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School track and ethnic classroom composition relate to the mainstream identity of adolescents with immigrant background in Germany, but not their ethnic identity

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Although developing a cultural identity is a core task for adolescents from immigrant families and the school is a highly important context in adolescence, to date, few studies have examined whether adolescents with particular cultural identities cluster in certain school contexts. Using data from a representative German sample including 7702 secondary school students of immigrant background from 1643 classrooms, we examined how the attended school track and four aspects of ethnic classroom composition relate to adolescents' cultural identity (i.e., their ethnic identity and mainstream identity). Two-level structural equation models indicated that students' ethnic identity was not systematically associated with the attended school track and the ethnic composition of the classroom. However, attending the academic school track, a classroom with a low proportion of classmates with immigrant background and frequently using German with classmates related positively to mainstream identity. Ethnic diversity and proportion of co-ethnics in class did not relate to mainstream identification. Our findings suggest that the ethnic identity of adolescents with an immigrant background in Germany is largely independent from the different socialisation contexts related to school tracks and the ethnic classroom composition. Yet, students' with a strong mainstream identity cluster in certain school contexts.

Keywords: Classroom composition; Ethnic identity; Ethnic diversity; Mainstream identity; School context.

Developing a cultural identity, that is, a sense of belonging to one or more cultural groups and the feelings associated with these memberships, is a core task for adolescents of immigrant background (Phinney, 1990; Umaña-Taylor

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et al., 2014).[1] Prominent accounts of cultural identity conceptualise the cultural identity of persons with an immigrant background two-dimensionally as encompassing a sense of belonging to their ethnic group (ethnic identity) and to members of the mainstream society (mainstream identity; e.g., Phinney, Horenczyk, Liebkind, & Vedder, 2001). The two dimensions of cultural identity can vary independently from each other and have both proven to be important resources for immigrant-origin adolescents' adaptation. More specifically, both dimensions of cultural identity are associated with positive psychological adaptation (i.e., mental health and well-being; Berry, Phinney, Sam, & Vedder, 2006; Rivas-Drake, Seaton, et al., 2014; Rivas-Drake, Syed, et al., 2014; Schwartz et al., 2015). Moreover, mainstream identity consistently relates to sociocultural adaptation, including academic achievement (Schotte, Stanat, & Edele, 2018).

Recently, scholars call to take greater account of social contexts in research on cultural identity (Echols, Ivanich, & Graham, 2018; Seaton, Quintana, Verkuyten, & Gee, 2017; Syed, Juang, & Svensson, 2018; Umaña-Taylor et al., 2014). Previous work found different aspects of social contexts to be linked with cultural identity, including experiences of perceived rejection and discrimination by the larger society (Suárez-Orozco, Motti-Stefanidi, Marks, & Katsiaficas, 2018; Verkuyten & Yildiz, 2007) and of ethnic socialisation in the family (Phinney, Romero, Nava, & Huang, 2001; Umaña-Taylor, Bhanot, & Shin, 2006). Yet, we know less on the relation of the school and classroom context with cultural identity.

Schools are crucial social contexts for the adaptation and development of children and adolescents of immigrant background, including their cultural identity formation (e.g., Umaña-Taylor, 2004). In stratified school systems like the German, different school tracks offer differential socialisation experiences (Baumert, Stanat, & Watermann, 2006) and their student bodies differ in characteristics relating to cultural identity, including their educational, socioeconomic and ethnic background (Autorengruppe Bildungsberichterstattung, 2018; Jonkmann, Maaz, Neumann, & Gresch, 2010). It is therefore well possible that students with different cultural identities cluster at different school tracks.

Similarly, students with specific cultural identities could select into classrooms with specific ethnic makeups[2], for instance, due to the clustering of students with particular cultural identities and ethnicities in neighbourhoods. Moreover, peers become an increasingly important source of social influence during adolescence (e.g., Osterman, 2000) and current accounts view the ethnic composition of social contexts as crucial for cultural identity formation (for an overview, see Syed et al., 2018). Hence, the ethnic makeup of their classroom could affect adolescents' cultural identity (Graham, 2018), but theoretical accounts make dissentient suggestions on the direction of effects and in terms of the aspect of ethnic composition (e.g., the proportion of co-ethnics or the ethnic diversity) they view as most important. Empirical findings corroborate that different aspects of ethnic classroom composition relate differentially to student outcomes (Rjosk, Lüdtke, Richter, & Eccles, 2017). Yet, the limited number of studies that examined the relation of ethnic classroom composition and cultural identity (e.g., Agirdag, Van Houtte, & Van Avermaet, 2011; Echols et al., 2018; Gharaei, Thijs, & Verkuyten, 2019; Phinney, Romero et al., 2001) typically include a single indicator of ethnic classroom composition.

The present study determines whether students with certain cultural identities are more likely to attend certain school tracks and classrooms with certain ethnic compositions. In particular, we examine the relation between students' ethnic and mainstream identities and four aspects of ethnic classroom composition (proportion of co-ethnics, proportion of students with immigrant background, ethnic diversity and language used with classmates). While the design of the study does not allow us to identify causal effects, our representative cross-sectional sample is well suited to describe patterns of students' cultural identity in different school contexts.

