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## International Journal of Intercultural Relations

journal homepage: [www.elsevier.com/locate/ijintrel](http://www.elsevier.com/locate/ijintrel)

# Assessing attitudes towards mutual acculturation in multicultural schools: Conceptualisation and validation of a four-dimensional mutual acculturation attitudes scale

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## ARTICLE INFO

## Keywords:

Mutual acculturation  
Acculturation attitudes  
Mutual intercultural relations  
Multicultural schools  
Scale validation  
Exploratory structural equation modelling

## ABSTRACT

Assessment of acculturation attitudes usually has focused on the importance of two dimensions: first, immigrants' maintenance of cultural heritage and, second, immigrants' adoption of the majority culture. Because acculturation is a reciprocal interaction, we extended a bidimensional scale to four dimensions to assess mutual acculturation. Given the importance of the social context for acculturation and schools as a crucial context for immigrant pupils' acculturation, the scale extension was validated within the context of school. We hypothesised that acculturation attitudes are held not only towards immigrant pupils but also towards native pupils and towards schools' responsibility to support intercultural contact. The study sample comprised 364 secondary school pupils in Swiss multicultural schools. Using exploratory structural equation modelling, we validated four distinct dimensions of acculturation attitudes: attitudes towards *immigrant pupils'* (a) *heritage culture maintenance* and (b) *adoption of the dominant culture* and attitudes towards (c) *native pupils acquiring cultural knowledge* and (d) *schools enabling intercultural contact*. We conclude that the proposed four-dimensional scale is a valid tool for assessing attitudes towards mutual acculturation within the school context and that acculturation attitudes are held not only towards immigrant pupils but also towards native pupils and schools.

## Introduction

In 2019, almost 272,000,000 people lived outside of their countries of birth, representing 3.5 % of the world's population ([International Organization for Migration, 2019, p. 2](#)). In turn, this means 96.5 % of the world's population still lived in the countries in which they were born. However, this relation differs from country to country. In Switzerland, where this study took place, 30 % of the 8,606,000 permanent inhabitants (as of December 2019) were born abroad ([Federal Statistical Office \[FSO\], n.d.-a](#)). Crossing borders does not always mean crossing cultures, and crossing cultures does not necessarily involve crossing borders. Nevertheless, most international migrants find themselves facing new cultural contexts, which is usually studied as the process of acculturation. The term "acculturation" traditionally has referred to immigrants' adaptation in a host country where firsthand contact ([Redfield et al., 1936](#)) might lead to behavioural and attitudinal changes. Historically, acculturation has been a diverse field of study, with anthropologists

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<https://doi.org/10.1016/j.ijintrel.2021.08.009>

Received 21 October 2020; Received in revised form 28 June 2021; Accepted 17 August 2021

Available online 28 August 2021

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and sociologists focusing on the group level, that is, on the dynamics involved when people with diverse cultural backgrounds come into continuous contact (Boas, 1948; Burgess & Park, 1933; Redfield et al., 1936). Social psychologists, on the other hand, were focusing on how individuals adapt to a change in cultural context (Rudmin, 2009). In the tradition of cross-cultural psychology, acculturation refers to both individual and/or ethnocultural group changes in behaviour and attitudes under the condition of intercultural contact (Berry, 2003, 2005; Berry et al., 2006).

In the last decade, researchers have addressed criticisms by examining ways to improve acculturation psychology (Berry, 2009; Bhatia & Ram, 2009; Chirkov, 2009a; Cresswell, 2009; Ngo, 2008; Rudmin, 2003; Waldram, 2009; Ward, 2008; Ward & Geeraert, 2016). Traditionally, the adaptation of immigrants to their host societies was the focus of the study of acculturation. However, the interactive nature of the process of acculturation has been implicated as one of the epistemological problems of acculturation research. The responsibility for whether acculturation was successful has been typically predicated on the minority groups' acculturation strategies (Rudmin, 2009; Weinreich, 2009). Nevertheless, if everyone is affected and the process of acculturation is a two-way street, as Berry (2009) noted, then the plausible conclusion would be that successful acculturation is everybody's responsibility.

For acculturation to be everybody's responsibility and for the assessment of mutual acculturation, research is needed in relation to not only newcomers' acculturation but also natives' acculturation. However, to our knowledge, no acculturation (attitudes) scale has considered this two-way interaction by looking at immigrants and natives as agents of acculturation. The aim of this study was to address this gap by proposing a novel method of assessing attitudes towards mutual acculturation: measuring acculturation attitudes towards newcomers and natives from the perspectives of natives and of newcomers, thus focusing on how not only newcomers but also natives and institutions acculturate.

### Conceptualisation of acculturation

Given the variety of disciplines from which researchers have worked or are working on acculturation and the inconsistent terminology they have used (Rudmin, 2003), clarifying the terms used in the framework of acculturation is important. Labelling different processes with the same term and not clarifying what each term relates to and how it is defined leads not only to confusing conceptualisations but also to diverse and thus incomparable results. In this article, to conceptualise acculturation, we consider five steps: First, we explore the notion of culture within acculturation by deconstructing the term "acculturation" into the Latin words *ad* and *cultura* (Zick, 2010), meaning "leading to a culture." Second, we conceptualise and differentiate the term "acculturation attitudes" from the four acculturation patterns (Berry et al., 1989). Third, given the importance of the social context in acculturation (Birman & Simon, 2014), in this article, we take a contextual approach to acculturation. Fourth, we introduce mutual acculturation. Fifth, because acculturation attitudes can be measured from both a native's and an immigrant's perspective (Bourhis et al., 1997), we describe the conceptualisation and operationalisation of the category *migration background*. The FSO (n.d.-b) officially uses this category to describe individuals who belong to the first or the second generation of immigrants to account for indirect connections to migration through parents. Following FSO, in 2019, close to 40 % of the permanent resident population had a migration background, of which more than a third had Swiss nationality (n.d.-b).

#### Acculturation and culture

The question of what is changing, why such change matters to people (Cresswell, 2009), and how people adapt to and/or handle change are the central points in acculturation research. Trying to capture what is changing during acculturation is based on the conceptualisation of culture, which is a difficult concept to define (Kroeber & Kluckhohn, 1952; Olmedo, 1979). Many studies on acculturation have been criticised for ignoring the concept of culture (Bhatia & Ram, 2009; Chirkov, 2009a; Tardif-Williams & Fisher, 2009) although culture is obviously found in the word "acculturation" (Zick, 2010). We conceptualise culture as follows: Culture includes visible artefacts; visible behaviours based on inferred rules or code systems; and fundamental attitudes, beliefs, and values (Rudmin, 2009, p. 109). Additionally, these artefacts, behaviours, and values are not fixed items in time, as cultures are dynamic and always changing (Maclachlan et al., 2004). This conceptualisation of culture as something visible but also fundamental while still being dynamic and always changing helps with the understanding of contextual and historical differences not only in the definition of culture but also in the way this concept is incorporated in acculturation research. It also guided us in adjusting cultural domains in relation to which acculturation takes place. In comparison to *enculturation*, which refers to an individual incorporating cultural elements during socialisation (Weinreich, 2009), here, *acculturation* is conceptualised as the acquisition of another culture, also called "second culture acquisition" when it happens for the first time (Rudmin, 2009).

