrants to Germany, a more positive cultural orientation toward Germans prospectively predicted a greater share of native Germans in participants' peer network over time (Michel et al. 2012). Two longitudinal studies conceptually replicated these results in a Canadian context. International students who reported a more positive orientation toward the mainstream group upon arrival in the country had more numerous mainstream friends and regular interlocutors at later time points (Doucerain et al. 2017). Importantly, the longitudinal directionality of these effects – from mainstream orientation to L2 experience – is consistent with the model hypothesized here. Hence, *a positive relation between migrants' mainstream cultural orientation and their experience with the mainstream language is expected.*

L2 Experience and L2 Competence (Relation b)

According to sociocultural theories, second language learning is a relational activity that is mediated by language itself (Lantolf 2000; Swain 2010). In this view, dialogue and interactions in the L2 are essential for SLA, as “language that has been learned serves to mediate further language learning” (Swain 2002: p.172). Building on Long's Interaction Hypothesis (1996), numerous studies have shown that peer-peer L2 interactions foster L2 learning (Foster & Otha 2005; Philp et al. 2013; Swain et al. 2002). A meta-analysis of more than 40 studies confirmed this positive role of interactions, for both lexical and grammatical L2 target items (Mackey & Goo 2007).

This body of work consists largely of small scale microgenetic studies in classroom or laboratory contexts, often with an emphasis on collaborative dialogue. More broadly in the SLA literature, many studies have shown that more extensive experience with the L2 – variously defined and measured, but conceptualized here as actual L2 usage rather than as contact opportunities – is associated with a range of positive L2 learning outcomes. For example, a productive line of work spearheaded by Flege, has shown that more extensive language experience is beneficial for L2 speech learning (see Bohn and Munro 2007 for an entire book on this research). Lifewise, in the context of study-abroad programs, more numerous social ties with members of the receiving country's mainstream group (Isabelli-Garcia 2006) and greater use of the mainstream language (Hernández 2010, Dewey et al. 2012) were associated with greater L2 oral proficiency. Lybeck (2002) also found that American immigrants who reported a greater share of native Norwegians in their social network demonstrated better pronunciation in Norwegian. Taken together, these data support the hypothesis that *migrants' greater experience with the mainstream language is associated with greater self-assessed competence in that language.*

Unpacking L2 Experience

The literature reviewed so far highlights the heterogeneity in how “L2 experience” is conceptualized and measured, and therefore the importance to unpack the relative contribution of different aspects of L2 experience in fostering L2 competence. At its most rudimentary (and problematic, L2 experience is indexed by a person length of residence in the new language environment. More broadly however, characterizations of L2 experience seem to fall into two categories: amount of language use (e.g., number of hours per day) and nature of social contact (e.g., number of friends who are native speakers of the L2), although the distinction between the two is sometimes blurred, such as for example, in the case of “frequency of L2 contact”. With a goal of “unpacking” L2 experience, this study keeps language use and social contact separate in order to assess their relative

contribution to self-assessed L2 competence. While language use can easily be operationalized as the percentage of the time one uses the L2 each day, social contact demands closer attention, as conceptualizations of social contact are highly heterogeneous across studies (Harwood 2010, Sampasivam and Clément 2014).

Characterizing social contact: The case of friendship. The idea that not all social contacts are created equal is fairly intuitive. For example, most people would agree that interactions with the bus driver or the cashier at the grocery may not benefit L2 competence as much as forming close friendships in the mainstream community. In more formal terms, “significant exposure” (Muñoz 2008, or “serious exposure”) is critical for L2 learning, where significant exposure refers to situations when learners are “able to carry out a variety of speech acts over a wide range of situations and topics, and to participate in social settings effectively dominated by the L2” (Muñoz 2008: 585). As such, friendships with native speakers of the L2 likely represent a particularly good source of significant exposure for migrants. This potential importance of friendship also resonates with the beneficial role of peer-peer collaborative dialogue for L2 learning (Foster and Ohta 2005). As noted earlier, several studies have shown that migrants with more numerous friends in the L2 community report better L2 learning outcomes (Lybeck 2002, Isabelli-Garcia 2006, Hernández 2010, Dewey et al. 2012) – as well as better psychological adjustment in general (Hendrickson et al. 2011). Accordingly, this study focuses on friendship as a form of social contact.

The ease of friendship formation varies across the lifespan, with school and university contexts being most conducive. Indeed, past research shows that friendship network size declines after early adulthood and that time spent with friends is greatest in later childhood and adolescence (Hartup and Stevens 1997). Therefore, how many mainstream friends migrants have may be influenced by whether they immigrated during their school years or later as adults with family obligations of their own. To address this concern, age of immigration is included as a control variable. In addition, this control variable also helps taking into account age effects in one's ease of acquiring a second language, thus acknowledging debated issues of sensitive periods for second language acquisition (Muñoz 2008).

Relation between L2 use and L2 friendships. Although it is important to examine facets of L2 experience separately, language use and number of L2 friendships are likely to be interrelated. Two longitudinal studies showed that more numerous mainstream social relationships prospectively predicted greater L2 use at later times (Jia and Aaronson 2003; Michel et al. 2012), an association replicated cross-sectionally in a study-abroad context (Dewey et al. 2014). Therefore, it is expected that *more numerous friendships in the L2 ethnolinguistic group will be associated with greater L2 use, which will in turn be related to greater self-assessed L2 competence.*

At the same time, some aspects of friendship may uniquely foster L2 competence, beyond its indirect effect through language use. For example, friendships typically provide a safe environment where migrants can experiment using the L2 and expect fewer negative consequences than with other types of social interactions. This may help reduce migrants' language anxiety, or “feeling of tension and apprehension specifically associated with second language contexts” (MacIntyre and Gardner 1994: 284). Given that language anxiety negatively impacts language processing and performance (MacIntyre and Gardner 1994), L2 friendships may cultivate L2 competence by buffering language anxiety. This is also congruent with theories placing anxiety reduction at the heart of migrants' intercultural adjustment (Gudykunst 2005). Therefore, *a direct positive relation between migrants' friendships in the L2 ethnolinguistic group and self-assessed L2 competence is also expected.*

Importance of the Social Context

All arguments and constructs discussed so far characterize the individual only – personal motivations and attitudes, or personal choices to make friends and use a language – reflecting an overarching goal of understanding individual differences in migrants' L2 competence. However, the social context within which this competence develops is important and should not be ignored (Clément 1980). In the original sociocontextual model, context is conceptualized in terms of ethnolinguistic vitality, reflecting its emphasis on long standing

linguistic minorities. This conceptualization is less relevant in the case of migrants, but the importance of context is still paramount in acculturation situations.