SCHOOL TRACK AND CULTURAL IDENTITY

Ecological models of human development (e.g., Bronfenbrenner, 1979) and developmental accounts on the adaptation of ethnic minority students and students with an immigrant background (García-Coll et al., 1996; Suárez-Orozco et al., 2018) view micro-level contextual influences, including the school context, as crucial for the adjustment and development of adolescents with an immigrant background, including their cultural identity formation (Echols et al., 2018; Umaña-Taylor, 2004). In stratified school systems, an important aspect of the school context that may affect identity formation is the attended school track.

Germany has a stratified secondary school system that tracks students from grade 5 (in some federal states grade 7). The Gymnasium (from here on labelled 'academic school track') is the highest track leading directly to a university entrance degree (Abitur). Graduating

[1]We use "cultural identity" as an umbrella term for the identification with members of the ethnic group (ethnic identity) and with members of the mainstream society (mainstream identity). In the literature, the term "ethnic identity" sometimes refers to both aspects and sometimes specifically to the identification with the ethnic group. The term "cultural identity" avoids this potential confusion.

[2]The article uses the terms "ethnic makeup" and "ethnic composition" interchangeably.

from the intermediate school track (Realschule) offers the possibility to attend a variety of recognised occupations requiring formal training. Completing the lowest, vocational school track (Hauptschule) opens access to a restricted number of formal trainings and less prestigious occupations. At comprehensive schools and schools with several tracks, students can attain different school leaving certificates. The curriculum differs considerably between school tracks and student composition varies remarkably across school tracks: Students attending the academic track on average have a higher socioeconomic family background and come less often from immigrant families than students attending lower school tracks (Autorengruppe Bildungsberichterstattung, 2018; Jonkmann et al., 2010). Moreover, the attended school track and related school leaving certificates involve very different socioeconomic returns and possibilities of social participation (Autorengruppe Bildungsberichterstattung, 2018). Hence, different school tracks include different student bodies and offer different socialisation experiences and future opportunities (Baumert et al., 2006; Dumont, Protsch, Jansen, & Becker, 2017). The attended school track (Knigge & Hannover, 2011) and earned school leaving certificates (Dumont et al., 2017) also predict students' academic motivation and sense of self, including their collective school-type identity and could also affect their cultural identity.

Neo assimilation theory (e.g., Alba & Nee, 1997) suggests that a successful structural integration (i.e., a higher education and economic position) strengthens the mainstream identity of immigrants and their descendants. Attending an academic school track is an indicator of early in life structural integration. In line with this assumption, some empirical evidence indicates that students attending an academic track exhibit a higher mainstream identity (Schulz & Leszczensky, 2016). This finding is also compatible with the notion that students' who feel rejected by the mainstream society disidentify with this group (rejection-disidentification-model, Jasinskaja-Lahti, Liebkind, & Solheim, 2009). Due to the hampered prospects involved with attending a non-academic school track, students at lower tracks may perceive themselves as marginalised and rejected by the mainstream society and experience lower levels of mainstream identity. Yet, the so-called *integration paradox* holds that structurally better-integrated persons of immigrant background experience higher levels of discrimination and rejection by the mainstream society and consequently develop less favourable attitudes towards the mainstream group (De Vroome, Martinovic, & Verkuyten, 2014; Verkuyten, 2016). This phenomenon could thwart the mainstream identification of students attending the academic track.

Yet, the just described theoretical accounts could also result in self-selection effects, namely, that students with certain cultural identities are more likely to enter certain school tracks and hence the opposite direction of the effect. According to the reasoning of neo assimilation theories (e.g., Alba & Nee, 1997) and of the rejection-disidentification-model (Jasinskaja-Lahti et al., 2009), families with higher levels of structural integration and hence socio-economic background could transfer a stronger identification with the mainstream society to their children. Hence, students attending the academic track might already possess higher levels of mainstream identity when they enter secondary school. The integration paradox (e.g., Verkuyten, 2016) suggests the opposite selection effect: Families with higher levels of structural integration might turn away from the mainstream society and convey this low mainstream identity to their children.

Relating to ethnic identity, the rejection-identification model (Branscombe, Schmitt, & Harvey, 1999) suggests that perceived rejection by the mainstream society fosters minority members' in-group identification. As a consequence of the perceptions of marginalisation and rejection involved with attending a lower school track, students at non-academic tracks may develop a stronger ethnic identity. As students attending non-academic school tracks often come from families with comparably lower levels of structural integration, they might enter secondary school with a particularly strong ethnic identity. Although theory suggests links between students cultural identity and the school track they attend, few studies have systematically examined whether students with certain ethnic and mainstream identity manifestations cluster at certain school tracks.

