RESEARCH ARTICLE

Immigrant adolescents' perceptions of cultural pluralism climate: Relations to self-esteem, academic self-concept, achievement, and discrimination

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Abstract

A cultural pluralism climate values differences between groups and fosters learning about different cultures. This study investigated the relation between four facets of cultural pluralism climate (learning about multicultural topics, learning about intercultural relations, interest shown by teachers, interest shown by non-immigrant students) and immigrant students' self-esteem, academic self-concept, achievement and perceived discrimination. We furthermore tested whether academic self-concept, self-esteem, and perceived discrimination mediated the relation between the four facets and achievement. Relying on a sample of 700 immigrant students (M_{age} = 12.62 years; SD = 1.12; 45.4% female) from 87 Austrian secondary school classes, all effects were estimated at two levels (L1, individual student level; L2, classroom level) in multilevel mediation models. It was shown that learning about multicultural topics and intercultural relations, and interest shown by teachers positively predicted academic self-concept and self-esteem at L1. Learning about intercultural relations negatively predicted discrimination at L1. At L2, learning about intercultural relations positively predicted academic self-concept and negatively predicted perceived discrimination. None of the facets predicted achievement at L1 and L2. However, academic self-concept

(positively) and self-esteem (negatively) fully mediated the effect of learning about multicultural topics, learning about intercultural relations, and interest shown by teachers on achievement at L1.

1 | INTRODUCTION

At school, immigrant students have to master normative developmental tasks, such as acquiring key competencies in different areas, succeeding academically, and developing healthy competence self-perceptions, while also facing migration-specific challenges, such as navigating between two or more cultures and dealing with discrimination (Bourhis, Montaruli, El-Geledi, Harvey, & Barrette, 2010; Masten, 2015; Motti-Stefanidi, 2018). The way schools handle cultural diversity creates an important context for immigrant adolescents' positive development and acculturation (Schachner, Noack, Van de Vijver, & Eckstein, 2016). A fruitful approach to study cultural diversity in schools relates to the concept of cultural pluralism climate. Cultural pluralism climate captures an atmosphere in which differences between cultural groups are valued by providing the opportunity to learn about, celebrate, and respect the different cultures of students (Schachner, Schwarzenthal, van de Vijver, & Noack, 2019; Schwarzenthal, Schachner, Van de Vijver, & Juang, 2018).

Existing empirical evidence points toward the promise of cultural pluralism climate, for example, in enhancing immigrant students' achievement and psychological adjustment (e.g., Celeste, Baysu, Phalet, Meeussen, & Kende, 2019; Schachner et al., 2016). However, several gaps in our understanding and areas in need for more research remain, given that research on cultural pluralism climate in educational settings is relatively new (Horenczyk & Tatar, 2012). There is a need to both reach more confident conclusions about existing findings (e.g., academic self-concept), but to also broaden the existing evidence base by considering effects on not yet investigated factors that are highly relevant for immigrant students' adaptive development in and beyond school (e.g., self-esteem). Both self-esteem and academic self-concept are perceptions of oneself that can be shaped by one's social surrounding and relations (Leary & Baumeister, 2000; Shavelson, Hubner, & Stanton, 1976). Hence, immigrant adolescents might integrate cues from the social surrounding regarding their position as an immigrant student into their self-esteem and academic self-concept, making these developmental tasks a fruitful area for research exploring the role of cultural pluralism climate. In addition, the mechanisms underlying well-established effects of cultural pluralism climate on important school-related outcomes such as achievement are currently not well understood, indicating a need to test factors transmitting—that is, mediating—these effects.

Moreover, researchers have cautioned that cultural pluralism climate may not only yield beneficial effects, but could potentially also produce detrimental effects (e.g., Schachner, 2019; Schwarzenthal et al., 2018). For example, emphasizing differences between cultural backgrounds may lead to a greater distance between immigrant and non-immigrant students, and, due to the higher visibility of the factor "culture," to increased perceptions of discrimination among immigrant students. To date, both detrimental effects of cultural pluralism climate on perceived discrimination (i.e., fostering cultural pluralism climate

increases discrimination, Schwarzenthal et al., 2018) and beneficial effects (i.e., fostering cultural pluralism climate decreases discrimination, Brown & Chu, 2012) have been reported, calling for more research to clarify these issues.

Finally, so far, no study has taken a detailed look at how different facets of the cultural pluralism climate relate to different student outcomes, even though a set of distinct facets making up a cultural pluralism climate in class has been proposed (Schachner et al., 2016). Specifically, teachers can provide the opportunity to learn about different cultures and countries in class (facet "learning about multicultural topics"), teachers can encourage intercultural contact and learning to respect each other (facet "learning about intercultural relations"), and teachers as well as students can show interest in immigrant students' ethnic background (facet "interest shown by teachers" and facet "interest shown by students").

The present study aimed to address these gaps in research on cultural pluralism climate and inconsistencies in prior findings. Relying on a sample of 700 immigrant students from 87 classes in Austria, we examined relations between four cultural pluralism climate facets (learning about multicultural topics in class, learning about intercultural relations in class, teachers' interest in the culture of immigrant students, non-immigrant classmates' interest in the culture of immigrant students; Schachner et al., 2016), and students' self-esteem, academic self-concept, achievement, and perceived discrimination. Furthermore, we tested whether academic self-concept, self-esteem, and perceived discrimination mediate the relation between each cultural pluralism climate facet and achievement to gain insights into mechanisms that may undergird the link between cultural pluralism climate and achievement. In order to account for the nested data structure, with immigrant students nested in classes, all relations were estimated on two levels (individual student level, classroom level) in multilevel models.

1.1 | Adolescents' adaptive development: The role of the school and classroom environment

In current developmental frameworks that model influences on immigrant adolescents' development, schools and classrooms are considered as proximal contexts that impact on immigrant adolescents' adaptation (Motti-Stefanidi, Berry, Chryssochoou, Sam, & Phinney, 2012). In general, it has been shown that a positive school and classroom climate represents a supportive and beneficial context which enhances various student outcomes, such as motivational variables and achievement (e.g., Bardach, Oczlon, Pietschnig, & Lüftenegger, 2020; Bergsmann, Lüftenegger, Jöstl, Schober, & Spiel, 2013; Wang, Degol, Amemiya, Parr, & Guo, 2020). Such a positive climate may be especially important for immigrant adolescents, as some seem to struggle in certain aspects of school life because they are faced with additional challenges (Booker, 2006; Thapa et al., 2013). In addition, immigrant adolescents may be particularly responsive to cues concerning the topics of migration and diversity in school as components of the school and classroom climate, because these issues are inherent parts of their daily life. This raises the important question of how schools deal with migration and diversity and specifically, how this is reflected in the classroom climate and which kind of classroom climate is beneficial for immigrant students.

1.2 | Cultural pluralism climate

Migration and diversity are omnipresent topics in today's classrooms and can be addressed in different ways. One prominent approach focusing on cultural diversity in classrooms is the "cultural pluralism climate." The cultural pluralism approach stems from a

multicultural perspective, which acknowledges and promotes cultural differences and thus considers diversity as a resource and an added value (Banks, 2015). In contrast to that, schools can emphasize overcoming differences between ethnic groups and explicitly support intergroup contact, an approach that has been termed "equality and inclusion" (Green, Adams, & Turner, 1988; Molina & Wittig, 2006; Schachner et al., 2016). Both approaches have been linked to numerous student outcomes (for a review, see Schachner, 2019). However, in addressing cultural diversity and creating a climate that appreciates the background of all students in the class, the cultural pluralism climate supposedly supports adolescents' position as immigrants in the classroom and may therefore be particularly valuable. In light of this, we aimed to contribute to the current state of research on cultural pluralism climate by studying relations between cultural pluralism climate and immigrant students' self-perceptions and academic achievement and by attempting to clear up ambiguous results concerning its relation to discrimination.