Indeed, the social context provides or constrains opportunities for frequent L2 contact and interactions in important ways. For example, migrants living in neighborhoods with a high concentration of heritage language speakers reported lower L2 proficiency (Chiswick and Miller 1996), presumably because of a lack of opportunities to use the L2. Conversely, greater exposure to French at work and in the neighborhood was associated with more frequent French communication among Anglophones in Canada (MacIntyre and Charos 1996). Therefore, there is a need to disentangle the affordances and constraints of the social context, or social processes, from a person's self positioning, reflecting individual processes. In many cases, these effects are confounded. For instance, international students forming friendships in their host university may reflect not only their personal motivation but also structural features of their social context, such as attending classes with local students daily.

Montreal provides a unique opportunity to start disentangling social from individual processes in the relation between mainstream cultural orientation and L2 experience. Indeed, Montreal has the peculiar characteristic of being home to two mainstream cultural groups: Francophone Canadians, and Anglophone Canadians, with French and English being Canada's two official languages. In addition, most of the cities' neighborhoods are still relatively clearly linguistically defined, such that it is possible for one's daily life to take place almost entirely in only one of the two mainstream languages. This configuration allows the recruitment of immigrants whose daily life takes place primarily in an Anglophone setting and to examine their cultural orientation and language experience among Francophone Canadians. In this case, French experience would reflect primarily individual processes, since the affordances and constraints of the social context would be tied to the Anglophone setting.

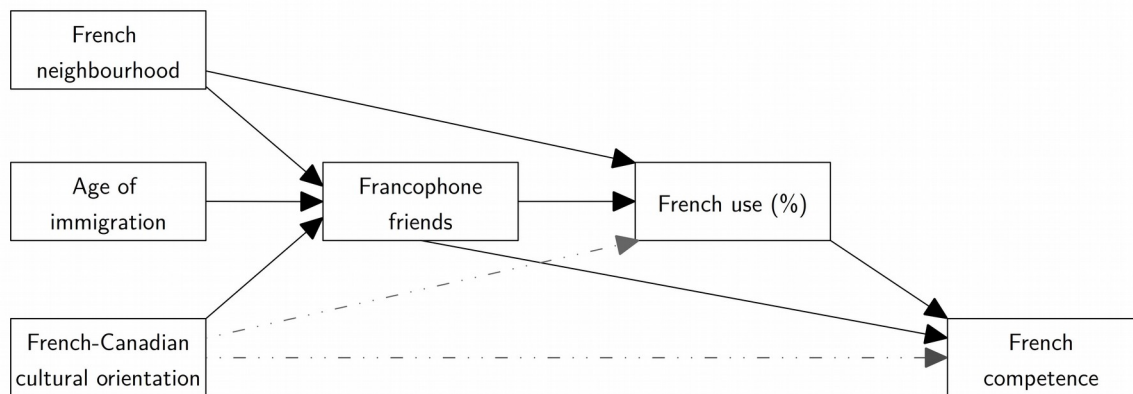


Figure 2 | Hypothesized path model.

Solid lines are hypothesized to be statistically significant, dashed lines are not hypothesized to be statistically significant.

Accordingly, this study focused on immigrant students attending an English-speaking university located in a neighborhood characterized by a middle-class Anglophone and multicultural community. Beyond its ease of accessibility, a student population ensures a certain level of homogeneity in terms of L2 experience opportunities (due to shared lifestyle) and predominance of English in daily life. To further test the specificity of the relation between mainstream cultural orientation and social contact with Francophone Canadians, analyses also controlled for the dominant language of the neighborhood where participants' dwelling is located. The hypothesized path model to be tested is illustrated in Figure 2.

Testing Alternative Models to Further Support the Hypothesis

The research on L2 motivation and on sociocultural L2 learning used to justify the hypothesized path model typically focus on different self-positioning variables than cultural orientations and on different contexts than immigration. Therefore, it is particularly important to test alternative configurations of variables. Showing that the hypothesized model fits the data better than less plausible alternatives would provide even stronger support for the hypothesized model than good model fit on its own.

Mainstream cultural orientation, the self-positioning variable chosen here, is conceptualized as an antecedent of L2 experience and learning outcomes because of its conceptual closeness to integrativeness, which is consistent with the sociocontextual model. In later formulations, this model also posits that L2 confidence predicts identification with the L2 ethnolinguistic group (Clément et al. 2003; Noels et al. 1996). To further support the hypothesized path model and the argument that mainstream cultural orientation is closer to integrativeness than to L2 identity, an alternative configuration of the study variables with mainstream orientation as outcome will also be tested (Alternative model 1 in Figure 3).

Finally, a second alternative model is also considered. This second model exchanges the order of language use and number of friends (Alternative model 2 in Figure 3), reflecting the possibility that using the L2 more often on a daily basis leads to more friendships in the L2 ethnolinguistic group. It is expected that *model fit will be greater for the hypothesized model than for either alternative models*. It is important to note that terms such as “predict”, “lead”, “outcome”, or “antecedent” are used without any implication of causality, but as a descriptor of statistical relations between variables.

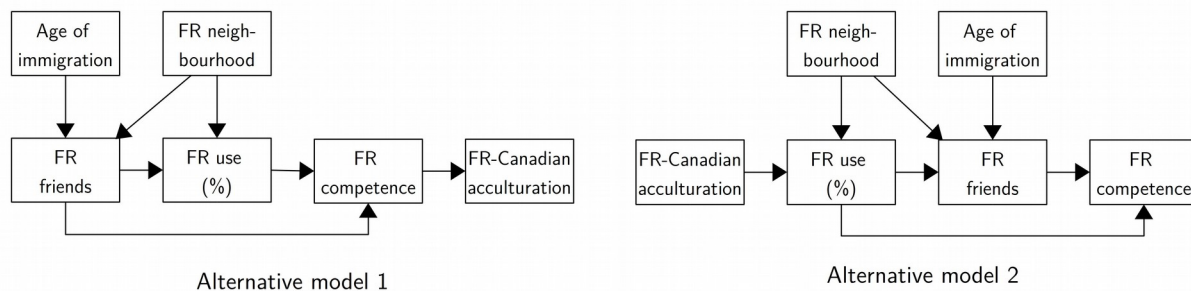


Figure 3 | Alternative path configurations tested.