ETHNIC CLASSROOM COMPOSITION AND CULTURAL IDENTITY

Peers and classmates play a crucial role in adolescents' lives and school adjustment (e.g., Osterman, 2000), including their cultural identity. A limited number of studies have examined the role of peers in cultural identity, indicating that friendships and peer networks affect adolescents' ethnic identity (e.g., Santos, Kornienko, & Rivas-Drake, 2017; Syed & Juan, 2012) and mainstream identity (e.g., Agirdag et al., 2011; Schulz & Leszczensky, 2016). Recent accounts emphasise the importance of the ethnic makeup of contexts in cultural identity formation (Syed et al., 2018) and propose that the ethnic composition of the school context affects students' school adjustment (Graham, 2018).

Several aspects characterise the ethnic composition of a classroom. Previous theory and research have particularly focused on (i) the proportion of co-ethnics. Co-ethnics can be defined narrowly as peers of the same ethnic group or more broadly in terms of pan-ethnic groups (e.g., "Latinos," "Muslim students," or "People of Colour") (Syed et al., 2018). At the same time, in

multicultural societies, group representations contrasting people with and without immigrant background are also salient (Syed et al., 2018). Ethnic composition can hence also be defined as (ii) the proportion of persons with an immigrant background. Although these two aspects are not independent from each other, they are still conceptually distinct, as classrooms with many students of immigrant descent can include a very low (or zero) share of co-ethnics. The ethnic composition of a context is further reflected by (iii) its ethnic diversity, that is, the number of ethnic groups and the distribution of students across these groups. Closely related to ethnic composition is (iv) the pattern of language used in a context: Whereas students can speak their minority language with co-ethnics, they typically use the mainstream language with mainstream peers and classmates from other ethnic groups. Although different ethnic composition aspects are empirically interrelated (see Rjosk et al., 2017), they are conceptually distinct. It is therefore not surprising that previous work has found different aspects of ethnic composition to relate differentially to student outcomes (Rjosk et al., 2017; Schachner, Noack, Van de Vijver, & Eckstein, 2016), which emphasises the necessity to differentiate these aspects conceptually and empirically.

While it is often assumed that the ethnic composition relates to adolescents' cultural identity, theoretical accounts make contrasting predictions on the direction of its effects (see Syed et al., 2018) and for different aspects of ethnic composition. Social identity theory (Tajfel & Turner, 1986) and self-categorisation theory (Turner, Hogg, Oakes, Reicher, & Wetherell, 1987) suggest that the perception of being a member of a minority can increase ethnic awareness and hence ethnic identification. Moreover, students in classrooms with few co-ethnics may perceive higher levels of discrimination and rejection, which could also increase their ethnic identification (Branscombe et al., 1999). Consequently, a classroom context including few or no co-ethnics could increase ethnic identification. As students can define their ethnicity more broadly in terms of immigrant versus non-immigrant, these lines of reasoning may also apply to the proportion of students with immigrant background in class, suggesting that a low proportion of immigrant classmates might foster students' ethnic identity.

Other notions, in contrast, suggest a positive relationship between the proportion of co-ethnic classmates and minority students' ethnic identity. Developmental accounts (e.g., Erikson, 1968; Marcia, 1980) emphasise that identity formation in a specific domain is closely tied to the opportunity to explore and develop this type of identity. Developmental accounts of ethnic identity (e.g., Cross, 1978; Phinney, 1989) propose that in order to acquire an *achieved ethnic identity*, which is characterised by a deep understanding of and strong commitment to one's ethnicity, a person needs to undergo a period of intense exploration of their ethnicity. Interactions with co-ethnics in class offer opportunities for adolescents to explore their ethnicity. Accordingly, a large proportion of co-ethnics in class should promote students' ethnic identification. As ethnicity can also be conceptualised more coarsely in terms of people with and without immigrant background (Syed et al., 2018, see above), classmates from other ethnic groups may also foster adolescents' ethnic identity exploration, suggesting that a large proportion of classmates with immigrant background could promote students' ethnic identification. Applied to mainstream identity, this notion suggests that a large proportion of mainstream students offers many opportunities to explore one's sense of belonging to the mainstream group and immerse in mainstream culture and should consequently promote students' mainstream identity.

Theoretical assumptions relating to the effects of ethnic diversity on cultural identity are also dissentient. The constrict proposition (Putnam, 2007) holds that ethnic diversity provokes feelings of anomy and social withdrawal and eventually undermines social cohesion (Van der Meer & Tolsma, 2014), suggesting a negative effect of ethnic diversity on mainstream identity. However, it can also be argued that in ethnically diverse classrooms, the identification with the mainstream society is a commonality, which allows students to develop a group identity and fulfil their desire for a positive self-concept (Tajfel & Turner, 1986). Following this reasoning, ethnic diversity in class could promote mainstream identity (see Schachner et al., 2016).

Moreover, theoretical accounts of acculturation and cultural identity formation highlight that language use and cultural identity are closely linked. Acculturation theories suggest that acculturative changes at the behavioural level, including the use of language, stimulate changes at the identity level (e.g., Arends-Tóth & Van de Vijver, 2006; Vedder, Horenczyk, Liebkind, & Nickmans, 2006). Similarly, developmental accounts suggest that using the ethnic language and mainstream language offers opportunities for students to explore the respective cultural identity dimension and strengthen their commitment to the respective ethnic group (e.g., Phinney, 1990). Hence, frequently using ethnic or mainstream language in class should boost students' corresponding identity dimension.