Cultural pluralism climate has been defined as a broad approach, which grants a role to teachers and fellow students. Recently, it has been proposed that cultural pluralism climate contains distinct facets (Schachner et al., 2016). First, learning about different cultures and countries can be actively promoted in class (= learning about multicultural topics). Second, teachers can encourage intercultural contact and emphasize the importance of learning to respect each other (= learning about intercultural relations). Third, teachers can show interest in immigrant students' ethnic background, thereby valuing the different ethnic backgrounds of all students in class (= interest shown by teachers). Fourth, non-immigrant students in class can care about and become interested in immigrant students' ethnic background (= interest shown by students).

1.3 | Relations between cultural pluralism climate and immigrant adolescents' self-esteem, academic self-concept, achievement, and perceived discrimination

Cultural pluralism climate in school has been linked to a range of student outcomes. For example, cultural pluralism climate has been found to promote psychological school adjustment by fostering ethnic orientation (Schachner et al., 2016), and to support well-being and life satisfaction among immigrant adolescents (Hoti, Heinzmann, Müller, & Buholzer, 2017). Moreover, the cultural pluralism climate transports views and attitudes about migration and diversity to immigrant adolescents. During adolescence, students continue to develop their perception of themselves in terms of how they view themselves and are viewed by others (Steinberg & Morris, 2001) and it seems likely that immigrant adolescents integrate the perception and position they have in school into their own views about themselves. Two key developmental tasks related to this negotiating of the self are self-esteem (Rosenberg, 1965) and academic self-concept (Shavelson et al., 1976). Self-esteem, an individual's positive or negative self-evaluation (Rosenberg, 1965) plays a major role in adolescents' adaptation (Steiger, Allemand, Robins, & Fend, 2014; Trzesniewski, Moffitt, Caspi, Taylor, & Maughan, 2006). Low global self-esteem is a risk factor for many maladaptive outcomes, such as depressive symptoms, suicidal ideation, or multiple health compromising behaviors (McGee & Williams, 2000; Orth, Robins, & Roberts, 2008).

Adolescents' interaction with their social environment plays an important role in shaping their self-esteem (e.g., Sarkova et al., 2014; see also Leary & Baumeister, 2000). Immigrant adolescents may rely on cues regarding their migration background from their surrounding and integrate them into their self-perceptions. For example, it has been shown that immigrant adolescents' perception of discrimination can affect and negatively influence their self-esteem (Verkuyten, 1998). By contrast, a successfully established

multicultural pluralism climate, which contributes to immigrant adolescents' feelings of being accepted and valued in the classroom, might help them in developing a healthy self-esteem. Academic self-concept, a further type of self-perceptions, specifically refers to individuals' perceptions about their competences in the academic domain and achievement situations. Academic self-concept represents an important educational outcome on its own as well as an enhancer of academic achievement (e.g., Bong & Skaalvik, 2003; Marsh & Martin, 2011). Cultural pluralism climate, as a learning environment that connects to and integrates immigrant adolescents' unique backgrounds, may foster immigrant adolescents' engagement with school-related topics and help them to develop a positive self-concept of their academic abilities. In fact, one prior study on cultural pluralism climate has already documented positive relations between cultural pluralism climate and academic self-concept, mediated by sense of school belonging (Schachner et al., 2019); however research on this relation is still sparse.

In addition, there is an achievement gap between immigrant and non-immigrant students, with immigrant students consistently exhibiting lower academic achievement than their non-immigrant peers in international large-scale assessments (e.g., OECD, 2017). A positive cultural pluralism climate may aid in decreasing the achievement gap between immigrant and non-immigrant students, as existing research has already shown a positive relation between cultural pluralism climate and academic achievement (Celeste et al., 2019; Chang & Le, 2010; Schachner et al., 2019). When teachers incorporate the topic of migration and diversity into the learning process and when classmates as well as teachers show interest in immigrant students' ethnic background, immigrant students may find it easier to connect to school subjects, which could result in higher-quality learning processes and increased school achievement.

However, even though cultural pluralism climate seems to hold promise as an enhancer of positive student outcomes, such as achievement or academic self-concept, researchers have also cautioned that cultural pluralism climate may not exclusively yield positive effects. Specifically, the current evidence based on the link between cultural pluralism climate and immigrant adolescents' perceived discrimination has produced inconclusive and even contrasting results. On the one hand, a negative relation between cultural pluralism climate and perceived discrimination has been reported, indicating that cultural pluralism climate may counteract discrimination (Brown & Chu, 2012). This squares well with research underlining that multiculturalism fosters positive intergroup relations: A cultural pluralism climate may help in recognizing and understanding diverse cultural backgrounds, thus resulting in better intergroup contact, lower levels of prejudice, and lower levels of discrimination (e.g., Brown & Chu, 2012; Verkuyten & Thijs, 2013). On the other hand, fostering cultural pluralism has also been linked to increased perceived discrimination in prior research (Schwarzenthal et al., 2018). It may be that the cultural pluralism approach, by emphasizing differences between students, creates a stronger separation between immigrant and non-immigrant students. This may then lead to alienation between students from different cultural groups and heightens discrimination. Hence, both directions of effects (multicultural pluralism climate raises discrimination and multicultural pluralism climate decreases discrimination) seem plausible and prior studies have been supportive of both directions.

1.4 │ Potential mediators of the relation between cultural pluralism climate and achievement

A positive classroom climate in general is supportive of students' academic success (Wang et al., 2020). For immigrant adolescents, this is also true for their perception of cultural

pluralism climate, as it has been consistently linked to increased academic achievement (Celeste et al., 2019; Chang & Le, 2010; Schachner et al., 2019). While this connection has been reported in several studies concerning cultural pluralism, we do not know much about mechanisms driving the effect of a cultural pluralism climate and increased achievement. Previous research has shown that the effect of cultural pluralism climate on achievement is mediated by a sense of school belonging (Schachner et al., 2019). In our study, however, we aimed to expand the current knowledge on cultural pluralism climate and achievement by testing a new set of potential mediators. Concretely, we focused on self-perceptions and perceived discrimination as factors that may mediate the link between cultural pluralism climate and academic achievement.

First, it seems reasonable to assume that the effect of cultural pluralism climate on achievement could be transmitted via students' competence self-perceptions, such as their self-concept and self-esteem. Acknowledging diversity in class creates a learning context in which immigrant adolescents feel valued, enjoy learning, and have the opportunity to develop positive self-perceptions of themselves and their capabilities. Self-concept, and of that academic self-concept in particular, plays a lead role in enhancing academic achievement (e.g., Marsh, 1990; Marsh & Martin, 2011), lending support to the assumption that the positive effect of cultural pluralism climate on achievement might be mediated by academic self-concept.

A similar, yet slightly different mechanism may be expected for self-esteem. As described above, adolescents' social environment plays an important role in shaping their self-esteem and immigrant adolescents may thus use cues regarding their migration background from their surroundings to inform the development of their self-perceptions. Increases in self-esteem in adaptive social contexts, such as classrooms with a well-established cultural pluralism climate, might in return boost immigrant students' academic achievement, given that research has also documented effects of self-esteem on academic achievement (Trautwein, Lüdtke, Köller, & Baumert, 2006).

At the same time, previous research suggests that perceived discrimination is negatively associated with students' academic achievement (e.g., Rüppel et al., 2015; Guerra et al., 2019). This may be the case as perceived discrimination has been found to result in poorer psychological and school adjustment (Hood, Bradley, & Ferguson, 2017) as well as problematic school adaptation (Benner & Kim, 2009), which lead to lower academic achievement. As an emphasis on cultural pluralism is related to perceived discrimination, perceived discrimination could be another possible pathway to impact academic achievement.