Summary of the Present Research

This study investigates the hypothesis that migrants' experience with the L2 mediates the relation between mainstream cultural orientation and self-assessed L2 competence, using path analysis. This work also unpacks L2 experience by examining L2 use and L2 social contact (namely, friendships in the mainstream ethnolinguistic group) separately. L2 experience is expected to fully mediate the above relation, so the paths between mainstream orientation and L2 use and between mainstream orientation and L2 competence (dashed lines in Figure 2) are not hypothesized to be statistically significant. In addition, this study takes into account the important role of the social context by selecting a setting that maximizes the centrality of individual differences in cultural orientations and by controlling for the perceived linguistic composition of the neighbourhood. In summary, this study bridges research on second language learning and on acculturation with the goal of better understanding naturalistic L2 learning among migrants. This approach is important because it can inform public policies aimed at fostering migrants' mainstream language learning and integration.

Methods

Participants and Procedure

Participants were 123 multicultural migrant students attending an English-speaking university in Montreal, Quebec, Canada (103 females, $M_{\text{age}} = 24.81$ $SD_{\text{age}} = 7.14$). They represent a subset of a larger study on acculturation and adjustment and met the following inclusion criteria: (1) not having French as a native language; (2) not having French as a dominant language; and (3) having arrived in Canada after the age of 12 (which corresponds to entry into secondary school). These criteria aimed at ensuring a relatively homogeneous sample in terms of language abilities in French, with the age criterion placing participants past the debated potential sensitive period for second language acquisition (Muñoz 2008). The third inclusion criteria also limits the extent to which social contact with Francophone Canadians would be influenced by Francophone schooling (as language laws require that new immigrants attend school in French).

Participants came from a large variety of countries (14 from North America, 27 from South and Central America, 37 from Europe, 8 from Africa, 18 from the Middle East, 7 from South East Asia, 10 from South Asia, and 2 from Oceania). On average, they had lived in Canada for 5.59 years ($SD = 5.98$) and had arrived in the country at age 19.22 ($SD = 5.33$).

Measures

Cultural orientation toward Francophone Canadians. The Quebec version of the Vancouver Index of Acculturation (VIA; Ryder et al. 2000) is a 30-item self-report measure assessing cultural orientations on a Likert scale ranging from 1 (Disagree) to 9 (agree). Ten triplets of items with mirror wording form three subscales assessing orientations toward Anglophone Canadians (VIA-EC), Francophone Canadians (VIA-FC), and the heritage cultural group (VIA-H). In the present case, only the Francophone Canadian subscale ($\alpha = .88$) was used. An example item is “I am comfortable working with typical Francophone Canadian people.” Past research has shown the VIA to be a valid measure of cultural orientations (Ryder et al. 2000, Kang 2006). In addition, a meta-analysis of commonly used acculturation instruments showed that the VIA is also reliable (Huynh et al. 2009).

Friendship with Francophones. Participants reported the number of friends with whom they usually speak French, which was used as the indicator for social contact with Francophone Canadians. Friends were defined to participants as people with whom they can have a 10 minute (minimum) conversation, and with whom they have had contact during the past two years, and with whom they choose to spend free time.

French use. Participants reported the daily percentage of the time that they use French by answering the following prompt: “Estimate, in terms of percentages, how often you use your different languages per day (in all daily activities combined). The total should equal 100%.” (adapted from the Language Experience and Proficiency Questionnaire, LEAP-Q; Marian et al. 2007). The percentage value reported for French was used as the French use score.

Self-assessed French competence. Four in-house items ($\alpha = .95$) measured participants’ self-assessment of ability to read, understand, write, and speak French on a 7-point rating scale ranging from “(1) Very poor” to “(7) Native-like.” In addition to these self-assessments, six in-house items ($\alpha = .97$) assessed participants’ comfort in using French in linguistically demanding situations on a 7-point rating scale ranging from “(1) Not comfortable at all” to “(7) As comfortable as a native speaker.” A sample situation was: “telling jokes to a group of French speaking friends/colleagues.” A single composite “self-assessed French competence” score was created by taking the mean of both measures, which were highly correlated ($r = .83$).

Dominant language of the neighborhood. Participants indicated the dominant language of the

neighborhood where they live. This variable was recoded as a dichotomous variable, such that coefficients in the results section reflect the effect of living in a predominantly French-speaking neighborhood compared to neighborhoods with other linguistic characteristics.

Analysis

The hypothesized path analysis model was tested using the R structural equation modeling package *lavaan* (version 0.5-17; Rosseel 2012). Univariate outliers were winsorized, whereby extreme values outside three median absolute deviations around the median were brought within that interval (Leys et al. 2013). One multivariate outlier was excluded from the analysis based on its robust Mahalanobis distance (Filzmoser et al. 2005) at a stringent level of $p < .001$, leaving 122 participants for the analysis. The issue of missing data was minimal: data on age of arrival was missing for three participants and one participant did not provide information for French use. The assumption that data are missing completely at random (MCAR) was reasonable ($p = .80$ for Little's test), so full information maximum likelihood (FIML) was used to deal with missing data. Visual inspection and tests of multivariate normality revealed that the data were not multivariate normal, so all path analyses used the MLR estimator, which addresses issues of non-normality by computing standard errors based on the robust Huber-White approach (Kaplan 2009).

Results

Descriptive Results

On average, participants reported a moderately positive orientation toward Francophone Canadians ($M = 5.53$, $SD = 1.51$) and had 2.84 ($SD = 3.26$) Francophone friends. Fifty participants (41%) lived in a predominantly French-speaking neighborhood. Participants' percentage of French use averaged 8.88% ($SD = 9.07$) of the time and their level of self-assessed French competence was fair ($M = 3.45$, $SD = 1.68$). On average, they reported a moderately positive cultural orientation toward Francophone Canadians ($M = 5.53$, $SD = 1.51$). Table 1 presents zero-order correlations and covariances of the study variables. The zero-order correlation between VIA-FC scores and L2 competence scores was positive and statistically significant ($r = .18$, 95% CI = [.003; .35]), suggesting that participants with a more positive outlook on Francophone Canadians also feel more proficient and comfortable in French.

Table 1 | Descriptive Statistics for the Study Variables

Variable	1	2	3	4	5
1. Age of arrival	28.36	-0.80	-3.85	-7.47	-2.18
2. Francophone Canadian orientation	-.10	2.28	1.93	3.67	0.46
3. Francophone friends	-.21*	.38***	11.29	16.46	2.79
4. French use (%)	-.15	.27**	.54***	82.23	10.53
5. Self-assessed French competence	-.24**	.18*	.49***	.69***	2.84

Note. Diagonal (boldfaced): variances; lower triangle: correlations; upper triangle: covariances.