Empirical investigations of ethnic classroom composition and adolescents' cultural identity are limited and inconclusive. While some findings indicate that a low share of co-ethnics is positively associated to ethnic identity (Umaña-Taylor, 2004), other investigations suggest that a high proportion of co-ethnics in class and frequently interacting with co-ethnics relates positively to ethnic identity (Phinney, Romero, et al., 2001). A recent Dutch study found the share of co-ethnics in class to relate positively to one out of two dimensions of ethnic identity in pre-adolescent minority students (Gharaei et al., 2019). A study conducted in Germany, in contrast, did not find a

significant relationship between the proportion of classmates with immigrant background and students' ethnic orientation (Schachner et al., 2016). Moreover, in a longitudinal study from the United States, ethnic diversity in class positively affected students' identification as multiracial (Echols et al., 2018). Yet, this effect only occurred in early adolescence (grade 6 to 7), while from grade 7 to 8, only the ethnic diversity among friends affected students' ethnic identification.

Relating to mainstream identity, several studies found the proportion of mainstream classmates and friends and frequent contact with mainstream peers to be positively related to the mainstream identity of adolescents with immigrant background (Agirdag et al., 2011; Sabatier, 2008; Schachner et al., 2016). Yet, there is evidence that adolescents' heritage group moderates the relationship between the share of mainstream friends and mainstream identity. Schulz and Leszczensky (2016), who examined a large sample of students with an immigrant background in Germany, found the proportion of native friends to be positively associated with the mainstream identity of students from families from former Yugoslavia, the former Soviet Union and southern Europe. Yet, this association was not found in students of Turkish and Polish origin. Moreover, a study on students with immigrant background in Germany found ethnic diversity in classrooms to be positively associated with mainstream identity (Schachner et al., 2016). A Belgian study, in contrast, reported a negative association between classroom diversity and mainstream identity (Agirdag et al., 2011).

Furthermore, research consistently indicates a close link of ethnic/mainstream language proficiency and of language use with the family with ethnic/mainstream identity (Edele, Stanat, Radmann, & Segeritz, 2013; Phinney, Romero, et al., 2001; Schulz & Leszczensky, 2016). Despite the crucial role of peers in adolescence, the role of language used with peers in the cultural identity formation of adolescents is less well understood.

Note that the mechanisms suggesting effects of ethnic composition on students' cultural identity are not restricted to the school context. They also apply to social contexts outside of school, such as neighbourhoods. For instance, social identity theory and the rejection-identification model suggest that students living in neighbourhoods with few co-ethnics or people of immigrant descent may develop strong ethnic identifications. Students from such neighbourhoods are likely to enter classrooms that reflect the ethnic makeup of the neighbourhood, suggesting that their ethnic identification may already be stronger when they enter secondary school. The same reasoning applies to the opposite suggestions of the developmental accounts.

Taken together, while the causal direction is ambiguous, theory and previous findings suggest an empirical relation of the attended school track and ethnic classroom composition with adolescents' ethnic and mainstream identities. While previous investigations have advanced our understanding on how the school context relates to students' cultural identity, they often used comparably small convenience samples and only examined one dimension of cultural identity. And although theoretical notions make differential predictions for different aspects of ethnic classroom composition, previous empirical investigations have not always differentiated between these aspects and have hardly modelled different characteristics of the ethnic makeup of classrooms simultaneously to systematically disentangle their associations with ethnic identity and mainstream identity. Consequently, it is to date largely unresolved which aspects of the ethnic makeup of classrooms relate meaningfully to ethnic identity and mainstream identity.

PRESENT STUDY

The present study examines whether certain cultural identities cluster at certain school contexts. Specifically, we examined how the attended school track and four aspects of ethnic classroom composition, namely, the proportion of co-ethnics, the proportion of classmates with an immigrant background, the ethnic diversity and the language spoken with classmates, relate to the ethnic and mainstream identity of adolescents with immigrant background in Germany. We tested whether students attending the academic school track are more likely to display a higher mainstream identity compared to students attending non-academic school tracks (hypothesis 1a), as suggested by neo assimilation theory (Alba & Nee, 1997) and the rejection-disidentification-model (Jasinskaja-Lahti et al., 2009). Yet, it is also plausible to assume the reverse pattern, namely, that higher educational levels are linked to a lower mainstream identity (hypothesis 1b), as suggested by the integration paradox (De Vroome et al., 2014). We further explored whether and how the attended school track relates to students' ethnic identity.