2 | THE PRESENT STUDY

The aim of the present study was to gain a more comprehensive understanding of immigrant adolescents' perceptions of four facets of cultural pluralism climate (learning about multicultural topics in class, learning about intercultural relations in class, teachers' interest in the culture of immigrant students, students' interest in the culture of immigrant students; Schachner et al., 2016) and their relations to critical outcomes. In light of the lack of prior research studying the effects of separate facets of cultural pluralism climate, our study contributes to a more differentiated knowledge of the different facets of cultural pluralism climate. In order to account for the nested data structure, with immigrant students nested in classes, we relied on multilevel modeling. Hence, all relations were estimated on two levels (individual student level [L1] and classroom level [L2], i.e., the average of the ratings of all immigrant students in a class) and we estimated the same relations at both levels.

FIGURE 1 Conceptual model of the main research questions in terms of (a) relations between cultural pluralism climate facets and achievement, academic self-concept, self-esteem, and perceived discrimination, and (b) potential mediators of the relation between cultural pluralism climate facets and achievement (academic self-concept, self-esteem, perceived discrimination) at both the individual student and the classroom level. Please note that the relations are addressed in four separate models for each of the four cultural pluralism climate facets, but we only show one exemplary model in the figure
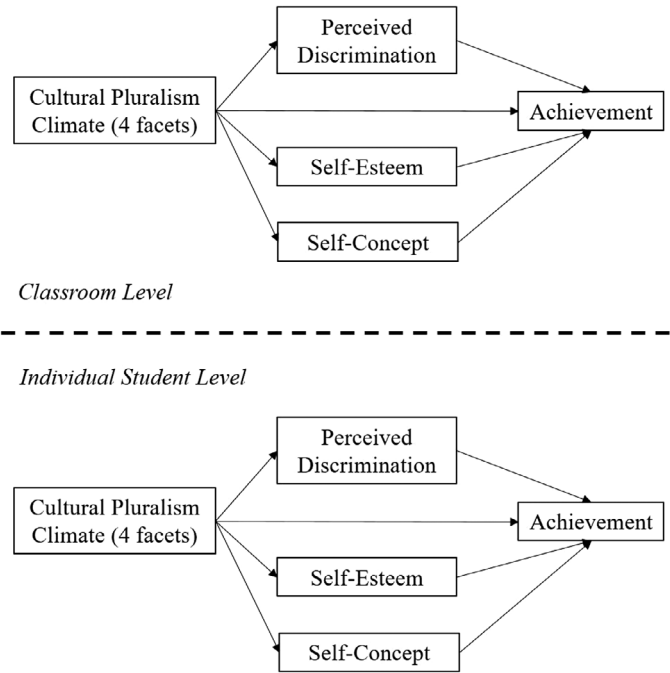
We investigated relations between the four facets of cultural pluralism climate and immigrant adolescents' self-esteem, academic self-concept, achievement, and perceived discrimination. We hypothesized that all four facets of cultural pluralism climate should be positively associated with achievement, academic self-concept, and self-esteem at both L1 and L2. With regard to perceived discrimination, we assumed that all four facets of cultural pluralism climate should be related to perceived discrimination at L1 and L2; however, due to inconclusive prior findings indicating both negative and positive effects, both directions of effects seem plausible and we wanted to test which one was empirically supported in our data. Additionally, we examined whether academic self-concept, self-esteem, and perceived discrimination mediated the relation between cultural pluralism climate facets and achievement to refine existing insights on the link between cultural pluralism climate and achievement at L1 and L2. We hypothesized that, at both L1 and L2, academic self-concept and self-esteem should positively mediate the relation between all cultural pluralism climate facets and achievement. For perceived discrimination, we did not specify a direction of the mediation between the four facets and achievement at any of the two levels. Moreover, we proposed that the mediators academic self-concept and self-esteem should be positively related to achievement, whereas perceived discrimination should be negatively related to achievement at L1 and L2. Figure 1 provides a conceptual model of the relations tested in the current study.

3 | Method

3.1 | Sample and procedure

The current study was carried out as part of a larger research project which focused on the role of contextual factors and (immigrant) adolescents' development in Austrian secondary schools with a total of 1649 students participating (Oczlon & Lüftenegger, 2020).

Our sample consisted of those 700 adolescents with an immigrant background (45.4% female). Participants' age ranged from 10 to 16 years (M_{age} 12.62 years, $SD = 1.12$, $Mdn = 13.00$). The students stemmed from 87 Austrian classes in 10 secondary schools in the federal states of Vienna, Lower Austria, and Burgenland. A total of 19.6% were enrolled in secondary schools of the highest academic track ("Gymnasium") and 80.4% in intermediate academic track schools ("Mittelschule"). Of those students, 35.4% were in Grade 6, 32.1% were in Grade 7, and 32.4% were in Grade 8. Students were considered as immigrants either when they were born in another country (first generation, 40.3 %) or when both of their parents were born in another country (second generation). In total, students reported 93 different countries where either they or one of their parents were born in. First-generation immigrant adolescents were mostly born in Slovakia (14%), followed by Syria (8.8%), Serbia (8.4%), Hungary (7%), Afghanistan (6.7%), and Germany (5.6%). All other countries accounted for less than 5% each. Of the second-generation immigrant students, most had Turkish migration background (15.7% whose parents were both born in Turkey), followed by Serbian (7.9%), Rumanian (5.9%), and Slovakian (5.7%) migration background. Of the second-generation immigrants, 18.7% had their mother and father born in different countries outside of Austria or reported only one parents' birthplace. All other countries accounted for less than 5% each. Schools differed in their percentage of immigrant students. They were not equally diverse, with the lowest percentage of immigrant students found in a high academic track school (16.5% first- or second-generation immigrant students in this school), and the highest in an intermediate academic track school (74.7% first or second-generation immigrant students).

Schools and classes volunteered to participate in the study. Prior to data collection, both students and parents gave their written consent. The study was also evaluated and approved beforehand by the educational authority of the federal states of Vienna, Lower Austria, and Burgenland. Data was collected through paper–pencil questionnaires, which students completed during one regular school hour in October 2019. Trained research assistants gave instructions and stayed in class during the data collection to answer questions. No compensation for participation was provided.

3.2 | Measures

3.2.1 | Cultural pluralism climate

Cultural pluralism climate was measured with four scales based on Schachner et. al., 2016. In some cases, the items which have originally been developed for the German school context were slightly adapted for the use in Austrian schools (i.e., "German students in this class" replaced with "Austrian students in this class"). The scale measuring the extent to which learning about intercultural relations takes place in class consisted of two items (sample item: "In school, we get taught to understand each other, even though we are from different countries," $\alpha = .74$) and the scale measuring the extent to which learning about multicultural topics was promoted in class contained three items (sample item: "In class we learn about how people in other countries live," $\alpha = .88$). Perceived interest of teachers in students' migration background was assessed with three items (sample item: "Teachers in this class ask the students in our class about their countries of origin," $\alpha = .79$). The scale capturing the perceived interest of classmates in students' migration background used the same wording as the subscale for teachers' interest, but the three items referred to non-immigrant classmates (e.g., "Austrian students in this class ask the students in our class about their countries of origin," $\alpha = .85$). Students were instructed to think about their

teachers and classes in general, not about a specific person or subject. Responses were given on a 5-point Likert-type scale ranging from 1 (*that's not right*) to 5 (*that's right*).

3.2.2 | Academic self-concept

We relied on a well-established academic self-concept scale (SESSKO, Schöne et al., 2012) to measure students' concept of their abilities in school with no point of reference (five items, sample item: "Learning new things is easy …. hard for me," $\alpha = .82$). Responses were given on a 5-point semantic differential scale.

3.2.3 | Self-esteem

To measure adolescents' self-esteem, we used three items taken from the short version of the scale of von Collani and Herzberg (2003), a German adaptation of Rosenberg's Self-Esteem Scale (Rosenberg, 1965). This scale provides a global assessment of the positive or negative attitudes toward oneself. We simplified the items in length and wording to match the developmental level of our sample (e.g., "I have some good qualities," $\alpha = .61$). Responses were given on a 5-point Likert-type scale ranging from 1 (*that's not right*) to 5 (*that's right*).