#### Acculturation attitudes

In this article, the term "acculturation attitudes" is defined as attitudes in relation to acculturation: Whereas *attitudes* consist of beliefs, feelings, and behavioural tendencies (Vaughan & Hogg, 2005) towards important matters in an individual's, group's, or society's life, *acculturation* relates to how natives and newcomers adapt to a change in cultural context (Rudmin, 2009). This definition allows for the reciprocal assessment of acculturation attitudes, that is, for newcomers to have attitudes about newcomers' acculturation and about natives' acculturation and for natives to have attitudes about natives' acculturation and about newcomers' acculturation. This is in contrast to how acculturation attitudes have been commonly assessed by measuring newcomers' maintenance and adoption of cultural characteristics (e.g., Bourhis et al., 1997) and the subsequent calculation of the four-fold model established by Berry et al. (1989), which leads to four newcomer acculturation patterns (i.e., integration, assimilation, separation/segregation, and

marginalisation). These patterns were variously labelled (Rudmin, 2003), and although some label separation, for example, as “an acculturation orientation” (Schwartz & Zamboanga, 2008), others label it as an “attitude” (Berry et al., 1989). However, in this study, separation is labelled as an “acculturation pattern” that results from the assessment of acculturation attitudes.

The significance of assessing acculturation attitudes (instead of assessing acculturation behaviour) lies in exactly this relation between attitudes and behaviours: Attitudes involve behavioural tendencies (Vaughan & Hogg, 2005), which means that whereas attitudes are not behaviours, attitudes influence behaviours. Thus, in assessing acculturation attitudes, rather than acculturating behaviour being assessed, an aspect of it is assessed.

### *Acculturation context*

Because the relationship between acculturation and adjustment is shaped by the surrounding context (Birman & Simon, 2014), we used a contextual approach to acculturation in this study. For youth with a migration background, the process of acculturation unfolds in different contexts while some of them are “oriented to the host culture, such as the school or workplace, and others to the heritage culture, such as the home” (Salo & Birman, 2015, p. 395). In light of this, the school context is considered one of the most important settings for ongoing and continuous acculturation among children and youth (Berry et al., 2011; Horenczyk & Tatar, 2012; Lebedeva et al., 2013; Makarova, 2019; Suárez-Orozco et al., 2010; Vedder & Horenczyk, 2006). Research on acculturation in the school context has shown that the characteristics of school contexts decisively shape minority pupils’ adjustment because they need to adjust not only to a new academic culture (i.e., academic requirements, assessment practices) but also to a new school culture (Makarova & Birman, 2016). Consequently, the conditions of acculturation in the school context affect youths’ psychological adjustment and achievement-related outcomes (Makarova & Birman, 2015).

### *Mutual acculturation*

The concept of mutual acculturation relates to the mutuality of the process of acculturation. Although immigrants’ adaptation to their host societies has traditionally been the focus of the study of acculturation, research has found that newcomers might acculturate to groups other than the dominant majority and that individuals in the dominant group may learn from newcomers, that is, acculturate to newcomers (Abraído-Lanza et al., 2006). Furthermore, according to Berry (2009),

Mutual accommodation is required for integration to be attained, involving the acceptance by both groups of the right of all groups to live as culturally different peoples. This strategy requires non-dominant groups to adopt the basic values of the larger society, while at the same time the dominant group must be prepared to adapt national institutions (e.g. education, health, and labour) to better meet the needs of all groups now living together in the plural society. (p. 367)

Thus, in addition to immigrants adapting to their host society, the host society has to adapt regarding both its institutions and its citizens, because acculturation is a two-way street (Berry, 2009) and concerns the whole society, not just newcomers (Chirkov, 2009a).

In the school context, the concept of mutual acculturation can be understood in the way that pupils with migration backgrounds, native pupils, and schools adjust to changes in cultural contexts. Both pupils with and without migration backgrounds have to acquire new skills to manage intercultural interaction and communication successfully (Landis et al., 2004; Landis & Bhawuk, 2020). The first new dimension focuses on native pupils and their intercultural learning. Through intercultural learning, individuals acquire intercultural competence, which includes the knowledge and skills needed for appropriate and effective intercultural interaction (Yang, 2017). Intercultural learning is also what migrant pupils or pupils with migration backgrounds experience before they decide whether to adopt specific behaviours, attitudes, or values. Whereas peer interactions often lead to contact with various cultural backgrounds (Miklikowska, 2017), the second new dimension focuses on schools’ agency and responsibility in shaping and providing space for exchanges and contact between pupils who have different cultural backgrounds. Additionally, although schools are cultural contexts, they are also cultural actors with specific codes, rules, and hierarchies (Warikoo & Carter, 2009). To conceptualise schools as actors within the school context, a possible focus of mutual acculturation could be how schools change and adjust to the multiculturalism of their pupils. Another focus, however, could be how schools actively shape the setting of intercultural contact, which may lead to intercultural learning and the adoption of cultural characteristics of both pupils with and without migration backgrounds.

### *Migration background*

Migration refers to an individual changing their usual place of residence, which is where they spend most daily periods of rest (Poulain, 2008). Migration background is used as a statistical category because naturalisations have blurred the boundary between migrants and natives (Horvath, 2019). We use the term “natives” to refer to the dominant majority, and the terms “newcomers” and “individuals with a migration background” to refer to individuals who do not belong to the dominant majority. Analogously to Connell’s (1983) theory on hegemonic masculinity, this perspective accounts for power relations and practices that aim to legitimise the majority’s dominant position in society and justify the subordination of newcomers. The category migration background was employed in this study to differentiate between individuals belonging to the dominant majority and those not belonging to the dominant majority. By doing this, we constructed a category that implicitly constituted a group (Brubaker, 2009).

Due to the rather small sample size, the category migration background was conceptualised dichotomously by combining three single-item indicators: pupil’s country of birth, parents’ countries of birth, and pupil’s nationality. If pupils and their parents were all born in Switzerland and pupils had only Swiss nationality and no other, then they were categorised as not having a migration background, that is, as being a native. Otherwise, if any of these conditions were not true, the pupil was categorised as having a

migration background. Such a classification involves losses of information, as migrants can be diverse regarding migration generation, migrant status, and countries of origin (Nauck & Genoni, 2019). Moreover, such a dichotomous category can be problematic, because respondents might be classified as having migration background though they would say otherwise (Horvath, 2019). Additionally, people who might have experienced acculturation through long-term traveling and stays abroad are not captured. Nevertheless, as this study's aim was not to examine attitudes in relation to mutual acculturation of all possible groups of migrants but to validate the newly constructed four-dimensional scale, a dichotomous category proved useful. Because the four-dimensional scale relates to these two general groups (i.e., adolescents from other countries and Swiss adolescents), testing it with a dichotomous variable for migration background was adequate.