We also tested competing assumptions relating to the proportion of co-ethnic classmates/classmates with immigrant background and students' ethnic identity. Based on a higher ethnic awareness for members of small ethnic groups or higher levels of discrimination in majority-dominated contexts, social identity theory and self-categorisation theory (Tajfel & Turner, 1986; Turner et al., 1987) and the rejection-identification model (Branscombe et al., 1999) suggest a negative relationship (hypothesis 2a). Developmental accounts (e.g., Cross, 1978; Phinney, 1989), in contrast, predict a positive relationship (hypothesis 2b). Moreover, we expected a high proportion of mainstream classmates (and hence a low proportion of students with immigrant background) to be positively related to students' mainstream identity (hypothesis 3). We further tested whether ethnic diversity

in the classroom is associated with lower levels of mainstream identity (hypothesis 4a), as suggested by the constrict proposition, against the competing hypothesis that diversity relates positively to students' mainstream identity (hypothesis 4b). As theoretical accounts of acculturation and cultural identity and empirical findings indicate a close and positive link between language and cultural identity, we assumed that using German with classmates relates positively to mainstream identity (hypothesis 5).

A major aim of the present study was to disentangle the effects of the different aspects of classroom composition. As the indicators are conceptually distinct, we assumed that each indicator would be associated with ethnic and mainstream identity over and above the effect of the other indicators (hypothesis 6). As previous research indicates differences in cultural identity by gender (e.g., Edele et al., 2013), immigrant generation (e.g., Schulz & Leszczensky, 2016), ethnic group (De Vroome et al., 2014; Schulz & Leszczensky, 2016), socio-economic background (Phinney, Romero, et al., 2001) and language used with the family (Edele et al., 2013; Schulz & Leszczensky, 2016), we controlled for these factors in our analyses.

METHODS

Sample

The present study uses data from the IQB National Assessment Study 2012 (10.5159/IQB_LV_2012_v4) carried out by the Institute for Educational Quality Improvement (IQB, Pant et al., 2015), a nationwide study assessing ninth-grade students from Germany (total $N = 44{,}584$). The data are accessible through the IQB's research data centre. The student questionnaire encompassed information on several sociodemographic characteristics, including students' and their parents' country of birth and language use with classmates as well as family characteristics. Students with an immigrant background received an additional questionnaire part that included items on their ethnic identity and mainstream identity.

We selected students who (i) attended regular schools (as opposed to special needs schools), (ii) had an immigrant background (i.e., student or at least one parent born abroad) and (iii) received a student questionnaire (in some federal states, participation was not mandatory and/or required parental consent) as our analyses sample. Since classroom composition is a major focus of this study, we further restricted our analyses to classrooms with data from at least eight participants. The final analysis sample included 7702 students of immigrant background (52% female; $M_{age} = 15.08$, $SD_{age} = 0.73$) from 1643 classrooms at 1136 schools (see Table 1 for more descriptive information). The composition indices were computed before restricting the sample to students with immigrant background and thus based on all information available for the classrooms, including the data of students without immigrant background ($N = 32{,}365$ students).

All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional research committee and with the 1964 Helsinki Declaration and its later amendments or comparable ethical standards. Informed consent was obtained from all individual adult participants included in the study; assent was obtained from children.

MEASURES

Ethnic identity and mainstream identity: Two 3-item scales using parallel wording captured students' commitment and positive affect towards their ethnic and mainstream group membership. Many scholars view commitment, that is, a sense of belonging to a group, as the core component of cultural identity (e.g., Phinney & Ong, 2007). The following items captured students' ethnic identity/mainstream identity: (i) "I feel closely related to the people from this country/Germany."[3], (ii) "I feel very comfortable when I am with people from this country/Germany.", (iii) "It is important to me to belong to the people from this country/Germany/." The 4-point response scale ranged from (1) *does not apply* to (4) *completely applies*. Both scales were highly reliable with $\omega = .85$ for ethnic identity and $\omega = .84$ for mainstream identity. The intraclass correlation (ICC), which reflects the proportion of the total variance that can be attributed to differences between classrooms, was .02 for ethnic identity and .07 for mainstream identity, indicating comparably small variation across classrooms.

Attended school track: The school tracks vary across the 16 federal German states. Yet, it is possible to distinguish between five major tracks: (i) the academic track (*Gymnasium*); (ii) an intermediate track (*Realschule*); (iii) a vocational track (*Hauptschule*); (iv) a comprehensive track (*Gesamtschule*) and (v) schools with several educational tracks (*Schule mit mehreren Bildungsgängen*). In the present study, we collapsed the comprehensive track and schools with several tracks into one category (for more information on the German tracking system, see Lohmar & Eckhardt, 2014).

[3]Before presenting the ethnic identity scale, the questionnaire defined "people from this country" as the ethnic community in the following way: "Now we are interested in your relation to the country in which you or your parents were born. Please think of people still living in this country and of people from this country who have moved to Germany. If your parents come from different countries, think of the country you are more familiar with."