3.2.4 | Perceived discrimination

Perceived discrimination was measured with three items adapted from a German scale by Brenick and colleagues (2018), which measure individual perception of ethnic discrimination in class by other students (sample item: *"*Have you ever been teased by your classmates because you are from your other country?," $\alpha = .87$*)*. Items were slightly adapted for the use in Austrian schools (i.e., some terms that are very commonly used in Germany, but not in Austria were replaced with terms more common in Austria). Responses were given on a 5-point Likert-type scale ranging from 1 (*never*) to 5 (*very often*).

3.2.5 | Academic achievement

Students reported their most recent report card grades in German, Maths, and English, which were averaged across the three subjects and used as indicators of achievement. In the Austrian school system, "1" represents the best grade and "5" the lowest grade. Thus, analyses were carried out with recoded grades, so that higher values reflect higher achievement.

3.2.6 | Control variables

Migration status (coded as 0 = *first generation*, 1 = *second generation*) and gender (coded as 0 = *female*, 1 = *male*) were used as control variables at L1 to control for key demographic characteristics. We further included academic track, coded as 0 = *Highest academic track* ("Gymnasium") and 1 = *Intermediate academic track* ("Mittelschule") and grade (0 = *grade 6*, 1 = *grade 7*, 2 = *grade 8*) as L2 control variables.

3.3 | Statistical analyses

The analyses were performed with Mplus Version 8.2 (Muthén & Muthén, 1998–2017). Given the multilevel structure of our data, with students nested in classes, all models tested in this study were specified as two-level models (L1: individual student level, L2: class level). In preliminary analyses, we set up a series of multilevel confirmatory factor analytic models (ML-CFAs) using the robust maximum likelihood estimator (MLR) to investigate the factorial structure of all multiple-item scales. In addition, we conducted cross-level invariance testing. Cross-level invariance ensures a common metric at both L1 and L2 (see e.g., Lüdtke, Marsh, Robitzsch, & Trautwein, 2011; Marsh et al., 2009; Morin, Marsh, Nagengast, & Scalas, 2014). Therefore, these ML-CFA models were first estimated with factor loadings freely estimated at both levels (configural invariance model) and re-estimated with factor loadings constrained to invariance across levels (metric invariance model). Cross-level invariance assumptions were evaluated by comparing the Bayesian information Criteria (BIC) values of the configural and metric invariance models, with lower BIC values indicating a better trade-off between fit and complexity (see, e.g., van de Schoot, Lugtig, & Hox, 2012). Goodness of fit of all ML-CFA models was assessed with the comparative fit index (CFI) and the root mean square error of approximation (RMSEA). Typical cut-off scores taken to reflect excellent and adequate fit to the data were considered: (a) CFI > .95 and .90, respectively; (b) RMSEA < .06 and .08 (Hu & Bentler, 1999).

Next, we set up multilevel mediation models (ML mediation models) to investigate our research questions, one for each cultural climate facet. In all four models, we (a) estimated the effects of cultural pluralism climate facets on achievement, self-esteem, academic self-concept, and perceived discrimination, and (b) additionally tested whether academic self-concept, self-esteem, and perceived discrimination mediated the relations between cultural pluralism climate facets on achievement. To enhance clarity, we will refer to these models as Model 1 (Model for learning about intercultural relations), Model 2 (Model for learning about multicultural topics), Model 3 (Model for interest shown by teachers), and Model 4 (Model for interest shown by students). We included gender (male vs. female) and migration background (first vs. second generation) as control variables at L1, and school grade (grade 6, 7, or 8) and track (highest ability track vs. intermediate track) as control variables at L2 in all models. We used manifest mean scales for the cultural pluralism climate facets, academic self-concept, self-esteem, and perceived discrimination, and manifest indicators (single items) for the control variables and achievement.

The ML mediation models were set up using a Bayesian estimator to test indirect effects as bootstrapping in conjunction with multilevel modeling is not implemented in Mplus 8.2. Thus, we applied the Bayesian Markov Chain Monte Carlo (MCMC) estimation method. In line with recommendations by Hox and colleagues (2012), convergence was assessed using the Gelman–Rubin criterion with a stricter cut-off value of 0.01 rather than the default setting of 0.05. Eight chains were requested for the Gibbs sampler and a minimum number of 10,000 iterations were specified. We manually inspected all trace plots to check for convergence. In all models, group-mean centering was applied to the predictors at L1. If group-mean centering (centering at the group mean or centering within cluster) is used, L1 student ratings of a specific feature are adjusted to the mean ratings of this feature in the cluster to which the student belongs. This means that the respective class mean is subtracted from the individual ratings and within-class and between-class effects can thus be disentangled. Please note that for L2 ratings only grand-mean centering can be applied (e.g., Lüdtke, Robitzsch, Trautwein, & Kunter, 2009; Raudenbush & Bryk, 2002).

Significance testing was conducted at the .05 level and relied on two-tailed tests. The amount of missing data at the item level of the variables analyzed in this study was very

TABLE 1 Class-level descriptive statistics, intraclass correlations, and bivariate correlations

Variable	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.
1. Learning intercultural relations		**.71**	**.61**	**.40**	.07	**.26**	−.05	−.15	—	—	.46	**−.28**
2. Learning multicultural topics	**.38**		**.75**	**.48**	−.11	**.24**	−.15	.01	—	—	**.52**	−.13
3. Interest teachers	**.30**	**.52**		**.50**	.01	.20	.02	.02	—	—	**.55**	−.03
4. Interest students	**.20**	**.34**	**.49**		.13	.03	.01	−.05	—	—	.16	−.19
5. Academic self-concept	**.16**	.08	.10	.00		**.26**	**.39**	−.18	—	—	−.17	−.11
6. Self-esteem	**.19**	**.15**	.12	.03	**.41**		.03	−.09	—	—	.22	−.03
7. Achievement	**.13**	.04	.10	−.03	**.43**	.04		−.15	—	—	−.16	**−.31**
8. Perceived discrimination	**−.10**	−.03	.05	**.08**	**−.15**	**−.14**	−.02		—	—	.21	.17
9. Gender	−.04	−.01	−.06	**−.07**	.02	**.13**	**−.20**	−.05		—	—	—
10. Migration status	.01	−.05	−.06	−.05	**−.10**	−.02	−.07	−.06	−.04		—	—
11. Academic track	—	—	—	—	—	—	—	—	—	—		.07
12. Grade	—	—	—	—	—	—	—	—	—	—	—	
M_{within}	4.21	3.31	3.06	2.87	3.56	4.02	3.09	1.82	—	—	—	—
SD_{within}	1.01	.94	1.03	1.11	.74	.74	.83	1.08	—	—	—	—
$Omega_{within}$	.848	.706	.760	.840	.821	.624	—	.877	—	—	—	—
$Omega_{between}$	.998	.954	.991	.975	.879	.877	—	.739	—	—	—	—
ICC	.243	.176	.205	.067	.001	.037	.058	.005	—	—	—	—

Note. $N = 700$ students from 87 classrooms; ICC = intraclass correlation coefficient (proportion of between-classroom variance in total variance). Statistically significant correlation coefficients at $p < .05$ are in boldface. Below the diagonal, individual student level; above the diagonal, class level.

low and ranged between 0% and 2.6%, with the sole exception of achievement (28% missing values). It should be noted that grades in Austria typically range between 1 and 5; however, 26.4% of our sample had grades scored on a 7-point scale. Different scoring systems like this are sometimes used by single schools. As there was no feasible way of transforming the 7-point grades to regular 5-point grades, we decided to code the grades of these students as missing values. This allowed us to take advantage of a larger sample for our analyses and was therefore deemed as more appropriate than completely excluding these students. We used full information maximum likelihood estimation (FIML; Enders, 2010) for the ML-CFAs and Bayesian estimation for the ML mediation models to deal with missing data.