## This study

This study examined the psychometric properties of an adapted and extended acculturation attitudes scale used by Makarova (2008) in the Swiss school context, which was founded upon the assessment of acculturation attitudes by Bourhis et al. (1997). It expanded on previous research by extending the focus from measuring only newcomers' acculturation to assessing newcomers', natives', and institutions' acculturation. Thus, the purpose of this study was to test the extension from a bidimensional to a four-dimensional model assessing attitudes towards mutual acculturation. Our hypothesis was that acculturation attitudes are held not only towards immigrant pupils but also towards native pupils and towards schools' responsibility to support intercultural contact. The four factors were explored through exploratory structural equation modelling (ESEM). Reliability was assessed via Cronbach's  $\alpha$  for all four dimensions in the general, native, and migration background samples. Construct validity was also explored by correlating the two new dimensions with the original assessment. By validating this four-dimensional approach, we showed that for secondary school pupils (whether or not they have migration backgrounds), the acculturation of migrants, natives, and schools is important.

## Methods

### Participants and procedure

The data used for this study were collected through an online questionnaire via tablets in Swiss multicultural schools in the three German-speaking cantons Aargau, Basel-Stadt, and Solothurn. A pilot study was done with one school class of 25 pupils, who did not participate in the main study. All pupils finished the online questionnaire within 1 h and understood all questions.

The study participants were 375 pupils who started secondary school in August 2019. Empty questionnaires ( $n = 11$ ) were excluded, which left 364 pupils (46 % female,  $n = 167$ ,  $M_{\text{age}} = 11.68$  years,  $SD = .69$ ) for data analysis. In each canton, we sampled in the two lowest school levels out of a possible three. Our sampling strategy was based on cantonal statistics, and we focused on schools in cities, towns, and villages with a high percentage of non-Swiss nationals. Of the participating pupils, 53 % ( $n = 193$ ) had Swiss citizenship (56 % of whom had only Swiss citizenship and no other,  $n = 109$ ), and both parents of 33 % ( $n = 120$ ) of the pupils were born in Switzerland. Furthermore, 18 % ( $n = 66$ ) of the pupils had been born abroad, both parents of 41 % ( $n = 150$ ) of the pupils had been born abroad, and one parent of 21 % ( $n = 76$ ) of the pupils had been born abroad.

After contacting the cantonal educational offices, we contacted school directors and then class teachers via email and phone calls. Through the teachers, the parents and pupils were informed and asked for consent. Data collection was instructed and executed by research assistants and took place in the classrooms during official school hours. Pupils' questions were answered by the research assistants, and a protocol was written for each data collection.

Convenience sampling affects the possibility of probabilistic inference (Hansen & Hurwitz, 1953). Thus, this study's sample (46 % female,  $n = 167$ ; 53 % Swiss,  $n = 193$ ), consisting of pupils of the lowest and middle school levels, was compared with official statistics of pupils in the three cantons concerned: canton Aargau (lowest level: 43 % female,  $n = 1,988$ , and 55 % Swiss,  $n = 2,501$ ; middle and highest levels: 51 % female,  $n = 7,772$ , and 81 % Swiss,  $n = 12,325$ ), canton Basel-Stadt (lowest level: 41 % female,  $n = 422$ , and 49 % Swiss,  $n = 497$ ; middle and highest levels: 51 % female,  $n = 1,710$ , and 70 % Swiss,  $n = 2,358$ ), and canton Solothurn (lowest level: 43 % female,  $n = 1,010$ , and 57 % Swiss,  $n = 1,348$ ; middle and highest levels: 52 % female,  $n = 2,416$ , and 82 % Swiss,  $n = 3,820$ ; FSO, 2020a, 2020b). The middle and highest school levels thus showed a higher percentage of females and of Swiss nationals. Concerning gender, the 46 % female pupils in this study's sample was comparable to the cantonal statistics, especially when considering that they combined the middle and highest school levels, whereas in this study, the highest school level was not included. Thus, we believe our study is representative in relation to gender. Concerning nationality, the 53 % of participants in this study having Swiss nationality was similar to the cantonal statistics of the lowest school level, yet this group was underrepresented in the middle and highest levels. However, because we included only the lowest and middle school levels in this study, the numbers resulting from adding the middle and highest school levels could not be fully compared. Nevertheless, this study's sample had a high percentage of pupils who did not have Swiss nationality. However, to test a scale measuring attitudes towards mutual acculturation, having a sample as close as possible to a 50–50 ratio between natives and newcomers is favourable, because the scale should be tested by both subgroups alike.

Given the sample's multicultural composition, questionnaires were prepared in five languages (Arabic, English, French, German, Turkish) following the four-eyes principle, a content translation and, as much as possible, a culturally sensitive approach (Peña, 2007). The vast majority ( $n = 349$ ; 96 %) of the pupils completed the questionnaire in German, 2.7 % ( $n = 10$ ) in English, 0.8 % ( $n = 3$ ) in Turkish, and 0.3 % ( $n = 1$ ) each in French and Arabic. This shows that although it was a multicultural sample (46 % having nationalities other than Swiss,  $n = 169$ ), most pupils chose German to answer the questionnaire.

The Ethics Committee of the University of Zurich assessed the study positively, and the relevant Departments for Education of the

three cantons in north-western Switzerland, were informed. The participating pupils and their parents signed consent forms and were informed that they could refrain from answering any question they did not want to answer and that they could withdraw from the study at any time.

#### *Development of a new scale assessing attitudes towards mutual acculturation*

The most common conceptualisation of acculturation in contemporary research is bidimensional. It presumes that retaining or losing one's culture of origin and—simultaneously, but not necessarily in the same way or to the same degree—adopting or avoiding the host society's culture is possible (Berry, 1990). Makarova (2008) adapted such an acculturation attitudes/orientation scale to the context of schools in Switzerland. Given that this study also took place within the Swiss school context, Makarova's scale (2008) served as the basis for our adaptations and extensions. Following the common conceptualisation, Makarova's scale has two dimensions (*culture maintenance* and *culture adoption*), each including five areas of life reflecting the three cultural domains introduced in the previous definition of culture. The first dimension assesses whether it is considered important that foreign children living in Switzerland keep their home countries' (a) traditions and customs, (b) religion, (c) way of life, (d) language, and (e) way of dressing. The second dimension assesses whether it is considered important that foreign children living in Switzerland adopt its (a) traditions and customs, (b) religion, (c) way of life, (d) language, and (e) way of dressing.

#### *General adaptations*

Both original dimensions, culture maintenance and culture adoption, were adapted slightly (see Table 1). The culture maintenance dimension can be understood in two ways: first by enabling (one can maintain) and second by demanding (one must maintain). The question of interest is not whether adolescents from other countries have to keep their language, but rather whether native adolescents and adolescents with migration backgrounds believe that adolescents from other countries should be allowed to keep their language if they want to. Thus, we adapted the wording from “keep their language” to “are allowed to keep their language.” Then, in the culture adoption dimension, references are not made to Swiss people (i.e., whether the way of life of Swiss people should be adopted), but rather to hegemonic cultures (i.e., whether the dominant way of life in Switzerland should be adopted). Acculturation involves a negotiation of dominance (Zick, 2010), and in referring to hegemonic cultures following the theory on hegemonic masculinity (Carrigan et al., 1985; Connell, 1983), the focus lies on power relations and practices that legitimise natives' dominant position in society (e.g., having a right to vote) and justify the subordination of newcomers (e.g., not having a right to vote). The focus of previous assessments of acculturation on how immigrants should acculturate supported the power relation imposed upon immigrants. However, whether this power relation was between natives and immigrants or between the dominant picture/idea of a native and of an immigrant was indeed questionable. Therefore, we adapted the culture adoption dimension from adopting the way of life of “Swiss people” to “adopting the dominant way of life in Switzerland.”