Testing the Hypothesized Path Model

Fit indices revealed an excellent fit of the model shown in Figure 2 to the data (CFI = .997; TLI = .99; RMSEA = .04; SRMR = .03; $\chi^2(df = 3) = 3.46, p = .33$). In addition, inspection of the residual correlation matrix revealed that overall, residual correlations were appreciably lower than .10 (12 out of 15 < .00001). The only exception was the residual correlation between age of arrival and self-assessed French competence scores ($r = -.14$). Adding a link between these two variables decreased overall model fit and did not improve the residual correlation matrix. Therefore, given that the offending residual correlation was not very high and that age of arrival was only included as a covariate, no further modifications were attempted.

Table 2 shows the estimated path coefficients and Figure 4 displays the standardized solution in a more visual form. All paths results were in accordance with the hypothesized model, with one exception: the control variable “language of neighborhood” was not statistically associated with French use. Participants who arrived in Canada at a younger age ($\beta = -.18$) and who lived in a predominantly Francophone neighbourhood ($\beta = .23$) reported significantly more Francophone friends. Controlling for age of arrival and language of the neighborhood, a more positive orientation toward Francophone Canadians (VIA-FC) was associated with significantly more Francophone friends ($\beta = .33$). Together, these variables accounted for about a quarter of the variance in Francophone friends. In addition, supporting the importance of the Francophone Canadian cultural orientation, $\beta_{VIA-FC \rightarrow Friends}$ was 43% greater than $\beta_{Neighborhood\ language \rightarrow Friends}$ and 83% greater than $\beta_{Age\ of\ arrival \rightarrow$

Friends.

In turn, participants who reported more numerous Francophone friends used French significantly more often ($\beta = .49$). However, living in a French neighborhood was not statistically related to the frequency of French use. Together, predictors of French use accounted for roughly a third of the variance in that variable. Finally, both French use ($\beta = .60$) and Francophone friends ($\beta = .19$) were positively and statistically significantly associated with self-assessed French competence, showing that participants who used French more often and had more Francophone friends also felt more proficient and comfortable in French. Notably, $\beta_{Use \rightarrow Competence}$ was more than three times larger than $\beta_{Friends \rightarrow Competence}$, suggesting that language use may contribute more to self-assessed language competence than friendships in that language. Collectively, predictors of self-assessed French competence accounted for half of the variance in that variable, a large effect size.

Table 2 | Path Coefficients of the Hypothesized Path Model

Path	B	SE	p	CI low	CI high	R ²
FR friends ← VIA-FC	0.73	0.15	<.001	0.44	1.02	.23
FR friends ← Age at arrival	-0.12	0.04	.001	-0.19	-0.04	
FR friends ← FR neighbourhood	1.55	0.59	.01	0.41	2.70	
FR use ← FR friends	1.32	0.24	<.001	0.84	1.79	.30
FR use ← VIA-FC	0.42	0.47	.38	-0.51	1.35	
FR use ← FR neighbourhood	1.37	1.49	.36	-1.56	4.29	
FR competence ← FR use	0.11	0.01	<.001	0.08	0.14	.50
FR competence ← FR friends	0.10	0.04	.02	0.01	0.18	
FR competence ← VIA-FC	-0.06	0.07	.42	-0.20	0.08	

Note. CI low = lower limit of 95% confidence interval of B values, CI high = upper limit of 95% confidence interval of B values.

Direct vs. Indirect Effects of Francophone Canadian Acculturation

Further supporting the hypotheses, $\beta_{\text{VIA-FC} \rightarrow \text{Use}}$ was not statistically significant and removing that path did not change the proportion of explained variance in French use ($R^2 = .29$ in both cases). Further, the indirect effect of VIA-FC scores on French use was $\beta = 0.17$ and statistically significant ($B = 1.00$, $SD = 0.26$, $p < .001$, $95\% \text{ CI} = [0.53; 1.52]$), which is more than twice as large as the statistically non-significant $\beta_{\text{VIA-FC} \rightarrow \text{Use}}$. These results suggest that the number of Francophone friends fully mediated the relation between Francophone Canadian cultural orientation and French use. Similarly, $\beta_{\text{VIA-FC} \rightarrow \text{Competence}}$ was also statistically non-significant, and removing that path decreased the proportion of explained variance in self-assessed French competence by only 1% ($R^2 = .49$ when removing the path). In addition, the indirect effect of VIA-FC scores on self-assessed French competence was $\beta = 0.21$ and statistically significant ($B = 0.23$, $SD = 0.06$, $p < .001$, $95\% \text{ CI} = [0.10; 1.35]$), compared to $\beta = -0.05$ for the direct effect, which was not statistically significant. These results suggest that the relation between Francophone Canadian cultural orientation and self-assessed French competence is fully mediated by the intervening variables. Finally, dropping the paths between VIA-FC and French use and between VIA-FC and self-assessed French competence resulted in a slight increase in goodness of fit (for the simpler model, $\text{CFI} = .998$; $\text{TLI} = .996$; $\text{RMSEA} = .02$; $\text{SRMR} = .03$; $\chi^2(df = 6) = 6.27$, $p = .39$; reduction in $\text{AIC} = 2.73$; reduction in $\text{BIC} = 8.34$).

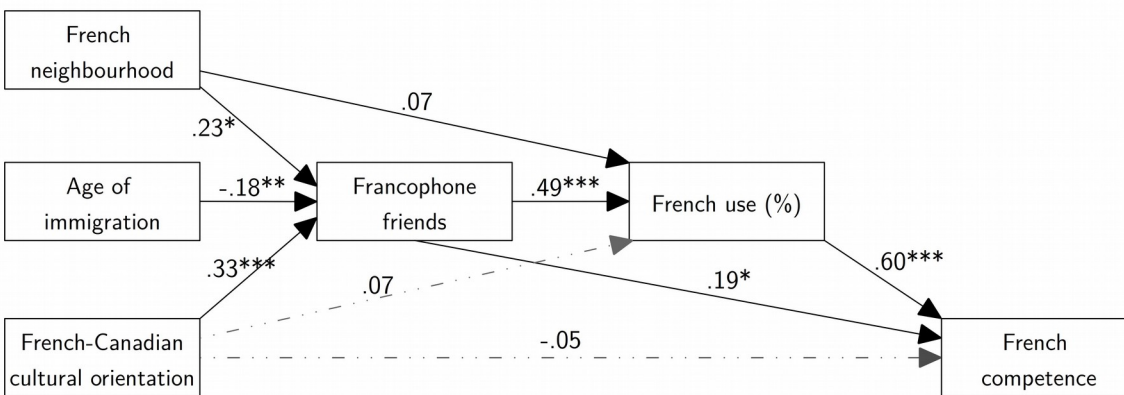


Figure 4 | Standardized path coefficients of the hypothesized model.