TABLE 1
Descriptive statistics

Variable	Mean/%	SD	*Min*	*Max*	*Missing*
Student level (L1)					
Ethnic identity	3.17	0.78	1.00	4.00	14.89%
Mainstream identity	3.14	0.75	1.00	4.00	16.59%
Female	52.16%				0.00%
Immigrant generation					0.00%
First generation	16.79%				
Second generation	43.61%				
One parent born abroad	39.69%				
Ethnic group					2.88%
Turkey	20.63%				
Former Soviet Union	18.28%				
Poland	9.32%				
Former Yugoslavia	5.15%				
Other	43.73%				
Socioeconomic family status	46.10	21.13	11.74	88.96	12.26%
Language use with family					7.13%
Never German	4.36%				
Sometimes German	45.78%				
Always German	42.73%				
Language with classmates: German					7.86%
Never/rarely	4.24%				
Often	7.95%				
Always	79.95%				
Proportion of co-ethnics in class	0.17	0.16	0.00	0.77	43.73%
Classroom level (L2)					
School track					0.00%
Academic track	32.77%				
Intermediate track	18.50%				
Vocational track	8.18%				
Comprehensive school/several tracks	40.55%				
Proportion of students with immigrant background in class	0.44	0.24	0.03	1.00	0.00%
Ethnic diversity in class	0.48	0.21	0.00	1.00	0.00%

Note. The sum of percentages may deviate from 100% due to rounding. All descriptive statistics are based on the analysis sample only including students with an immigrant background ($N = 7702$).

Proportion of co-ethnics in class: The study includes four indicators of ethnic classroom composition. The first indicator of classroom composition is the proportion of co-ethnic classmates. As the definition of co-ethnic relies on a students' specific immigrant background, the proportion of co-ethnics is a student level variable rather than a classroom level variable. The proportion of co-ethnics was only calculated for the four specific immigrant groups distinguished in this study (see below), not for those from "other countries."

Proportion of students with immigrant background in class: The second indicator of classroom composition is the proportion of students with immigrant background in class (ranging from 0 to 1 with a mean of 0.44, see Table 1). We aggregated individual information of students' immigrant background to form this classroom-level indicator.

Ethnic diversity in class: The third indicator of classroom composition is ethnic diversity operationalised as Simpson's Diversity Index (Simpson's *D*, Simpson, 1949). It reflects the probability that two randomly chosen individuals in a setting come from different ethnic groups. Greater values of Simpson's *D* reflect greater heterogeneity; its minimum value is 0. To prevent a conceptual overlap with the proportion of immigrant students in class, we calculated Simpson's *D* based on students with an immigrant background only and excluded students with a mainstream background when computing the index (see Rjosk et al., 2017).

Language use with classmates: The item "How often do you use German with your classmates during school breaks" measured the language use with classmates as a fourth indicator related to classroom composition. The 4-point response scale was (i) *never or almost never*, (ii) *rarely*, (iii) *often*, (iv) *always or almost always*. We collapsed the response categories (1) and (2) into a single category due to the low proportions of students in these categories (see Table 1).

While the four indicators of ethnic classroom composition were to some degree correlated, particularly the proportion of co-ethnics in class and the proportion of students with an immigrant background in class ($r = .60$, see

Table A1 in Appendix A), they were all clearly distinct from each other.

Student-level control variables

Immigrant generation: Students who were born in another country than Germany with at least one foreign-born parent were assigned to the first immigrant generation and students who were born in Germany with two foreign-born parents were assigned to the second immigrant generation. Students who were born in Germany with one foreign-born parent and one parent born in Germany were assigned to a separate category labelled "one parent born abroad."

Ethnic group: Based on the country of birth of the students and their parents, we distinguished between four specific immigrant groups. The two largest groups were immigrants from Turkey ($n = 1589$; 20.63%) and the former Soviet Union ($n = 1408$; 18.28%). The third largest group were students from Poland ($n = 718$; 9.32%), followed by students from former Yugoslavia ($n = 397$; 5.15%). The remaining students were assigned to the heterogeneous category of "other countries" encompassing many different ethnic groups ($n = 3368$; 43.73%).

Socioeconomic family status: The socioeconomic status of students' family was measured with the highest International Socio-Economic Index of Occupational Status (ISEI; Ganzeboom, 2010), ranging from 10 to 90, with higher values indicating a higher status.

Language use with family: The item "How often do you use German at home" assessed the language students used in their family. The 3-point response scale was (i) *At home*, *I always or almost always use German*, (ii) *At home*, *I sometimes use German and sometimes use another language*, (ii) *At home*, *I never use German*.