Finally, the answer scale was changed from a five- to a four-point Likert scale to have no extreme answers and no neutral/middle point. The reason for this was that some participants tend to answer with extreme answers (i.e., extreme response style) or tick the neutral/middle point of a Likert scale, even if this response does not reflect their real attitude (Bogner & Landrock, 2015).

**Table 1**

Operationalisation of the Two Original Dimensions Culture Maintenance and Culture Adoption.

Dimension	Introduction	Dimension	Areas of life	Dominant Majority
Culture maintenance	I find it important for <i>teenagers</i> from other countries who live in Switzerland...	<i>...to be allowed to keep their...</i>	<i>...religion; traditions and customs; language; way of dressing; way of living...</i>	.
Culture adoption		<i>...to adopt a/the dominant...</i>		<i>...in Switzerland.</i>

*Note.* Adapted from *Akkulturation und kulturelle Identität: eine empirische Studie unter Jugendlichen mit und ohne Migrationshintergrund in der Schweiz* [Acculturation and cultural identity: an empirical study on adolescents with and without a migration background in Switzerland], by Makarova (2008), Haupt. Adaptations in relation to the original scale from Makarova are italicized.

#### *First extension: culturally affected areas of life*

Following Berry (2009), in order to identify the areas of life that are important to the relevant groups in contact, initial research needs to be done. No universal acculturation attitudes scale exists, so scales should be adapted for each acculturation arena. On one hand, adaptations are needed in relation to language, for the scale to be understood; on the other hand, they also are needed concerning the important areas of life within the relevant context. Because Makarova's scale (2008) had already been used within the context of schools in Switzerland, the areas of life used there served as the basis for this study. Those areas of life could be categorised according to Rudmin's (2009) definition that culture includes visible artefacts; visible behaviours; and fundamental attitudes, beliefs, and values.

Makarova's (2008) original scale measures visible artefacts by means of way of dressing; visible behaviours by means of language, traditions and customs, and way of life; and fundamental attitudes, beliefs, and values by means of religion. These domains were extended with three visible behaviours/fundamental values: (a) *family culture*, (b) *views on professional careers of women and men*, and

(c) *views on the distribution of household tasks between women and men.* In general, gender roles and societally defined developmental tasks (e.g., career choice) are culturally defined within a given society and its institutions. In Switzerland, adolescents start the occupational decision process in secondary school, and because one's occupational choice is important for successful participation in society, the professional domain becomes more important during these years. However, during adolescence, one's family and home environment play an important role in the occupational choice (Makarova et al., 2016). Cultural meanings "about gender roles have changed in transnational diasporic spaces" (Bhatia & Ram, 2009, p. 143), and the process of immigration creates complex negotiations on gender and family roles (Hondagneu-Sotelo, 1992). To reflect those negotiations, we added the above-mentioned three items to each dimension.

#### Second extension: additional acculturation dimensions

We developed two additional acculturation dimensions to assess the acculturation of native adolescents and schools as institutions based on the theory of mutual acculturation (Berry, 2009; Chirkov, 2009a) and on the social learning approach (Landis et al., 2004; Landis & Bhawuk, 2020). Thus, the two new dimensions assessed attitudes towards the adaptation of the dominant group on two levels. First, on the individual level, they assessed the adaptation of natives (*acquiring cultural knowledge*; see Table 2) and, second, on the institutional level, they assessed the adaptation of schools (*enabling cultural contact*; see Table 2). Intercultural learning can be defined as obtaining a developed awareness of a subjective cultural context (of others and of one's own) and as increasing one's ability to interact competently across cultural contexts as both an immediate and long-term effect of exchanges (Bennett, 2009). However, because intercultural contact does not necessarily initiate a process of intercultural learning (Paige, 1993), the dimension enabling cultural contact related only to a general exchange, that is, a general intercultural contact, whether or not it led to intercultural learning. The dimension acquiring cultural knowledge, however, implied intercultural learning and thus involved a further step compared to intercultural exchange through enabling cultural contact.

The contextual approach to acculturation most affected the new dimension enabling cultural contact in relation to its wording. Because institutional acculturation needs to refer to either specific institutions or the general institutions of an acculturation arena, we adapted this dimension to the school context. Thus, in the latter context, institutional acculturation was assessed with school as a facilitator of intercultural contact between immigrant and native pupils.

We developed the items of the two new dimensions during the preparation phase of this study (spring and summer 2019). The items' formulation was discussed, and expert opinions were considered. We ascertained the items' comprehensibility through feedback from teachers and the pilot study.

It is important to note here that the four dimensions read the same to all participants, contrary to Makarova's (2008) original scale, where the wording was adapted in relation to whether the respondent belonged to the group in question. To differentiate answers concerning newcomers' acculturation and natives' acculturation in relation to whether the respondent belonged to that group, we used the migration background category.

**Table 2**

Operationalisation of the Two New Dimensions Acquiring Cultural Knowledge and Enabling Cultural Contact and the Three New Areas of Life.

Dimension	Introduction	Dimension	Areas of Life	Minority
Acquiring cultural knowledge	I find it important that Swiss teenagers living in Switzerland...	...have to get to know the...	...family culture; views on professional careers of women and men; views on the distribution of household tasks between women and men...	...of teenagers from other countries living in Switzerland.
Enabling cultural contact	I find it important that Swiss schools give the possibilities...	...for teenagers from other countries and Swiss teenagers to exchange about...		.

*Note.* The three new areas of life were added to the five areas of life of Makarova (2008), and thus all eight areas of life were applied to each of the four dimensions. The third area of life, gendered views on household tasks, has been excluded from further analysis due to high correlations to the other two newly added areas of life.

#### Measures

Attitudes towards mutual acculturation were assessed through four dimensions, each consisting of eight items: The two dimensions culture maintenance and culture adoption were used to assess attitudes towards newcomers' acculturation, and the two dimensions acquiring cultural knowledge and enabling cultural contact were used to assess attitudes towards natives' and institutions' acculturation. Each dimension consisted of eight items: Five items were adopted from the scale used by Makarova's (2008)—traditions and customs, religion, way of life, language, and way of dressing—and three items related to the extension of the culturally affected areas of life, namely family culture, gendered views on professional careers, and gendered views on the distribution of household tasks. Thus, the assessment of attitudes towards mutual acculturation consisted of 32 items.

To measure traditional acculturation attitudes assessing attitudes only towards immigrants, Makarova's (2008) original scale was operationalised by using only the five original areas of life (traditions and customs, religion, way of life, language, and way of dressing) of the two dimensions culture maintenance and culture adoption.

The category migration background was operationalised dichotomously by combining four single-item indicators: pupil's country of birth, parents' countries of birth, and pupil's nationality. If a pupil and their parents were all born in Switzerland and the pupil had

only Swiss nationality and no other, then this pupil was categorised as not having a migration background, that is, as being a native. Otherwise, if any of the aforementioned conditions were not true, the pupil was categorised as having a migration background.