Alternative Models

Alternative model 1 considered the possibility that Francophone Canadian cultural orientation is an outcome rather than a predictor of self-assessed French competence. Fit indices for this model demonstrated a poorer fit to the data ($\text{CFI} = .91$; $\text{TLI} = .81$; $\text{RMSEA} = .12$; $\text{SRMR} = .08$; $\chi^2(df = 7) = 20.17$, $p = .005$; increase in $\text{AIC} = 16.67$; increase in $\text{BIC} = 17.24$) compared to the hypothesized model. Alternative model 2 simply exchanged the order of percentage of French use and Francophone friends, in line with the possibility that using French more often on a daily basis may lead to forming more friendships among Francophones. Here too, fit indices for this alternative model revealed a poorer fit to the data ($\text{CFI} = .92$; $\text{TLI} = .81$; $\text{RMSEA} = .13$; $\text{SRMR} = .06$; $\chi^2(df = 5) = 16.03$, $p = .007$; increase in $\text{AIC} = 8.00$; increase in $\text{BIC} = 2.40$). By comparison, fit indices values were excellent for the hypothesized model. These results fully support the secondary hypothesis that the hypothesized path configuration would fit the data better than alternative configurations.

Discussion

The present study tested the overarching hypothesis that experience with the L2 mediates the relation between cultural orientation toward the mainstream group and self-assessed L2 competence among migrants. The path analysis results, based on a sample of relatively recent immigrant students to Montreal, fully supported this hypothesis. The positive zero-order correlation between mainstream orientation and L2 competence vanished in the full mediation model, and the indirect effect between these two variables through L2 social contact and L2 use was statistically significant. In simple terms, these findings mean that participants with a more positive outlook toward Francophone Canadians formed more numerous friendships with Francophones, which were then associated with using French more often during the day. In turn, using French more frequently was associated with a self-assessment of greater skills and comfort in French.

In some ways, this tripartite relation between mainstream orientation, L2 experience and L2 competence is a “Catch-22” situation. Having experience with the L2 is linked to greater L2 competence, but competence is required in the first place to be able to use the L2 and form social ties with speakers of that language. Considering bi-directional links between these variables provides a plausible solution to this scenario (see also Trofimovich and Turuševa 2015 for a similar argument). Once migrants reach a minimum level of L2 proficiency, they can start socially interacting in the mainstream community. As they practice the L2, they become more competent using the L2, which affords further social interactions (Swain 2002). Similarly, a positive cultural orientation toward the mainstream group can provide the motivation to socially participate in that group. As migrants are in contact more frequently with speakers of the L2 and become more proficient in the L2, they may gradually develop a sense of affiliation with members of that group, as proposed by later formulations of Clément's sociocontextual model (e.g., Noels and Clément 1996). In turn, these feelings of belonging may lead to more openness toward engaging in that group, which then fuels further social participation in the mainstream group. Longitudinal data with frequent sampling would be necessary to provide evidence for such feedback loops over time. In particular, longitudinal designs that follow migrants very shortly after arrival could help clarify the temporal relation between variables. Such designs are resource-intensive and therefore not always an option, but they represent an important future research direction. The feedback loops proposed here do not preclude the influence of other forces, such as for example instrumental motivation, in driving social participation; these alternative influences were simply not the focus of this study.

A somewhat surprising result was the absence of a direct relation between the dominant language of the neighborhood and French use. Indeed, a logical hypothesis would be to expect that a primarily Francophone geographical community would be associated with more French use (e.g., while shopping, eating out, etc.). The specific context of Montreal may provide a simple explanation for this pattern. Indeed, Francophone Montrealers are typically quite functional in English, especially in the retail/food/service industries. As a result, Francophones typically switch to English as soon as they perceive the slightest difficulty in their interlocutor's ability to speak French, which may have impacted how much participants living in Francophone neighborhoods use French during their daily activities. This phenomenon of over-accommodation by Francophones may decrease the ability of newly arrived migrants to learn French in Montreal. Raising public awareness of the importance of tolerance for learner French is thus an important applied implication of the current research.

More broadly, this surprising result (no direct relation between neighborhood dominant language and French use) begs a closer examination of language dynamics between Francophones and immigrants in public spaces in Montreal. The preliminary explanation proposed here fits with a motive of linguistic convergence within a Communication Accommodation Theory framework (Giles 2008). In the context of intergroup relations between Francophones and Anglophones in Quebec, past research has indeed shown that Francophones overwhelmingly converge to the linguistic needs of interlocutors (Bourhis et al. 2007). Future research should examine how accommodation plays out with migrants - with important applied implications for migrants' integration.

The current results show that the number of friendships was associated with self-assessed L2 competence, both indirectly through L2 use and through a direct link. They establish the unique importance of friendship as a form of social contact, independently of its potential effects on L2 use. The suggestion that friendship provides a safe space to experiment with the L2, thereby reducing L2 anxiety, is a plausible explanation, but whether it is true and what other mechanisms are at play is an open empirical question. Also, it would be important to examine whether characteristics of migrants' friendships moderate the positive L2 competence – L2 friendship link. For example, do migrants accrue more L2 benefits from more intimate friendships?

In future research, it will also be important to investigate more closely other forms of L2 social contact and whether they mediate the relation between L2 self positioning and L2 outcomes in similar ways. For example, for many migrants preoccupied with securing an income and taking care of a family, friendship may not be a central concern and social ties with work colleagues may be more relevant. More generally, unpacking how different facets of L2 experience are related to L2 outcomes is essential. In spite of the centrality of L2 experience and social contact in the SLA literature, surprisingly little attention has been devoted to careful and detailed examinations of social contact (Harwood 2010, Ranta and Meckelborg 2013, Simpasivam and Clément 2014). Yet, as noted by Harwood (2010: 148), “the specific linguistic and interactive dynamics of the contact situation *matter*.” He proposed that the different types of social contact fall along two orthogonal dimensions: the extent to which the self is involved in the contact situation (e.g., being involved in an interaction vs. observing an interaction), and the richness of the contact experience (e.g., computer mediated interaction vs. face-to-face interaction). Different forms of L2 social contact may foster different aspects of L2 competence to different degrees, and Harwood's typology represents a promising starting point for future work aimed at unpacking the role of L2 experience. By distinguishing between language use and a specific form of social contact – L2 friendships – this study took a step in that direction.