4 | Results

4.1 | Preliminary analyses

Table 1 displays bivariate correlations between all variables, separately for L1 and L2 and intraclass correlation coefficients (ICCs). ICC values are ideally close to or higher than .10 (e.g., Lüdtke et al., 2009). In our study, high ICC values were obtained for the facets learning about intercultural relations and multicultural topics, and interest shown by teachers, and a slightly lower value was reported for interest shown by students. Lower ICC were

found for self-esteem and achievement, and particularly for perceived discrimination and self-concept. However, recent research underlines that a multilevel modeling approach is appropriate even in the presence of low ICC values (Bliese, Maltarich, & Hendricks, 2018).

The ML-CFAs that were estimated to verify the adequacy of the measurement model and to test cross-level metric invariance indicated a good level of fit to the data for all scales. In addition, cross-level invariance assumptions were supported for all scales, as indicated by a lower BIC value of the metric invariance models (factor loadings constrained to be invariant across levels) as compared to the configural invariance models (see Table S1 in Supporting Information).

4.2 | Relations between cultural pluralism climate facets and achievement, academic self-concept, self-esteem, and perceived discrimination

The four ML mediation models converged properly. Table 2 displays all effects (unstandardized and standardized estimates), including the effects of the control variables. In this section, we report the effects of all four cultural pluralism climate dimensions on achievement, academic self-concept, self-esteem, and perceived discrimination. The mediation effects are covered in the section below. The abbreviation b indicates unstandardized estimates.

In the Model 1 set up for the cultural pluralism climate facet *learning about intercultural relations*, learning about intercultural relations was positively associated with academic self-concept ($b = 0.14$, $p < .001$), and self-esteem ($b = 0.16$, $p < .001$) at L1, whereas it was negatively related to perceived discrimination ($b = -0.13$, $p = .006$) at L1. The relation between learning about intercultural relations and achievement was not statistically significant ($b = -0.05$, $p = .272$). At L2, we did not obtain a statistically significant relation between learning about intercultural relations and achievement ($b = -0.09$, $p = .270$) and self-esteem ($b = 0.05$, $p = .452$). However, we found a significant positive relation between learning about intercultural relations and academic self-concept ($b = 0.12$, $p = .040$) and a significant relation between learning about intercultural relations and perceived discrimination ($b = -0.35$, $p < .001$).

In Model 2 for the cultural pluralism climate facet *learning about multicultural topics*, learning about multicultural topics was positively associated with self-esteem ($b = 0.13$, $p < .001$) and academic self-concept ($b = 0.07$, $p = .024$) at L1. By contrast, the relations between learning about multicultural topics and achievement as well as perceived discrimination were not statistically significant ($b = 0.02$, $p = .610$, and $b = -0.05$, $p = .282$, respectively) at L1. At L2, learning about multicultural topics was not statistically significantly related to achievement ($b = -0.09$, $p = .364$), academic self-concept ($b = 0.01$, $p = .888$), self-esteem ($b = 0.08$, $p = .360$), or perceived discrimination ($b = -0.225$, $p = .066$).

In Model 3 for the cultural pluralism climate facet *interest shown by teachers*, interest shown by teachers was significantly related to self-esteem ($b = 0.10$, $p < .001$) and academic self-concept ($b = 0.08$, $p = .012$) at L1. Furthermore, the results yielded no statistically significant relations between immigrant students' perceptions of the interest shown by teachers and achievement ($b = 0.04$, $p = .270$) and perceived discrimination ($b = 0.05$, $p = .290$) at L1. At L2, none of the effects were statistically significant: Interest shown by teachers was not significantly related to achievement ($b = 0.03$, $p = .724$), academic self-concept ($b = 0.10$, $p = .172$), self-esteem ($b = 0.02$, $p = .796$), and perceived discrimination ($b = -0.19$, $p = .094$).

TABLE 2 Direct effects of the multilevel mediation models

Model	Independent variable	Mediating variable	Dependent variable	Est. (*SE*)	Std. Est.
Individual student level					
1	Learning intercultural relations		Achievement	0.05 (0.04)	0.05
	Learning intercultural relations		Self-concept	**0.14** (0.03)	**0.16**
	Learning intercultural relations		Self-esteem	**0.16** (0.03)	**0.19**
	Learning intercultural relations		Perceived discrimination	**−0.13** (0.05)	**−0.11**
		Self-concept	Achievement	**0.49** (0.05)	**0.43**
		Self-esteem	Achievement	**−0.12** (0.05)	**-0.10**
		Perceived discrimination	Achievement	0.02 (0.03)	0.03
	Gender		Achievement	**−0.34** (0.07)	**−0.42**
	Gender		Self-concept	0.03 (0.05)	0.04
	Gender		Self-esteem	**0.19** (0.05)	**0.28**
	Gender		Perceived discrimination	−0.12 (0.08)	−0.12
	Migration background		Achievement	−0.07 (0.07)	−0.08
	Migration background		Self-concept	**−0.16** (0.05)	**−0.24**
	Migration background		Self-esteem	−0.04 (0.05)	0.05
	Migration background		Perceived discrimination	−0.12 (0.08)	−0.11
2	Learning multicultural topics		Achievement	0.02 (0.04)	0.02
	Learning multicultural topics		Self-Concept	**0.07** (0.03)	**0.09**
	Learning multicultural topics		Self-esteem	**0.13** (0.03)	**0.15**
	Learning multicultural topics		Perceived discrimination	−0.05 (0.05)	−0.04
		Self-concept	Achievement	**0.50** (0.05)	**0.44**
		Self-esteem	Achievement	**−0.11** (0.05)	**−0.10**
		Perceived discrimination	Achievement	0.02 (0.03)	0.03
	Gender		Achievement	**−0.34** (0.07)	**−0.43**
	Gender		Self-concept	0.01 (0.05)	0.02
	Gender		Self-esteem	**0.18** (0.05)	**0.26**
	Gender		Perceived discrimination	−0.11 (0.08)	−0.11
	Migration background		Achievement	−0.06 (0.07)	−0.07
	Migration background		Self-concept	**−0.15** (0.05)	**−0.22**
	Migration background		Self-esteem	−0.02 (0.05)	−0.03
	Migration background		Perceived discrimination	−0.12 (0.08)	−0.12
3	Interest teacher		Achievement	0.04 (0.04)	0.05
	Interest teacher		Self-concept	**0.08** (0.03)	**0.10**

(Continues)

TABLE 2 (Continued)

Model	Independent variable	Mediating variable	Dependent variable	Est. (*SE*)	Std. Est.
	Interest teacher		Self-esteem	**0.10** (0.03)	**0.14**
	Interest teacher		Perceived dis-crimination	0.05 (0.04)	0.04
		Self-concept	Achievement	**0.50** (0.05)	**0.43**
		Self-esteem	Achievement	**−0.12** (0.05)	**−0.10**
		Perceived dis-crimination	Achievement	0.02 (0.03)	0.02
	Gender		Achievement	**−0.34** (0.07)	**−0.43**
	Gender		Self-concept	0.02 (0.05)	0.03
	Gender		Self-esteem	**0.19** (0.05)	**0.28**
	Gender		Perceived dis-crimination	−0.10 (0.08)	−0.10
	Migration background		Achievement	−0.06 (0.07)	−0.07
	Migration background		Self-concept	**−0.15** (0.05)	**−0.22**
	Migration background		Self-esteem	−0.02 (0.05)	−0.03
	Migration background		Perceived dis-crimination	−0.11 (0.08)	−0.11
4	Interest students		Achievement	−0.04 (0.03)	−0.05
	Interest students		Self-concept	−0.01 (0.03)	−0.01
	Interest students		Self-esteem	0.03 (0.03)	0.05
	Interest students		Perceived dis-crimination	0.07 (0.04)	0.07
		Self-concept	Achievement	**0.50** (0.05)	**0.43**
		Self-esteem	Achievement	−0.10 (0.05)	−0.09
		Perceived dis-crimination	Achievement	0.03 (0.03)	0.03
	Gender		Achievement	**−0.35** (0.07)	**−0.44**
	Gender		Self-concept	0.01 (0.05)	0.01
	Gender		Self-esteem	**0.18** (0.05)	**0.26**
	Gender		Perceived dis-crimination	−0.09 (0.08)	−0.08
	Migration background		Achievement	−0.06 (0.07)	−0.07
	Migration background		Self-concept	**−0.16** (0.06)	**−0.23**
	Migration background		Self-esteem	−0.04 (0.05)	−0.05
	Migration background		Perceived dis-crimination	−0.11 (0.08)	−0.10
Class level					
1	Learning intercultural relations		Achievement	−0.09 (0.09)	−0.20
	Learning intercultural relations		Self-concept	**0.12** (0.06)	**0.26**
	Learning intercultural relations		Self-esteem	0.05 (0.07)	0.10
	Learning intercultural relations		Perceived dis-crimination	**−0.35** (0.09)	**−0.45**
		Self-concept	Achievement	**0.66** (0.16)	**0.69**