### *Validation strategy and statistical analysis*

The validation strategy consisted of a preanalysis followed by three statistical analyses. These stages were nested, and the results of each step shaped the analysis of the subsequent step. In the preanalysis, descriptive statistics were presented, and the correlations of the eight areas of life within each of the four dimensions were explored to make sure the extension of the original five areas of life to the eight new items actually benefitted the assessment.

#### *First step: assessing factorial structure with exploratory structural equation modelling*

The scale's dimensionality was assessed using ESEM in MPlus (Version 8.3; Muthén & Muthén, 2017). ESEM, in comparison to a confirmatory factor analysis (CFA), allows all observed variables to load freely on all latent variables, similarly to an exploratory factor analysis (EFA). However, unlike in EFA, residual correlations and regressions among factors are accessible in ESEM. Asparouhov and Muthén (2009) have shown that ESEM is a combination of CFA and EFA, enhancing a CFA with the exploration of an EFA. Additionally, the main advantage ESEM has over EFA is that ESEM integrates the benefits of structural equation modelling, such as goodness-of-fit indices, and has the ability to combine regression and structural equations within the same model (Marsh et al., 2014). A geomin solution, as recommended by Marsh et al. (2009), was used in all ESEM analyses. Through ESEM, standardised factor loadings were tested to analyse factorial validity, using robust maximum likelihood estimation with robust standard error procedures. Model-fit precision was examined using a combination of the comparative fit index (CFI), Tucker–Lewis index (TLI), root mean square error of approximation (RMSEA), and standardised root mean square residual (SRMR; Barrett, 2007). CFI and TLI values of .95 or greater indicate an excellent model fit, whereas values of .90–.94 suggest an adequate fit (Kline, 2015). RMSEA and SRMR values of .05 or less are considered indicative of an excellent fit, whereas values of .06 to .08 suggest an adequate model fit (Kline, 2015). The ESEM procedure was run for three-, four-, and five-factor solutions, as we expected a four-factor solution to fit the data best.

#### *Second analysis: assessing internal consistency*

To test for reliability, the internal consistency of each of the four extended dimensions (each consisting of seven items) was measured by means of Cronbach's  $\alpha$  for three samples: general, native, and migration background samples. Eigenvalues were assessed only regarding the general sample due to the native group's low sample size. Then the internal consistency of Makarova's (2008) original scale consisting of five items each was assessed for the general sample to compare it to the extension. Additionally, item-total correlations were calculated to obtain information about the items' discrimination power.

#### *Third analysis: assessing construct validity*

Convergent validity "reflects the extent to which two measures capture a common construct" (Carlson & Herdman, 2012, p. 18), and recommendations for validity values differ within the literature. In order not to measure the same factor, the convergent validity should be neither too high nor too low when assessing a common construct (Campbell & Fiske, 1959). Thus, convergent validities between  $r = .40$  and  $r = .60$  are desired. We assessed convergent validity through concurrent validity. If acculturation is a mutual process consisting of immigrants' and of natives' acculturation, as we proposed, then the two new dimensions acquiring cultural knowledge and enabling cultural contact should be related to the original dimensions culture maintenance and culture adoption used by Makarova (2008). Thus, we used the latter two to show concurrent validity, comparing the new scale with the existing scale (of the same nature). The relation between the two original dimensions culture maintenance and culture adoption was assessed first to compare it to the association between the two new dimensions and the two original dimensions. All correlations were assessed for the three samples: general, only native, and only migration background. The interaction term showed whether being in the native or the migration background group influenced the relation between the two dimensions assessed.

## **Results**

### *Preanalysis*

As a preanalysis, we explored the descriptive statistics of and correlations between the eight areas of life within each of the four dimensions. The descriptive statistics are presented in Table 3.

Then we analysed the extension from five to eight areas of life in each dimension. In the new dimension acquiring cultural knowledge, high correlations between the three new areas of life ( $r = .71, p \leq .01$  between family cultures and ways of distributing household tasks, and  $r = .69, p \leq .01$  between the two gender role items) were found. This suggested that a remarkably similar construct was measured. The item gendered views on the distribution of household tasks was excluded from further analysis, because it showed the highest correlations to the other two items. This led to having only one item on gender roles (gendered views on professional careers) and one item on the situation at home (family culture). Given the previously described reduction of the extended areas of life from three to two, seven items were tested per dimension, for 28 items. For further analysis, only one missing item per dimension was allowed.

**Table 3**  
Descriptive Statistics.

Variable	Culture maintenance	Culture adoption	Acquiring cultural knowledge	Enabling cultural contact
<i>n</i> =	345	319	338	340
Missing	19	45	26	24
<i>M</i>	3.42	2.45	2.96	3.15
<i>Mdn</i>	3.57	2.43	3.00	3.14
<i>SD</i>	.59	.84	.78	.74
Gender				
Female	161	151	155	160
Male	178	163	176	173
Country of birth				
Switzerland	284	260	275	279
Abroad	61	59	62	60
Pupil's nationality				
Swiss (+ other)	184	174	180	181
Other	160	145	156	157
Country of birth parents				
Both parents born in Switzerland	113	108	111	113
One parent born abroad	74	70	73	73
Both parents born abroad	142	127	137	137
Only Swiss	110	106	108	109
Mother's nationality				
Swiss + other	43	36	41	41
Other	184	172	181	183
Only Swiss	117	113	114	116
Father's nationality				
Swiss + other	41	36	40	39
Other	178	164	175	177

*First analysis: testing for factorial validity with exploratory structural equation modelling*

Factorial structure was assessed using ESEM in Mplus (Version 8.3; Muthén & Muthén, 2017). Model fit is shown in Table 4 and the resulting factorial loadings of the 28 items (*n* = 359) are displayed in Table 5. Cross-loadings are shown when greater than or equal to .30.

The three- and four-factor solutions did not exhibit cross-loading items, but the three-factor solution showed a remarkable variation in factor loading strength for the third factor (around .30–.40 for culture maintenance and around .70–.80 for enabling cultural contact). The four-factor solution, however, showed less variation within the factor loadings of each factor. Additionally, it displayed the exact four factors that theoretically were expected to appear (1 = culture maintenance, 2 = culture adoption, 3 = acquiring cultural knowledge, and 4 = enabling cultural contact). The five-factor solution showed the same four factors with similar factor loadings as the four-factor solution yet two low cross-loadings. The fifth factor thus consisted of only two cross-loadings and no main factor loading.

The improvement of the factor loadings on the four-factor solution in comparison to the three- and five-factor solutions was confirmed by the model fit indices (see Table 4). The model fit of the three-factor solution was lower in comparison to the four- and five-factor solutions. When comparing the four- and five-factor solution, a better fit for the four-factor solution by the lower RMSEA value and higher CFI and TLI values was identified. This indicates a fit enhancement to the four theoretically suggested factors: (a) culture maintenance, (b) culture adoption, (c) acquiring cultural knowledge, and (d) enabling cultural contact.

The correlations between these four extracted factors (*n*<sub>total items</sub> = 28) were low to moderate (see Table 6). The highest correlation between the four factors was moderate, *r* = .59, *p* ≤ .01, and implied the expected connection between the four factors, but no high overlap was detected.