To date, research in SLA has focused on the quantity, and to a lesser extent on the quality, of L2 social contact (Simpasivam and Clément 2014). However, social network theory emphasizes that people are embedded in webs of social relations (Borgatti et al. 2009) and that the *structure* of the system influences and places constraints on individual actors within it, in other words, that structure matters. As a case in point, in a study of immigrant students, Doucerain et al. (2015) found that the interconnectedness in migrants' L2 social network was associated with communication-related acculturative stress, whereas the size of their network was not. Yet, this structural approach has received surprisingly little empirical attention in areas related to L2 learning. Acculturative stress represents an important liability for immigrants' well-being, and more research is needed to better understand how social mechanisms of L2 learning could alleviate important immigration outcomes such as acculturative stress.

This study focused on L2 experience as a mechanism underlying the relation between L2 self positioning and L2 competence among migrants, but in future research it will be important to examine other potential moderators/mediators, including constructs such as perceived discrimination, which are central to research on acculturation. Similarly, the social context within which L2 learning takes place plays an important role in shaping the learning process (MacIntyre and Charos 1996), a concern also central to research on acculturation (Doucerain et al. 2013). This study took into account the influence of the social context to some extent, but a richer investigation of contextual influences would be desirable. For example, what types of daily L2 interactions lead to most improvement in L2 proficiency? Better understanding what structural features of a person's environment are conducive to L2 learning could yield important practical recommendations regarding how to promote migrants' L2 learning in their daily life. With these goals in mind, the study of naturalistic adult L2 learning among migrants would greatly benefit from a better integration of SLA research in applied linguistics and research on acculturation in cross-cultural psychology, as these two fields emphasize different and complementary facets of a similar phenomenon. Unfortunately, although becoming a successful speaker of the mainstream language is relevant to both, both strands of research have remained largely separate. By focusing on L2 outcomes among migrants and on cultural orientations, a key construct in acculturation research, this study contributes to a limited body of work attempting to bridge both lines of enquiry (e.g., Noels and

Clément 1996, Gallagher 2013).

Despite this study's contributions, some limitations need to be discussed. Analytically, this study would have been stronger with a full structural equation modeling approach instead of a simple path analysis. While numerous studies rely on path analysis, future research should favor analytic procedures with variables modeled as latent constructs. Moreover, compared to using a community sample, relying on a student sample limits the generalizability of the results. Indeed, the study focused on L2 friendships as a form of social contact, a more central concern for young adults than for people managing work and family responsibilities. It is unclear whether L2 friendships would contribute to L2 competence to the same extent in the latter case. Also, the sample included a majority of females (84%). In light of documented differences in friendship attributes between males and females (Hartup and Stevens 1997), this skewed distribution is also a definite limitation as the results might differ in a more male-dominated sample. In addition, the meaning of friendship differs across cultural contexts (Baumgarte 2013). Given the cultural heterogeneity present in this sample, it is possible that different participants used different criteria concerning what counts as a friend, thus introducing biases in the friendship numbers reported. A second limitation concerns the use of a cross-sectional design, which precludes any conclusions on the temporal order of effects. Using a self-report measure of L2 competence is also limiting to some extent. Although as argued by Clément et al. (2003), perceptions of competence play a considerable role in migrants' communication behaviours, objective aspects such as accent or fluency also determine to what degree a migrant's interlocutors will understand and be willing to pursue communication. In future research, it would be important to also include objective measures of L2 skills. Similarly, the measure of French use employed here was relatively crude. Participants are asked to estimate on average how often they use French daily, but it is unclear how accurate these estimates are. Using more sensitive methods, such as for example a detailed language log administered over several days (e.g., Martinsen et al. 2010), would be desirable.

Meanwhile, this study contributes to a body of work focusing on the role of social factors in SLA in general and on the role of learners self positioning with respect to the L2 ethnolinguistic group in particular. The results provide evidence of a positive link between migrants' mainstream cultural orientation and self-assessed L2 competence, and show that migrants' L2 experience mediates this relation. In addition, the present work underscores the importance of unpacking the relative contribution of various aspects of L2 experience to L2 learning. More broadly, this study contributes to the literature on naturalistic L2 learning among adult migrants, a context understudied in SLA research. This domain of inquiry would greatly benefit from integrating SLA research in applied linguistics and research on acculturation in cross-cultural psychology, two research strands that unfortunately remain largely separate in spite of their complementarity.

References

- Berry J. W.** 2005. 'Acculturation: Living successfully in two cultures.' *International Journal of Intercultural Relations* 296: 697–712. doi:10.1016/j.ijintrel.2005.07.013
- Block D.** (2003). *The social turn in second language acquisition*. Georgetown University Press.
- Bohn O.-S.** and **M. J. Munro** (Eds.). 2007. *Language experience in second language speech learning: In honor of James Emil Flege*. John Benjamins.
- Borgatti S. P., A. Mehra, D. J. Brass and G. Labianca.** 2009. 'Network analysis in the social sciences.' *Science* 323/5916: 892–895. doi:10.1126/science.1165821
- Bourhis R. Y., E. Montaruli and C. E. Amiot.** 2007. Language planning and French-English bilingual communication: Montreal field studies from 1977 to 1997. *International Journal of the Sociology of Language*, 185: 187-224.
- Chiswick B. R.** and **P. W. Miller.** 1999. 'Language skills and earnings among legalized aliens.' *Journal of Population Economics* 12/1: 63–89.
- Clément R.** 1980. 'Ethnicity contact and communicative competence in a second language' in Giles H., W. P. Robinson and P. M. Smith (eds): *Language: Social psychological perspectives* pp. 147–154. Pergamon.
- Clément R.** and **B. G. Kruidenier.** 1985. 'Aptitude attitude and motivation in second language proficiency: A test of Clément's model.' *Journal of Language and Social Psychology* 4/1: 21–37. doi:10.1177/0261927X8500400102
- Clément R., S. C. Baker and P. D. MacIntyre.** 2003. 'Willingness to communicate in a second language: The effects of context norms and vitality.' *Journal of Language and Social Psychology* 22/2: 190–209.