(Continues)

TABLE 2 (Continued)

Model	Independent variable	Mediating variable	Dependent variable	Est. (*SE*)	Std. Est.
		Self-esteem	Achievement	−0.05 (0.15)	−0.06
		Perceived dis-crimination	Achievement	−0.07 (0.10)	−0.11
	Grade		Achievement	**−0.14** (0.07)	**−0.44**
	Grade		Self-concept	−0.01 (0.05)	−0.03
	Grade		Self-esteem	−0.01 (0.05)	−0.02
	Grade		Perceived dis-crimination	0.01 (0.07)	0.01
	School track		Achievement	0.02 (0.12)	0.07
	School track		Self-concept	−0.15 (0.08)	−0.45
	School track		Self-esteem	0.14 (0.09)	0.36
	School track		Perceived dis-crimination	**0.38** (0.13)	**0.70**
2	Learning multicultural topics		Achievement	−0.09 (0.10)	−0.15
	Learning multicultural topics		Self-concept	0.01 (0.08)	0.02
	Learning multicultural topics		Self-esteem	0.08 (0.09)	0.11
	Learning multicultural topics		Perceived dis-crimination	−0.23 (0.13)	−0.22
		Self-concept	Achievement	**0.59** (0.16)	**0.63**
		Self-esteem	Achievement	−0.07 (0.15)	−0.08
		Perceived dis-crimination	Achievement	−0.05 (0.10)	−0.08
	Grade		Achievement	**−0.13** (0.07)	**−0.43**
	Grade		Self-concept	−0.04 (0.04)	−0.14
	Grade		Self-esteem	−0.01 (0.05)	−0.03
	Grade		Perceived dis-crimination	0.08 (0.07)	0.14
	School track		Achievement	0.00 (0.12)	0.01
	School track		Self-concept	−0.07 (0.09)	−0.21
	School track		Self-esteem	0.12 (0.10)	0.30
	School track		Perceived dis-crimination	0.27 (0.14)	0.49
3	Interest teacher		Achievement	0.03 (0.09)	0.06
	Interest teacher		Self-concept	0.10 (0.07)	0.17
	Interest teacher		Self-esteem	0.02 (0.08)	0.03
	Interest teacher		Perceived dis-crimination	−0.19 (0.12)	−0.21
		Self-concept	Achievement	**0.62** (0.16)	**0.64**
		Self-esteem	Achievement	−0.09 (0.15)	−0.10
		Perceived dis-crimination	Achievement	−0.05 (0.10)	−0.09
	Grade		Achievement	−0.13 (0.07)	−0.40
	Grade		Self-concept	−0.04 (0.04)	−0.12

(Continues)

TABLE 2 (Continued)

Model	Independent variable	Mediating variable	Dependent variable	Est. (*SE*)	Std. Est.
	Grade		Self-esteem	−0.02 (0.05)	−0.05
	Grade		Perceived discrimination	0.09 (0.07)	0.17
	School track		Achievement	−0.07 (0.12)	−0.22
	School track		Self-concept	−0.13 (0.09)	0.38
	School track		Self-esteem	0.16 (0.10)	0.42
	School track		Perceived discrimination	0.27 (0.14)	0.48
4	Interest students		Achievement	−0.02 (0.09)	−0.03
	Interest students		Self-concept	0.12 (0.07)	0.18
	Interest students		Self-esteem	−0.05 (0.08)	−0.07
	Interest students		Perceived discrimination	−0.18 (0.12)	−0.17
		Self-concept	Achievement	**0.63** (0.16)	**0.66**
		Self-esteem	Achievement	−0.07 (0.15)	−0.09
		Perceived discrimination	Achievement	−0.04 (0.10)	−0.08
	Grade		Achievement	−0.13 (0.07)	−0.40
	Grade		Self-concept	−0.03 (0.04)	−0.09
	Grade		Self-esteem	−0.03 (0.05)	−0.07
	Grade		Perceived discrimination	0.08 (0.07)	0.14
	School track		Achievement	−0.04 (0.10)	−0.14
	School track		Self-concept	−0.09 (0.07)	−0.26
	School track		Self-esteem	**0.19** (0.08)	**0.50**
	School track		Perceived discrimination	0.18 (0.12)	0.32

Note. $N = 700$ students from 87 classrooms; Est. = unstandardized parameter estimate; Std. Est. = standardized estimate; Self-concept = academic self-concept. Statistically significant results at $p < .05$ are in boldface.

Finally in Model 4 for the cultural pluralism climate facet *interest shown by students*, immigrant students' perception of this facet was not statistically significantly related to any of the outcomes (for achievement: $b = −0.40$, $p = .230$, for self-esteem: $b = 0.03$, $p = .236$, for academic self-concept: $b = −0.01$, $p = .856$; for perceived discrimination: $b = 0.07$, $p = .068$). Similarly, at L2, interest shown by student was not statistically significantly associated with achievement ($b = −0.02$, $p = .808$), academic self-concept ($b = 0.12$, $p = .090$), self-esteem ($b = −0.05$, $p = .524$), and perceived discrimination ($b = −0.18$, $p = .114$).

4.3 | Mediating effects of academic self-concept, self-esteem, and perceived discrimination

In each of the four models for the four cultural pluralism climate facets, we also tested whether academic self-concept, self-esteem, and perceived discrimination mediated the relation between the cultural pluralism climate facets and achievement. In the model for

learning about intercultural relations (Model 1), academic self-concept fully mediated the relation between learning about intercultural relations and achievement at both L1 ($b = 0.06$, $p < .001$) and L2 ($b = 0.08$, $p = .040$). Moreover, self-esteem was also found to fully mediate the relation between learning about intercultural relations and achievement ($b = -0.02$, $p = .026$). In the model set up for the cultural pluralism climate facet learning about multicultural topics (Model 2), academic self-concept ($b = 0.04$, $p = .024$) and self-esteem ($b = -0.01$, $p = .034$) fully mediated the association between immigrant students' perceptions of this facet and achievement at L1. Moreover, in the model for the cultural pluralism climate facet interest shown by teachers (Model 3), academic self-concept and self-esteem fully mediated the relation between interest shown by teachers and achievement at L1 ($b = 0.04$, $p = .012$, and $b = -0.01$, $p = .024$, respectively). In the model for interest shown by students (Model 4), none of the mediating effects were significant. Table 3 reports all significant and non-significant mediating effects, including 95% confidence intervals. All estimates (unstandardized and standardized effects) for the relations between the three mediators and achievement can be consulted in Table 2 as well. With regard to the associations between the mediators and achievement, academic self-concept and achievement were significantly and positively related at both L1 and L2 in all models. With the sole exception of the model for interest shown by students (Model 4), in which the relation between self-esteem and achievement just failed to attain statistical significance ($p = .050$), self-esteem and achievement were significantly and negatively related at L1 in all other models (Models 1, 2, and 3, see Table 2).