**Table 4**  
Model Fit for the Tested Exploratory Structural Equation Models With a Three-, Four-, and Five-Factor Solution.

Factor	Items	$\chi^2$	<i>p</i>	<i>N</i>	<i>df</i>	CFI	TLI	RMSEA	SRMR
3	28	813.042*	< .001	359	297	.875	.841	.070	.061
4	28	467.590*	< .001	359	272	.953	.934	.045	.030
5	28	451.035*	< .001	359	248	.951	.925	.048	.026

Note. CFI = comparative fit index; TLI = Tucker–Lewis Index; RMSEA = root mean square error of approximation; SRMR = standardised root mean square residual.

**Table 5**  
Factor Loadings of the Performed Exploratory Structural Equation Model Procedure With All 28 Items.

Factor solution	Three-factor solution			Four-factor solution				Five-factor solution				
	1	2	3	1	2	3	4	1	2	3	4	5
Factors												
KEEP1			.45	.56				.57				
KEEP2			.39	.72				.74				
KEEP3			.30	.67				.67				
KEEP4			.35	.59				.59				
KEEP5			.38	.66				.65				
KEEP6			.35	.64				.64				
KEEP7		.35		.54				.54				
ADOPT1	.83				.83				.84			
ADOPT2	.75				.74				.76			
ADOPT3	.81				.82				.82			
ADOPT4	.64				.65				.65			
ADOPT5	.85				.84				.85			
ADOPT6	.84				.83				.84			
ADOPT7	.64				.67				.66			
KNOW1		.81				.77				.78		
KNOW2		.75				.73				.74		
KNOW3		.82				.80				.82		
KNOW4		.63				.60				.64		
KNOW5		.82				.78				.71		.33
KNOW6		.74				.74				.76		
KNOW7		.83				.80				.81		
EXCH1			.90				.89				.87	
EXCH2			.77				.74				.71	
EXCH3			.81				.81				.77	
EXCH4			.84				.80				.79	
EXCH5			.70				.64				.77	.39
EXCH6			.75				.71				.75	
EXCH7			.77				.68				.67	

Note. The four dimensions are referred to as follows: KEEP = culture maintenance; ADOPT = culture adoption; KNOW = acquiring cultural knowledge; and EXCH = enabling cultural contact. Numbers 1–7 refer to the seven areas of life: 1 = traditions and customs; 2 = religion; 3 = way of life; 4 = language; 5 = way of dressing; 6 = family culture; 7 = gendered views on professional careers.

**Table 6**  
Intercorrelations Between the Four Extracted Factors of 28 Items (7 Items Per Dimension).

Factor	Culture maintenance	Culture adoption	Acquiring cultural knowledge	Enabling cultural contact
Culture maintenance	1			
Culture adoption	-.04	1		
Acquiring cultural knowledge	.46**	.20**	1	
Enabling cultural contact	.51**	.03	.59**	1

\*\*  $p \leq .01$ .

*Second analysis: testing for reliability*

Internal consistency was tested with Cronbach’s  $\alpha$ . Additionally, item-total correlations were calculated to obtain information about the items’ discrimination power (see Table 7).

Internal consistency for the extended dimension culture maintenance (see Table 7) was good, with  $\alpha = .84$  for the general sample ( $n = 325$ ),  $\alpha = .82$  for natives ( $n = 84$ ), and  $\alpha = .85$  for pupils having migration backgrounds ( $n = 239$ ). The item-total correlation test also displayed high coefficients of  $r_{it} \geq .46$  in all samples (lowest item-total correlation was for careers in all three samples; highest was for religion in the general and migration background samples and for clothing in the native sample). Eigenvalues confirmed the dimensionality of this scale found by ESEM and displayed just one factor ( $\lambda_{\text{general sample}} = 3.65$ , explained variance = 52 %).

Internal consistency for the extended dimension culture adoption (see Table 7) was excellent, with  $\alpha = .91$  for the general sample ( $n = 306$ ),  $\alpha = .89$  for natives ( $n = 79$ ), and  $\alpha = .92$  for pupils having migration backgrounds ( $n = 224$ ). The item-total correlation test also displayed high coefficients of  $r_{it} \geq .43$  in all samples (lowest item-total correlation was for language in all three samples; highest was for family culture in all three samples). Eigenvalues confirmed the dimensionality of this scale found by ESEM and displayed just one factor ( $\lambda_{\text{general sample}} = 4.65$ , explained variance = 66%).

Internal consistency for the new dimension acquiring cultural knowledge (see Table 7) was excellent, with  $\alpha = .92$  for all three samples: for the general sample ( $n = 320$ ), for natives ( $n = 81$ ), and for pupils having migration backgrounds ( $n = 235$ ). The item-total correlation test also displayed high coefficients of  $r_{it} \geq .65$  in all samples (lowest item-total correlation was for language in the general and migration background samples and for religion in the native sample; highest was for traditions and customs in the general and migration background samples and for traditions and customs plus careers in the native sample). Eigenvalues confirmed the

**Table 7**  
Internal Consistency of the Extended Four Dimensions, General Sample.

Dimension	$\alpha$	Item	Item total correlation
Culture maintenance	.84 ( $n = 325$ )	Traditions and customs	.53
		Religion	.68
		Way of life	.64
		Language	.59
		Way of dressing	.66
		Family culture	.59
		Gendered views on careers	.51
Culture adoption	.91 ( $n = 306$ )	Traditions and customs	.79
		Religion	.73
		Way of life	.79
		Language	.60
		Way of dressing	.80
		Family culture	.81
		Gendered views on careers	.65
Acquiring cultural knowledge	.92 ( $n = 320$ )	Traditions and customs	.82
		Religion	.74
		Way of life	.80
		Language	.66
		Way of dressing	.69
		Family culture	.73
		Gendered views on careers	.78
Enabling cultural contact	.92 ( $n = 335$ )	Traditions and customs	.81
		Religion	.76
		Way of life	.76
		Language	.76
		Way of dressing	.70
		Family culture	.75
		Gendered views on careers	.74

dimensionality of this scale found by ESEM and displayed just one factor ( $\lambda_{\text{general sample}} = 4.71$ , explained variance = 67%).

Internal consistency of the new dimension enabling cultural contact (see Table 7) was excellent, with  $\alpha = .92$  for the general sample ( $n = 335$ ),  $\alpha = .93$  for natives ( $n = 87$ ), and  $\alpha = .92$  for pupils having migration backgrounds ( $n = 244$ ). The item-total correlation test also displayed high coefficients of  $r_{it} \geq .67$  in all samples (lowest item-total correlation was for way of dressing in the general and migration background samples and for careers in the native sample; highest was for traditions and customs in the general and migration background samples and for family culture in the native sample). Eigenvalues confirmed the dimensionality of this scale found by ESEM and displayed just one factor ( $\lambda_{\text{general sample}} = 4.75$ , explained variance = 68%).

Internal consistency of Makarova's (2008) original culture maintenance dimension (see Table 8) was good, with  $\alpha = .82$  for the general sample. The item-total correlation test also displayed a high coefficient of  $r_{it} \geq .56$  (lowest item-total correlation was for traditions and customs; highest was for religion). The original culture adoption dimension (see Table 8) showed good internal consistency,  $\alpha = .88$ . The item-total correlation test also displayed a high coefficient of  $r_{it} \geq .57$  (lowest item-total correlation was for language; highest was for way of dressing).