doi:10.1177/0261927X03022002003

- Clément R., A. Sylvestre and K. A. Noels.** 1991. 'Modes d'acculturation et identité située: le cas des immigrants haïtiens de Montréal.' *Études ethniques canadiennes* 23: 81-94.
- Coupland N., H. Bishop, A. Williams, B. Evans, and P. Garrett.** 2005. 'Affiliation engagement language use and vitality: Secondary school students' subjective orientations to Welsh and Welshness.' *International Journal of Bilingual Education and Bilingualism* 8/1: 1-24.
- Dewey D. P., J. Bown, W. Baker, R. A. Martinsen, C. Gold and D. Eggett.** 2014. 'Language use in six study abroad programs: An exploratory analysis of possible predictors.' *Language Learning* 64/1: 36-71. doi:10.1111/lang.12031
- Dewey D. P., J. Bown and D. Eggett.** 2012. 'Japanese language proficiency social networking and language use during study abroad: Learners' perspectives.' *Canadian Modern Language Review* 68/2: 111-137. doi:10.3138/cmlr.68.2.111
- Dörnyei Z., K. Csizér and N. Németh.** 2006. *Motivation language attitudes and globalisation: A Hungarian perspective.* Multilingual Matters.
- Dörnyei Z. and E. Ushioda.** 2009. *Motivation language identity and the L2 self.* Multilingual Matters.
- Doucercain M., J. Dere, and A. G. Ryder.** 2013. 'Travels in hyper-diversity: Multiculturalism and the contextual assessment of acculturation.' *International Journal of Intercultural Relations* 37/6: 686-699. doi:10.1016/j.ijintrel.2013.09.007
- Doucercain M. M., S. S. Deschênes, J.-P. Gouin, C. E. Amiot and A. G. Ryder.** 2017. 'Initial mainstream cultural orientations predict early social participation in the mainstream cultural group.' *Personality and Social Psychology Bulletin* 43/2: 245-258. doi:10.1177/0146167216679642
- Doucercain M. M., R. S. Varnaamkhaasti, N. Segalowitz, and A. G. Ryder.** 2015. 'Second language social networks and communication-related acculturative stress: the role of interconnectedness.' *Frontiers in Psychology* 6: 1111. doi:10.3389/fpsyg.2015.01111
- Filzmoser P., R. G. Garrett, and C. Reimann.** 2005. 'Multivariate outlier detection in exploration geochemistry.' *Computers & Geosciences* 31/5: 579-587.
- Firth A. and J. Wagner.** 2007. 'Second/foreign language learning as a social accomplishment: Elaborations on a reconceptualized SLA.' *The Modern Language Journal* 91: 800-819. doi:10.1111/j.1540-4781.2007.00670.x
- Foster P. and A. S. Ohta.** 2005. 'Negotiation for meaning and peer assistance in second language classrooms.' *Applied Linguistics* 26/3: 402-430.
- Gallagher H. C.** 2013. 'Willingness to communicate and cross-cultural adaptation: L2 communication and acculturative stress as transaction.' *Applied Linguistics* 34/1: 53-73. doi:10.1093/applin/ams023
- Gardner R. C.** 2001. 'Integrative motivation and second language acquisition' Dörnyei Z. (ed.): *Motivation and Second Language Acquisition.* National Foreign Languages Resource Center.
- Gardner R. C. and W. E. Lambert.** 1959. 'Motivational variables in second-language acquisition.' *Canadian Journal of Psychology/Revue Canadienne de Psychologie* 13/4: 266-272.
- Gatbonton E. and P. Trofimovich.** 2008. 'The ethnic group affiliation and L2 proficiency link: Empirical evidence.' *Language Awareness* 17/3: 229-248. doi:10.2167/la464.0
- Gatbonton E., P. Trofimovich and N. Segalowitz.** 2011. 'Ethnic group affiliation and patterns of development of a phonological variable.' *The Modern Language Journal* 95/2: 188-204. doi:10.1111/j.1540-4781.2011.01177.x
- Giles H.** 2008. 'Communication accommodation theory' in Baxter L. A. and D. O. Braithwaite (eds): *Engaging theories in interpersonal communication: Multiple perspectives.* Sage Publications.
- Gudykunst W. B.** 2005. 'An Anxiety/Uncertainty Management AUM theory of strangers' intercultural adjustment' in Gudykunst W. B. (ed.): *Theorizing about intercultural communication.* Sage.
- Hartup W. W. and N. Stevens.** 1997. 'Friendships and adaptation in the life course'. *Psychological Bulletin*, 121/3: 355-370.
- Harwood J.** 2010. 'The contact space: A novel framework for intergroup contact research.' *Journal of Language and Social Psychology* 29/2: 147-177. doi:10.1177/0261927X09359520
- Hendrickson B., D. Rosen and R. K. Aune.** 2011. 'An analysis of friendship networks social connectedness homesickness and satisfaction levels of international students.' *International Journal of Intercultural Relations* 35/3: 281-295. doi:10.1016/j.ijintrel.2010.08.001
- Henning-Lindblom A. and K. Liebkind.** 2007. 'Objective ethnolinguistic vitality and identity among Swedish-speaking youth.' *International Journal of the Sociology of Language* 2007/187-188: 161-183.
- Hernández T. A.** 2010. 'The relationship among motivation interaction and the development of second language oral proficiency in a study-abroad context.' *The Modern Language Journal* 94/4: 600-617. doi:10.1111/j.1540-4781.2010.01053.x
- Hochman O. and E. Davidov.** 2014. 'Relations between second-language proficiency and national identification: The case of immigrants in Germany.' *European Sociological Review* 30/3: 344-359. doi:10.1093/esr/jcu043
- Huynh Q.-L., R. T. Howell, and V. Benet-Martínez.** 2009. 'Reliability of bidimensional acculturation scores: A meta-analysis.' *Journal of Cross-Cultural Psychology*, 40/2: 256-274. doi:10.1177/0022022108328919
- Isabelli-García C.** 2006. 'Study abroad social networks motivation and attitudes: Implications for second language acquisition' in DuFon M. A. and E. Churchill (eds.): *Language learners in study abroad contexts.* Multilingual Matters.
- Jia G. and D. Aaronson.** 2003. 'A longitudinal study of Chinese children and adolescents learning English in the United States.' *Applied Psycholinguistics* 24/1: 131-161.