Data analysis

We estimated a series of two-level structural equation models using the software Mplus (Version 7.11; Muthén & Muthén, 1998–2012). Using a random-intercept approach, we predicted students' ethnic identity and mainstream identity by[4] the attended school track, the proportion of students with immigrant background in class and the ethnic diversity in class at the classroom level (level 2), and by the proportion of co-ethnics in class and the language used with classmates at the student level (level 1). Separate models were estimated for ethnic identity (see Table 2) and mainstream identity (see Table 3). In a first step, we predicted ethnic and mainstream identity based on the school track and the control variables (Model 1). To estimate the effects of the classroom composition indicators, we subsequently included them separately in the models (Models 2–5). To disentangle their effects and to determine whether they predict ethnic and mainstream identity over and above the other indicators, we then considered them simultaneously (Model 6). As the school tracks differ in their student composition and the study aimed to determine the unique statistical effects of ethnic classroom composition, we also included the school track in Models 2 to 6. The above-mentioned student-level control variables were included in all models. For all continuous predictor variables, we report standardised coefficients (STDYX standardisation); for categorical predictors that were included as dummy variables, we only standardised the outcome variables and did not standardise or centre the dummy variables (STDY standardisation). We used a doubly-latent modelling approach in which ethnic and mainstream identity were included as latent factors at both levels to control for measurement error as well as sampling error (Lüdtke, Marsh, Robitzsch, & Trautwein, 2011; Marsh et al., 2009). The factor loadings were constrained to equality across the student and the classroom level (Marsh et al., 2009). To deal with missing data (see Table 1), we used the *Full Information Maximum Likelihood* (FIML) method.[4] This estimator applies a model-based approach to missing data (see Enders, 2010), using all information available from the model variables to estimate the model parameters.

RESULTS

Predicting ethnic identity

The first model which predicted ethnic identity by the attended school track and the control variables at the student level indicated that several student characteristics relate significantly to students' ethnic identity (see Table 2, Model 1). Being female, from the first immigrant generation, and sometimes speaking German and sometimes another language increased students' likelihood for reporting a strong ethnic identity. Moreover, ethnic groups differed in their ethnic identity with students from former Yugoslavia showing particularly high levels of ethnic identity. Yet, ethnic identity was unrelated to the attended school track. Subsequently, we separately added the four indicators of classroom composition to the model (Models 2–5). The findings indicate that ethnic identity was not related to the proportion of co-ethnics in class, the proportion of students with immigrant background, the ethnic diversity of the class or the use of German with classmates. Simultaneous

[4]In the models including the proportion of co-ethnic peers (Models 4 and 6), there was a comparably high percentage of missing data on this variable as the proportion was not calculated for students in the "other" group. To keep the estimation consistent with the other models, we report coefficients from the models in which the whole sample and FIML was used. As a robustness check, we replicated these models with listwise deletion obtaining similar results.

TABLE 2
Two-level structural equation models predicting students' ethnic identity by school track, ethnic classroom composition, and language use with classmates

	Model 1		*Model 2*		*Model 3*		*Model 4*		*Model 5*		*Model 6*	
Predictors	β	*(SE)*	β	*(SE)*	β	*(SE)*	β	*(SE)*	β	*(SE)*	β	*(SE)*
Student level (L1)												
Female	0.04*	(0.01)	0.04*	(0.01)	0.04*	(0.01)	0.04*	(0.01)	0.04*	(0.01)	0.04*	(0.01)
Immigrant generation[a]												
Second generation	−0.04	(0.02)	−0.04	(0.02)	−0.04	(0.02)	−0.04	(0.02)	−0.04	(0.02)	−0.04	(0.02)
One parent born abroad	−0.07*	(0.02)	−0.07*	(0.02)	−0.07*	(0.02)	−0.07*	(0.02)	−0.07*	(0.02)	−0.07*	(0.02)
Ethnic group[b]												
Former Soviet Union	−0.08*	(0.02)	−0.08*	(0.02)	−0.09*	(0.02)	−0.08*	(0.02)	−0.08*	(0.02)	−0.09*	(0.02)
Poland	−0.04	(0.02)	−0.04	(0.02)	−0.04	(0.02)	−0.04	(0.02)	−0.04	(0.02)	−0.04	(0.02)
Former Yugoslavia	0.06*	(0.02)	0.06*	(0.02)	0.06*	(0.02)	0.06*	(0.02)	0.06*	(0.02)	0.06*	(0.02)
Other	0.02	(0.02)	0.02	(0.03)	0.02	(0.02)	0.02	(0.02)	0.02	(0.02)	0.03	(0.03)
Socioeconomic family status	0.03	(0.02)	0.03	(0.02)	0.03	(0.02)	0.03	(0.02)	0.03	(0.02)	0.03	(0.02)
Language use with family[c]												
Sometimes German	0.12*	(0.02)	0.12*	(0.02)	0.12*	(0.02)	0.12*	(0.02)	0.11*	(0.02)	0.11*	(0.02)
Never German	−0.01	(0.02)	−0.01	(0.02)	−0.01	(0.02)	−0.01	(0.02)	−0.01	(0.02)	−0.01	(0.02)
Language use with classmates: German[d]												
Often									−0.00	(0.01)	−0.00	(0.01)
Never/rarely									−0.03	(0.01)	−0.04	(0.01)
Co-ethnics in class (%)					0.00	(0.02)					0.03	(0.03)
Classroom level (L2)												
School track[e]												
Intermediate track	0.05	(0.31)	0.04	(0.31)	0.06	(0.31)	0.04	(0.31)	0.07	(0.32)	0.06	(0.31)
Vocational track	−0.16	(0.43)	−0.16	(0.43)	−0.07	(0.43)	−0.17	(0.43)	−0.11	(0.44)	−0.03	(0.43)
Comprehensive school/several tracks	−0.61	(0.31)	−0.62	(0.31)	−0.56	(0.30)	−0.61	(0.31)	−0.60	(0.32)	−0.55	(0.30)
Proportion of students with immigrant background in class					−0.12	(0.11)					−0.20	(0.15)
Ethnic diversity in class							0.04	(0.14)			0.14	(0.17)
R^2 (L1)		.05		.05		.05		.05		.04		.04
R^2 (L2)		.09		.09		.10		.09		.09		.13