**Table 8**  
Internal Consistency of the Original Two Dimensions by Makarova (2008), General Sample.

Dimension	$\alpha$	Item	Item total correlation
Culture maintenance (Makarova, 2008)	.82 ( $n = 330$ )	Traditions and customs	.56
		Religion	.68
		Way of life	.62
		Language	.60
		Way of dressing	.63
		Traditions and customs	.77
Culture adoption (Makarova, 2008)	.88 ( $n = 313$ )	Religion	.70
		Way of life	.75
		Language	.57
		Way of dressing	.79

Note. Original version adapted from: *Akkulturation und kulturelle Identität: eine empirische Studie unter Jugendlichen mit und ohne Migrationshintergrund in der Schweiz* [Acculturation and cultural identity: an empirical study on adolescents with and without a migration background in Switzerland], by Makarova (2008), Haupt.

*Third analysis: testing for construct validity*

To test construct validity, the two new dimensions acquiring cultural knowledge and enabling cultural contact and the two extended dimensions culture maintenance and culture adoption were correlated to the two original dimensions from Makarova (2008) for concurrent validity (see Table 9).

The two original dimensions culture maintenance and culture adoption showed a highly significant, negative, and medium correlation only in the native sample and a highly significant yet rather low interaction term. For the general and migration background samples, the two dimensions were not related. For the native sample, though, the two original dimensions were negatively correlated, which means that for natives, the more they agreed with one dimension, the less they agreed with the other. The low interaction term meant that it did make a difference whether someone was in the native or migration background sample.

Correlations between the new dimension acquiring cultural knowledge and the original dimension culture maintenance were highly significant, positive, and medium in all three samples, yet the interaction term was not significant. This means that in all three samples, the more participants agreed with one dimension, the more they agreed with the other, too. Correlations between the new dimension acquiring cultural knowledge and the original dimension culture adoption were highly significant and positive yet not terribly strong for the general and the migration background sample, and the interaction term was not significant. This means that in the general and migration background samples, the more participants agreed with one dimension, the more they tended to agree with the other, too. Because the interaction term was not significant in either of these correlations, no differentiation between the native and migration background samples made sense.

Correlations between the new dimension enabling cultural contact and the original dimension culture maintenance were highly significant, positive, and medium in all three samples, yet the interaction term was not significant. This means that in all three samples, the more participants agreed with one dimension, the more they agreed with the other, too. Correlations between the new dimension enabling cultural contact and the original dimension culture adoption were deeply significant and negative yet not particularly strong for the native sample. For the migration background sample, the correlations were significant, positive, and decidedly low, yet the interaction term was highly significant, positive, and rather low. This means that in the native sample, the more participants agreed with one dimension, the less they agreed with the other. In the migration background sample, on the other hand, the more they agreed with one dimension, the more they tended to agree with the other, too. Because the interaction term was highly significant only in the correlation between enabling cultural contact and culture adoption, this meant that only there did it make a difference whether

**Table 9**

Concurrent Validity Assessed via Correlations Between the Original Two Dimensions Culture Maintenance and Culture Adoption by Makarova (2008) and the Two New Dimensions Acquiring Cultural Knowledge and Enabling Cultural Contact.

Correlated dimensions	Sample	<i>r</i>	<i>n</i>
Culture maintenance ↔ culture adoption	General	-.04	316
	Only natives	-.49**	83
	Only migration background	.09	230
	Interaction term	.24**	313
Acquiring cultural knowledge ↔ culture maintenance	General	.46**	330
	Only natives	.30**	85
	Only migration background	.52**	242
	Interaction term	.10	327
Acquiring cultural knowledge ↔ culture adoption	General	.20**	313
	Only natives	.09	82
	Only migration background	.22**	228
	Interaction term	.09	310
Enabling cultural contact ↔ culture maintenance	General	.51**	332
	Only natives	.62**	86
	Only migration background	.48**	243
	Interaction term	-.06	329
Enabling cultural contact ↔ culture adoption	General	.03	316
	Only natives	-.32**	83
	Only migration background	.14*	230
	Interaction term	.21**	313
acquiring cultural knowledge ↔ enabling cultural contact	General	.59**	332
	Only natives	.57**	86
	Only migration background	.61**	242
	Interaction term	-.01	328

*Note.* First, correlations between the two original dimensions culture maintenance and culture adoption are shown, each consisting of five items. Then, correlations between the new dimension acquiring cultural knowledge (consisting of seven items) and the two original dimensions are shown. Afterwards, the correlations between the original two dimensions and the new dimension enabling cultural contact are presented. Finally, the relation between the two new dimensions is shown. Assessment adapted from *Akkulturation und kulturelle Identität: eine empirische Studie unter Jugendlichen mit und ohne Migrationshintergrund in der Schweiz* [Acculturation and cultural identity: an empirical study on adolescents with and without a migration background in Switzerland], by Makarova (2008), Haupt.

\*  $p \leq .05$ .

\*\*  $p \leq .01$ .

someone belonged to the native or migration background sample.

The two new dimensions acquiring cultural knowledge and enabling cultural contact showed a highly significant, positive, and medium to strong correlation in all three samples and no significant interaction term. This meant that the two new dimensions were correlated, yet it did not matter whether someone belonged to the native or migration background sample.

### Summary

The ESEM results suggested the four-factor solution (culture maintenance, culture adoption, acquiring cultural knowledge, and enabling cultural contact) fit the model best, as was theoretically expected. Reliability for all four dimensions showed good to excellent internal consistency. Intercorrelations between the four factors extracted by ESEM showed the expected relation between the four factors but detected no large overlap. Construct validity was assessed via concurrent validity by putting the two new dimensions (acquiring cultural knowledge and enabling cultural contact) in relation to the two previously existing dimensions (culture maintenance and culture adoption). Whereas acquiring cultural knowledge and enabling cultural contact showed concurrent and thus convergent validity with culture maintenance, they did not show a similar connection to culture adoption. This can be explained by the special role the dimension culture adoption seemed to play in relation to all three other dimensions through the interaction term, which meant that depending on whether someone belonged to the native or migration background group, the dimension culture adoption was rated differently.

### Discussion

Traditionally, the adaptation of newcomers to their host society has been the focus of the study of acculturation. However, taking this view means assuming that the process of acculturation does not affect the host society and that “working out how to live with and between two [or more] cultures” (Berry, 2009, p. 368) happens only to newcomers and neither to the dominant majority nor to national institutions. This involves identifying society as a natural entity, somehow outside and unaffected by individuals and/or groups experiencing a change in cultural context. The notion of methodological nationalism—that is, the criticised “assumption that the nation/state/society is the natural social and political form of the modern world” (Wimmer & Glick Schiller, 2002, p. 302)—is a reminder that society is a social construct and not a naturally given system. Thus, a change in its composition (members, permanent inhabitants, and newcomers) is not without consequence. Indeed, it has been stated that acculturation concerns the whole society and not just newcomers (Chirkov, 2009a) and that “acculturation is a two-way interaction” (Berry, 2009, p. 365). Such theoretical insights points towards acculturation as a phenomenon concerning the whole society; thus, successful acculturation would be everybody’s responsibility. In order for acculturation to be everybody’s responsibility, differentiating between what natives and immigrants think about immigrants’ acculturation is insufficient (e.g., Bourhis et al., 1997). A mutual acculturation process would be less about whom we are asking and more about who is at stake. This means that not only immigrants but also natives change and go through a process of adaptation. If one wonders whether immigrants should keep or adopt specific cultural characteristics, then mutual acculturation means that one also wonders how natives should acculturate.