- Jiang M., R. J. Green, T. B. Henley, and W. G. Masten.** 2009. 'Acculturation in relation to the acquisition of a second language.' *Journal of Multilingual and Multicultural Development* 30/6: 481–492. doi:10.1080/01434630903147898
- Kang S.** 2006. 'Measurement of acculturation, scale formats, and language competence: Their implications for adjustment.' *Journal of Cross-Cultural Psychology*, 37/6: 669–693. doi:10.1177/0022022106292077
- Kaplan D.** 2009. *Structural equation modeling: Foundations and extensions*. Sage.
- Lantolf J. P.** 2000. *Sociocultural theory and second language learning*. Oxford University Press.
- Leys C., O. Klein, P. Bernard and L. Licata.** 2013. 'Detecting outliers: Do not use standard deviation around the mean use absolute deviation around the median.' *Journal of Experimental Social Psychology* 49/4: 764–766. doi:10.1016/j.jesp.2013.03.013
- Lybeck K.** 2002. 'Cultural identification and second language pronunciation of Americans in Norway.' *The Modern Language Journal* 86/2: 174–191.
- Long M. H.** 1996. 'The role of the linguistic environment in second language acquisition' in Doughty C. J. and M. H. Long (eds): *Handbook of second language acquisition*. Blackwell Publishing.
- MacIntyre P. D. and C. Charos.** 1996. 'Personality attitudes and affect as predictors of second language communication.' *Journal of Language and Social Psychology* 15/1: 3–26. doi:10.1177/0261927X960151001
- MacIntyre P. D., Z. Dörnyei, R. Clément, and K. Noels.** 1998. 'Conceptualizing willingness to communicate in a L2: A situational model of L2 confidence and affiliation.' *The Modern Language Journal* 82/4: 545–562. doi:10.2307/330224
- MacIntyre P. D. and R. C. Gardner.** 1994. 'The subtle effects of language anxiety on cognitive processing in the second language.' *Language Learning* 44/2: 283–305.
- Mackey A. and J. Goo.** 2007. 'Interaction research in SLA: A meta-analysis and research synthesis' in Mackey A. (ed): *Conversational interaction in second language acquisition: a series of empirical studies*. Oxford University Press.
- Marian V., H. K. Blumenfeld, and M. Kaushanskaya.** 2007. 'The Language Experience and Proficiency Questionnaire LEAP-Q: Assessing language profiles in bilinguals and multilinguals.' *Journal of Speech Language and Hearing Research* 50/4: 940–967. doi:10.1044/1092-43882007/067
- Martinsen R. A., W. Baker, D. P. Dewey, J. Bown, and C. Johnson.** 2010. 'Exploring diverse settings for language acquisition and use: Comparing study abroad service learning abroad and foreign language housing.' *Applied Language Learning* 20/1-2: 45–69.
- Masgoret A.-M. and R. C. Gardner.** 2003. 'Attitudes motivation and second language learning: A meta-analysis of studies conducted by Gardner and associates.' *Language Learning* 53/S1: 167–210.
- Michel A., P. F. Titzmann and R. K. Silbereisen.** 2012. 'Language shift among adolescent ethnic German immigrants: Predictors of increasing use of German over time.' *International Journal of Intercultural Relations* 36/2: 248–259. doi:10.1016/j.ijintrel.2011.10.002
- Muñoz C.** 2008. 'Symmetries and asymmetries of age effects in naturalistic and instructed L2 learning.' *Applied Linguistics* 29/4: 578–596. doi:10.1093/applin/amm056
- Ng E., K. Pottie and D. Spitzer.** 2011. 'Official language proficiency and self-reported health among immigrants to Canada.' *Health Reports* 22/4: 15–23.
- Noels K. A. and R. Clément.** 1996. 'Communicating across cultures: Social determinants and acculturative consequences.' *Canadian Journal of Behavioural Science/Revue Canadienne Des Sciences Du Comportement* 28/3: 214–228. doi:10.1037/0008-400X.28.3.214
- Noels K. A., G. Pon and R. Clément.** 1996. 'Language identity and adjustment: The role of linguistic self-confidence in the acculturation process.' *Journal of Language and Social Psychology* 15/3: 246–264. doi:10.1177/0261927X960153003
- Norton B.** 2013. *Identity and language learning: Extending the conversation*. Multilingual Matters.
- Ortega, L.** 2011. 'SLA after the social turn: Where cognitivism and its alternatives stand' in Atkinson D. (ed.): *Alternative approaches in second language acquisition*. Routledge.
- Pavlenko A. and A. Blackledge.** Eds. 2004. *Negotiation of identities in multilingual contexts*. Multilingual Matters.
- Philp J., R. Adams and N. Iwashita.** Eds. 2013. *Peer interaction and second language learning*. Routledge.
- Pisarenko O.** 2006. 'The acculturation modes of Russian speaking adolescents in Latvia: Perceived discrimination and knowledge of the Latvian language.' *Europe-Asia Studies* 58/5: 751–773. doi:10.1080/09668130600732100
- Polat N. and D. L. Schallert.** 2013. 'Kurdish adolescents acquiring Turkish: Their self-determined motivation and identification with L1 and L2 communities as predictors of L2 accent attainment.' *The Modern Language Journal* 97/3: 745–763. doi:10.1111/j.1540-4781.2013.12033.x
- Ranta L. and A. Meckelborg.** 2013. 'How much exposure to English do international graduate students really get? Measuring language use in a naturalistic setting.' *Canadian Modern Language Review/La Revue Canadienne Des Langues Vivantes* 69/1: 1–33.
- Rosseel Y.** 2012. 'lavaan: An R package for structural equation modeling.' *Journal of Statistical Software* 48/2: 1–36.
- Ryder A. G., L. E. Alden and D. Paulhus.** L. 2000. 'Is acculturation unidimensional or bidimensional? A head-to-head comparison in the prediction of personality self-identity and adjustment.' *Journal of Personality and Social Psychology* 79/1: 49–65. doi:10.1037/0022-3514.79.1.49
- Sampasivam S. and R. Clément.** 2014. 'The dynamics of second language confidence: Contact and interaction' in Mercer S. and M. Williams (eds.): *Multiple Perspectives on the Self in SLA*. Multilingual Matters.
- Segalowitz N., E. Gathbonton and P. Trofimovich.** 2009. 'Links between ethnolinguistic affiliation self-rated motivation and

second language fluency' in Dörnyei Z. and E. Ushioda (eds.): *Motivation language identity and the L2 self*. Multilingual Matters.

Snauwaert B., B. Soenens, N. Vanbeselaere, and F. Boen. 2003. 'When Integration Does Not Necessarily Imply Integration Different Conceptualizations of Acculturation Orientations Lead to Different Classifications.' *Journal of Cross-Cultural Psychology*, 34: 231–239.

Stoessel K., P. F. Titzmann, and R. K. Silbereisen. 2012. 'Young diaspora immigrants' attitude and behavior toward the host culture: The role of cultural identification.' *European Psychologist* 17/2: 143–157. doi:10.1027/1016-9040/a000113

Swain M., L. Brooks, and A. Tocalli-Beller. 2002. 'Peer-peer dialogue as a means of second language learning.' *Annual Review of Applied Linguistics* 4: 171–185.

Trofimovich P. and L. Turuševa. 2015. 'Ethnic identity and second language learning.' *Annual Review of Applied Linguistics* 35: 234–252. doi:10.1017/S0267190514000166