5 | DISCUSSION

The overall goal of this study was to provide a more fine-grained picture of immigrant students' perceptions of the cultural pluralism climate and its relation to key developmental and school-related outcomes. In doing so, we wanted to strengthen and expand existing knowledge on the role of cultural pluralism climate in immigrant students' adaptation and take a closer look at different facets that make up a cultural pluralism climate. Our first aim was thus to examine relations between all cultural pluralism climate facets and immigrant students' outcomes in terms of their self-esteem, self-concept, achievement, and perceived discrimination in multilevel models. Our second aim centered on testing whether self-concept, self-esteem, and perceived discrimination mediated the relations between cultural pluralism climate facets and achievement.

5.1 | Relations between cultural pluralism climate facets and achievement, academic self-concept, self-esteem, and perceived discrimination

Concerning our first aim, significant positive relations between learning about multicultural topics, learning about intercultural relations, and interest shown by teachers and immigrant adolescents' academic self-concept and self-esteem emerged at L1, with effects of mainly small size (see standardized estimates in Table 2). Moreover, the results indicated a negative association between immigrant adolescents' perception of the climate regarding learning about intercultural relations and perceived discrimination at L1 (small effect sizes). At L2, only learning about intercultural relations was significantly related to two of the considered outcomes, revealing a positive relation to academic self-concept

TABLE 3 Indirect effects of the multilevel mediation models

	Independent variable	Mediating variable	Dependent variable	Est. (*SE*)	95% CI
Within level					
1	Learning intercultural relations	Self-concept	Achievement	**0.07 (0.02)**	**[0.04, 0.10]**
	Learning intercultural relations	Self-esteem	Achievement	**-0.02 (0.01)**	**[-0.04, -0.00]**
	Learning intercultural relations	Perceived discrimination	Achievement	-0.00 (0.01)	[-0.01, 0.01]
2	Learning multicultural topics	Self-concept	Achievement	**0.04 (0.02)**	**[0.01, 0.07]**
	Learning multicultural topics	Self-esteem	Achievement	**-0.01 (0.01)**	**[-0.03, -0.00]**
	Learning multicultural topics	Perceived discrimination	Achievement	-0.00 (0.00)	[-0.01, 0.00]
3	Interest teacher	Self-concept	Achievement	**0.04 (0.02)**	**[0.01, 0.07]**
	Interest teacher	Self-esteem	Achievement	**-0.01 (0.01)**	**[-0.03, -0.00]**
	Interest teacher	Perceived discrimination	Achievement	0.00 (0.00)	[-0.00, 0.00]
4	Interest students	Self-concept	Achievement	-0.00 (0.01)	[-0.03, 0.02]
	Interest students	Self-esteem	Achievement	-0.00 (0.00)	[-0.01, 0.00]
	Interest students	Perceived discrimination	Achievement	0.00 (0.00)	[-0.00, 0.01]
Between level					
1	Learning intercultural relations	Self-concept	Achievement	**0.08 (0.05)**	**[0.00, 0.18]**
	Learning intercultural relations	Self-esteem	Achievement	-0.00 (0.01)	[-0.03, 0.02]
	Learning intercultural relations	Perceived discrimination	Achievement	0.02 (0.04)	[-0.05, 0.10]
2	Learning multicultural topics	Self-concept	Achievement	0.01 (0.05)	[-0.09, 0.10]
	Learning multicultural topics	Self-esteem	Achievement	-0.00 (0.02)	[-0.05, 0.03]
	Learning multicultural topics	Perceived discrimination	Achievement	0.01 (0.03)	[-0.04, 0.07]
3	Interest Teacher	Self-Concept	Achievement	0.06 (0.05)	[-0.03, 0.16]
	Interest teacher	Self-esteem	Achievement	0.00 (0.01)	[-0.04, 0.03]
	Interest teacher	Perceived discrimination	Achievement	0.01 (0.02)	[-0.03, 0.06]
4	Interest Students	Self-concept	Achievement	0.07 (0.05)	[-0.01, 0.18]
	Interest students	Self-esteem	Achievement	0.00 (0.02)	[-0.03, 0.04]
	Interest students	Perceived discrimination	Achievement	0.01 (0.02)	[-0.03, 0.06]

Note. $N = 700$ students from 87 classrooms; Est. = unstandardized parameter estimate; 95% CI = 95% confidence intervals of the mediating effects; Self-concept = Academic self-concept. Statistically significant results at $p < .05$ are in boldface.

(small-to-medium effect) and a negative relation to perceived discrimination (medium-to-large effect). None of the other effects at L1 and L2 attained statistical significance.

Overall, these results paint a solely positive picture of the cultural pluralism climate as we could confirm the hypothesized positive associations between several facets and adaptive outcomes (self-esteem, self-concept). Furthermore, none of the facets were linked to higher levels of perceived discrimination; by contrast, we found negative relations for learning about intercultural relations and discrimination at both L1 and L2. To summarize,

even though we have to keep in mind that the nature of our data does not allow us to make claims about influences and causality, the pattern of finding suggests that immigrant students' perceptions of cultural pluralism climate facets could be particularly relevant for their self-esteem and academic self-concept, as three out of four facets (learning about intercultural relations, learning about multicultural topics, and interest shown by teachers) were connected to these two outcomes at L1. Hence, it seems that individual immigrant students' positive self-beliefs—both in terms of more general evaluations of themselves (self-esteem) as well as more closely tied to academic tasks (academic self-concept)—may benefit from an environment with the provision of learning opportunities related to diversity at school and from teachers' clear interest in their different ethnic backgrounds.

Moreover, at the classroom level, we also obtained positive relations between learning about intercultural relations and academic self-concept, and negative relations to perceived discrimination. For this facet, the relations with self-concept and perceived discrimination occurred at both levels, with larger effects at the classroom level. These more pronounced effects at the classroom level may indicate that learning about intercultural relations best unfolds its effects when modeled as "true" climate, that is, as class-level feature that varies between classes (see, e.g., Morin et al., 2014).

Some previous studies have cautioned that cultural pluralism climate may produce negative effects, as it has been found to increase perceived discrimination (Schwarzenthal et al., 2018). In the present study, there was no indication of such a detrimental effect. On the contrary, we observed that learning about intercultural relations, which records whether students get taught about respecting and getting along with students from other countries (Schachner et al., 2016), was negatively related to perceived discrimination. In general, our results emphasize the importance of taking a closer look at different facets of a cultural pluralism climate and to distinguish between its facets as they may be differentially related to different outcomes. Only one facet was associated with lower levels of perceived discrimination and none of the four investigated facets was, as sometimes warned, positively related to perceived discrimination (Schwarzenthal et al., 2018).

One possible explanation for finding previous ambiguous results concerning discrimination we want to stress relates to the quality of cultural pluralism climate, that is, the way in which topics are addressed in class. Detrimental effects on intergroup relations can potentially arise from stressing the differences between groups which, when not done correctly, can lead to greater distance and holds the risk of stereotyping (Schwarzenthal et al., 2018; Wolsko, Park, Judd, & Wittenbrink, 2000). Stereotyping in return leads to increased discrimination (Kim, Wang, Deng, Alvarez, & Li, 2011). Taking a closer look at the quality of how cultural pluralism is implemented in the classroom could offer essential insights. Furthermore, an explanation for our findings regarding discrimination relates to the measurement of perceived discrimination, as we asked about perceived discrimination against oneself, as opposed to the ethnic group in general (e.g., "To what extent are Turkish youth in your school discriminated against" in Stevens, Vollebergh, Pels, & Crijnen, 2005). Students experience even more discrimination against their ethnic group than against themselves individually (Verkuyten, 1998). As the cultural pluralism climate addresses differences between cultural group as a whole it potentially creates stereotypes that result in perceived ethnic group discrimination, rather than individual discrimination. Future studies could investigate this by linking different facets of the climate to perceived ethnic group discrimination.