The aim of this study was to develop a scale to assess attitudes towards mutual acculturation, because, to our knowledge, no such scale exists. Makarova’s (2008) bidimensional scale, which was based on the framework of Bourhis et al. (1997) and was used to assess acculturation attitudes towards immigrant pupils within the school context in Switzerland, served as a starting point for this study. We extended the culturally relevant areas of life and added two new dimensions, such that attitudes were assessed towards not only immigrants’ but also natives’ and institutions’ acculturation. To validate this four-dimensional scale, we explored factor loadings, reliability, and construct validity. The empirical results suggest that, in this study, attitudes towards mutual acculturation were successfully assessed within the school context in relation to four dimensions: (a) culture maintenance of adolescents from other countries, (b) culture adoption of adolescents from other countries, (c) native adolescents acquiring cultural knowledge, and (d) schools enabling cultural contact.

The assessment of four dimensions instead of the original two dimensions not only makes sense in relation to the results presented, but also fills a conceptual gap within acculturation research (Berry, 2009; Rudmin, 2009; Weinreich, 2009). The more people are migrating and traveling the world, the more not only migrants but also permanent inhabitants and political entities all over the world are interacting with cultural diversity. To account for the variety of ways and contexts in which acculturation can be perceived and experienced and to account for all the different agents of acculturation (including not only real people and groups but also political and social institutions), a more holistic approach is needed (Abraído-Lanza et al., 2006). This implies that mutual acculturation should be taken into account to assess acculturation attitudes (Berry, 2009; Chirkov, 2009a). The two new dimensions acquiring cultural knowledge, which implies intercultural learning, and enabling cultural contact, which does not, may not be the only two ways of assessing natives’ and institutions’ acculturation. Nevertheless, the empirical results in this study suggest that these four dimensions are a valid model for assessing attitudes towards mutual acculturation in the school context.

The way acculturation previously was researched seemed unsatisfactory, because it did “not meet the complexity of this phenomenon and [did] not bring useful and practical results to immigrants’ communities” (Chirkov, 2009b, p. 177). Following theoretical insights, however, measuring acculturation attitudes towards newcomers alone tells only half of the story (Chirkov, 2009a). In extending the bidimensional assessment of acculturation attitudes, a more holistic approach was achieved that more precisely meets the complexity of the process of acculturation by assessing attitudes towards the acculturation of newcomers, natives, and institutions (Berry, 2009; Chirkov, 2009b). By adjusting the focus of acculturation research away from focusing mainly on the adaptation of newcomers towards the adaptation of newcomers, natives, and institutions, further research should be able to bring more useful and

practical results not only to immigrants' communities but also to natives and institutions dealing with cultural diversity.

### Limitations

There are limitations to this study. The extended four-dimensional scale for assessing attitudes towards mutual acculturation was developed and empirically validated for adolescents within the school context in Switzerland. To apply it in another context (nationally, culturally, and/or institutionally), adaptations in relation to language, participants, and the culturally affected areas of life should be made (Berry, 2009). Whereas the contextual approach to acculturation limits the generalisation of results, it also is a strength because it takes seriously the proven impact of the context on acculturation.

Furthermore, the two original dimensions culture maintenance and culture adoption were included in this framework without questioning whether these two dimensions are still appropriate for assessing attitudes towards newcomers' acculturation (Chirkov, 2009a). Nevertheless, to assess attitudes towards mutual acculturation, the aim of this study was to add attitudes towards natives' and institutions' acculturation to the original framework by expanding the original framework, not by enhancing it.

Finally, although construct validity consists of concurrent and discriminant validity, only concurrent validity could be assessed, because no measure for discriminant validity was applied. Concurrent validity tests whether two constructs that should be related are actually so, that is, whether they converge at the same construct, and herein, we showed that the extension and the original scale correlate as expected (high enough to relate to the same construct but not too high, because they measure different dimensions). Nevertheless, we argue that in the future, we should assess discriminant validity, too, even though concurrent validity confirmed the proposed scale's construct validity. Similarly, we could not assess criteria validity, but another study should do so.

### Conclusion

To meet the complexity of the phenomenon of acculturation better (Berry, 2009; Bhatia & Ram, 2009; Chirkov, 2009a; Cresswell, 2009; Ngo, 2008; Rudmin, 2003; Waldram, 2009; Ward, 2008; Ward & Geeraert, 2016), the aim of this study was to fill the gap on assessing acculturation attitudes held towards natives and institutions. We tested the validity and reliability of this novel assessment within the context of multicultural schools in Switzerland. Data from 364 pupils in Swiss secondary schools were analysed. Factorial validity was tested with ESEM, reliability was tested with internal consistency (Cronbach's  $\alpha$ ), and the dimensionality of the scales was tested with correlational analyses between the four extracted factors. Finally, concurrent validity was tested for construct validity. The analysis showed that we succeeded in extending the bidimensional approach focusing on attitudes towards adolescents from other countries (culture maintenance and culture adoption) to a four-dimensional approach including attitudes towards native adolescents acquiring cultural knowledge and schools enabling cultural contact. Thus, the four-dimensional scale is a valid tool for assessing attitudes towards mutual acculturation within the context of Swiss schools.

Future research could investigate the various patterns emerging when using a four-dimensional approach to assess attitudes towards mutual acculturation and their effects on acculturation outcomes in the school context (e.g., psychological adjustments and school outcomes). Such studies could offer insights for school directives on how to manage intercultural contact actively in the context of schools, acknowledging schools' field of action in enabling cultural contact. Additionally, further studies combining acculturation attitudes and acculturation outcomes could offer insights for school directives and teachers on how to best support pupils with and without migration backgrounds so they succeed in school.

Thus, the analysed data and the identification of patterns of attitudes towards mutual acculturation and their relationships towards school adjustment and school outcomes may be useful as an empirical basis on which teachers and school directives can particularly support both pupils with and without migration backgrounds in easing their school adjustments and promoting intercultural learning.

### Funding

The Swiss National Science Foundation (SNSF) funded this study through the National Centre of Competence in Research (NCCR) - on the move via the project *Overcoming Inequalities with Education* awarded to Prof. Dr. Wassilis Kassis (Grant: 51NF40-182897). The University of Applied Sciences and Arts Northwestern Switzerland (FHNW) generously supported this study. Neither funders had roles in the study design, data collection, data analysis, or drafting the manuscript.

### Informed consent

Participant's legal guardian or next of kin provided written informed consent to participate in the study. Additionally, informed consent was obtained from the adolescents themselves.

### Declaration of Competing Interest

The authors report no conflict of interest.

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