As for all other effects at L1 and L2, the results indicated that teacher behavior and classroom instructions, as captured by the three facets learning about multicultural topics, learning about intercultural relations, and interest shown by teachers, may play a more important role as they showed larger relations to school-related outcomes than

cultural pluralism climate facets related to classmates (i.e., the facet "interest shown by students"). With regard to the facet centered around teachers, the importance of positive student–teacher interactions is well documented in the literature (e.g., Hamre & Pianta, 2005). Our study contributes to this line of research by pointing toward the importance of teachers' interactions with immigrant students in a way that shows students that their teacher cares about and is interested in their culture. Another possible explanation for the lack of statistically significant findings for the facet "interest shown by students" lies in the operationalization of this scale. The items referred to the interest shown by non-immigrant classmates, neglecting the role of fellow immigrant students. It may also be important how other immigrant students talk to immigrant students about their background and show interest. Future studies may want to expand this facet by incorporating fellow immigrant students' approaches to topics of diversity and migration.

5.2 | Mediating effects of academic self-concept, self-esteem, and perceived discrimination

To address our second aim, we tested whether academic self-concept, self-esteem, and perceived discrimination mediate the relation between each cultural pluralism climate facets and achievement. Prior studies found that immigrant adolescents show higher academic achievement in classrooms where a cultural pluralism climate is prevalent (Celeste et al., 2019; Chang & Le, 2010). In our study, we demonstrated that this effect is transmitted via an increase in academic self-concept. Interestingly, none of the direct effects, with cultural pluralism climate predicting achievement reached statistical significance. This is surprising, as the link between cultural pluralism climate appeared to be the most robust prior finding in the literature. However, the results demonstrated that academic self-concept fully mediated the effects of the three cultural pluralism climate facets learning about multicultural topics, learning about intercultural relations, and interest shown by teachers on achievement at L1. This indicates that the relation between cultural pluralism climate and achievement may be more complex than previously assumed. Students' perceptions of a classroom atmosphere characterized by a teachers' interest in and learning about diverse cultural backgrounds and relations translates into a higher academic self-concept of immigrant students and thus, indirectly, into higher academic achievement. This represents an important finding, as closing the achievement gap between immigrant and non-immigrant students is a major concern in today's schools (Motti-Stefanidi & Masten, 2013) and confirms the central role of academic self-concept in transmitting the positive effect of cultural pluralism on academic achievement. Moreover, this finding reinforces the need to identify factors that can contribute to a better understanding of the relation between cultural pluralism climate and achievement as well as potential underlying mechanism—as we have done in our study. On the other hand, we observed no mediating effect for interest shown by students, aligned with the other (non-significant) results for this facet.

In addition, self-esteem also mediated the relation between learning about intercultural relations and achievement, between learning about multicultural topics and achievement, and between interest shown by teachers and achievement at L1. However, all these mediating effects were negative and the mediator self-esteem was negatively related to achievement in all of these models as well. We want to outline one potential reason for the negative effects and the negative mediation that remains of course speculative. It could be that in our sample, specific strivings and patterns that become more common in adolescence (e.g., being popular and "cool" instead of a nerd, devaluing school, and the academic domain) may have played a particularly important role in the formation of

these immigrant adolescents' self-esteem. Hence, a higher self-esteem could in this case be indicative of school disengagement and, relatedly, lower performance, and this could then explain the negative mediation. In line with this, the negative effect could also surface due to the interplay with other variables in the model. For instance, it is possible that the association of self-esteem and achievement only becomes negative when controlled for academic self-concept.

Finally, perceived discrimination did not mediate the relation between any cultural pluralism climate facet and academic achievement. Perceived discrimination is certainly an important outcome on its own and it is vital to decrease discrimination in any context. Nonetheless, in our study, it did not add to the explanation of the link between cultural pluralism climate and achievement. If we want to build a comprehensive evidence base of cultural pluralism climate and how it is correlated with pivotal student outcomes such as achievement, identifying more versus less promising mediators of this relation is crucial. The findings from our study suggest that other mediators (e.g., academic self-concept) may hold more promise in this regard.

5.3 | Limitations

Our study makes an important contribution to the understanding of cultural pluralism climate. However, it also has some limitations that should be addressed in future research. The most apparent limitation concerns the cross-sectional design of our study. This prevents us from drawing conclusions about the temporal ordering of the observed relations. Although previous research has shown that a positive classroom climate can influence student outcomes, we cannot infer that this is also the case for the cultural pluralism facets and the outcomes examined in this study. For example, learning about intercultural relation could lead to less discrimination because students stereotype less. On the other hand, it could also be that in classrooms where students perceive less discrimination, teachers are more encouraged to bring in the topic of intercultural relations. We thus encourage future studies to use longitudinal data in order to investigate the interplay of cultural pluralism climate and student outcomes over time. Adolescence is furthermore a time of major changes (Eccles et al., 1993), and during adolescence, the importance of different (school-related) aspects shifts over time. Future research is needed to ensure whether certain facets of the cultural pluralism climate become more or less salient in different age groups and whether the same patterns of effects of cultural pluralism climate on critical outcomes can be observed in different age groups.

Another limitation concerns the labeling and definition of who is considered an immigrant. This study focuses on relations between how students with a certain immigrant status (first and second generation) perceive a cultural pluralism approach in the classroom and a set of outcomes, regardless of their cultural or ethnic group. As we considered students as immigrants when either they or both their parents were born outside of the country they currently live in, we neglected their self-identification. They might not consider themselves as an immigrant, which could be especially true for second-generation immigrants, as they did not experience the migration process themselves. Possibly, a cultural pluralism climate may have different effects for students who self-identify as an immigrant and those who do not even though they have some sort of migration background.

Moreover, the current study did not consider cultural or ethnic groups and can thus not account for any variability in student outcomes between different ethnic or cultural groups. Future studies should take a look at the role that belonging to different ethnic and cultural groups plays for the perception and effects of a cultural pluralism climate. Here, it would

be especially important to account for multiple identities, as research has shown that adolescents often identify with more than one ethnic or cultural group and, in today's diverse contexts, adolescents are even more likely to integrate multiple acculturation orientations (Bourhis et al., 2010). We would also like to add that by not letting adolescents self-identify and considering them immigrants due to their or their parents' birthplaces, we potentially deny that they will ever be considered a local in that country. Scholars should be more careful with the term "immigrant" to not reinforce that picture.

Another limitation concerns our analytical approach. Due to model complexity, we analyzed the four facets separately. Future studies investigating fewer relations and relying on less complex models should attempt estimating one comprehensive model with all facets together. Lastly, we relied on student self-reports to gauge their perceptions of cultural pluralism climate. It is therefore necessary to include further sources of data, such as teachers, in future research on cultural pluralism climate. Prior research on instruction has already shown that students and teachers can differ greatly in their perceptions (e.g., Bardach, Yanagida, Schober, & Lüftenegger, 2019) and it would be interesting to test whether the same pertains to cultural pluralism climate facets and to explore whether teachers' perceptions of cultural pluralism climate may still add something to the prediction of student outcomes.

5.4 | Conclusions

To conclude, in our study cultural pluralism showed positive associations to adaptive student outcomes for several facets and negative associations to perceived discrimination as a detrimental outcome for one facet. Overall, our study indicates that different facets of the cultural pluralism climate are differentially related to student outcomes and it is thus important to consider them separately. By having revealed that academic self-concept fully mediates the relation between several facets with achievement, we successfully contributed to a more comprehensive understanding of the beneficial relation between cultural pluralism climate and achievement. Furthermore, our findings demonstrate that the way teachers address and value cultural pluralism seems to play a particularly important role in fostering immigrant adolescents' self-concept and self-esteem.

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