Note. NL1 = 7702. NL2 = 1643. Results are standardised (continuous variables STDYX; categorical variables STDY).
[a]Reference group: First generation. [b]Reference group: Turkey. [c]Reference group: Always German. [d]Reference group: Always German. [e]Reference group: Academic track. $^*p < .01$.

inclusion of all four classroom composition indicators (Model 6) corroborated the findings from the previous models. Thus, neither hypothesis 2a nor 2b were supported.

Together, the student-level indicators only explained a limited proportion of variance in ethnic identity (4–5%). The classroom-level indicators explained 9–13% of the variance between classrooms. Yet, variance between classes was very small, as indicated by an ICC of .02 (see Measures section). Taken together, the results indicate that the attended school track and the ethnic classroom composition are not systematically related to the ethnic identity of adolescents with an immigrant background in Germany.

Predicting mainstream identity

The first model predicting mainstream identity based on the student-level control variables and the attended school track (see Table 3, Model 1) indicated that girls and students with only one parent born abroad reported a higher mainstream identity compared to boys and students from the first immigrant generation. Moreover, the model showed differences between ethnic groups with students from the former Soviet Union showing particularly high levels of mainstream identity. Students who sometimes or never use German in their family were less likely to show high levels of mainstream identity. In addition, students attending the academic school track were more likely to report a strong mainstream identity compared to students attending non-academic school tracks, which is in line with hypothesis 1a.

Model 2 showed that the proportion of co-ethnics in class was not associated with students' mainstream identity. Yet, the proportion of students with an immigrant background in class was negatively related to mainstream identity (Model 3), which supports hypothesis 3. Moreover, a negative relationship between ethnic diversity in class and mainstream identity emerged (Model 4), providing support for hypothesis 4a. In line with hypothesis 5, Model 5 indicated that students who always used German with classmates reported higher levels of mainstream identity compared to students who did not exclusively speak German in class. When the attended school track

TABLE 3
Two-level structural equation models predicting students' mainstream identity by school track, ethnic classroom composition, and language use with classmates

Predictors	*Model 1*		*Model 2*		*Model 3*		*Model 4*		*Model 5*		*Model 6*	
	β	*(SE)*	β	*(SE)*	β	*(SE)*	β	*(SE)*	β	*(SE)*	β	*(SE)*
Student level (L1)												
Female	0.06*	(0.01)	0.06*	(0.01)	0.06*	(0.01)	0.06*	(0.01)	0.06*	(0.01)	0.06*	(0.01)
Immigrant generation[a]												
Second generation	0.05	(0.02)	0.05	(0.02)	0.05	(0.02)	0.05*	(0.02)	0.05*	(0.02)	0.05	(0.02)
One parent born abroad	0.08*	(0.02)	0.08*	(0.02)	0.06	(0.02)	0.08*	(0.02)	0.09*	(0.02)	0.07*	(0.02)
Ethnic group[b]												
Former Soviet Union	0.07*	(0.02)	0.05*	(0.02)	0.04	(0.02)	0.06*	(0.02)	0.06*	(0.02)	0.03	(0.02)
Poland	0.02	(0.02)	0.01	(0.02)	0.01	(0.02)	0.02	(0.02)	0.02	(0.02)	0.01	(0.02)
Former Yugoslavia	0.04	(0.02)	0.03	(0.02)	0.03	(0.02)	0.04	(0.02)	0.03	(0.02)	0.03	(0.02)
Other	0.05	(0.02)	0.00	(0.03)	0.03	(0.02)	0.04	(0.02)	0.03	(0.02)	0.04	(0.03)
Socioeconomic family status	0.04	(0.02)	0.04	(0.02)	0.03	(0.02)	0.03	(0.02)	0.04	(0.02)	0.04	(0.02)
Language use with family[c]												
Sometimes German	−0.19*	(0.02)	−0.19*	(0.02)	−0.19*	(0.02)	−0.19*	(0.02)	−0.16*	(0.02)	−0.16*	(0.02)
Never German	−0.19*	(0.02)	−0.19*	(0.02)	−0.19*	(0.02)	−0.19*	(0.02)	−0.17*	(0.02)	−0.18*	(0.02)
Language use with classmates: German[d]												
Often									−0.07*	(0.01)	−0.07*	(0.02)
Never/rarely									−0.07*	(0.02)	−0.07*	(0.02)
Co-ethnics in class (%)			−0.06	(0.03)							0.05	(0.03)
Classroom level (L2)												
School track[e]												
Intermediate track	−0.56*	(0.20)	−0.58*	(0.20)	−0.47	(0.18)	−0.48	(0.19)	−0.54*	(0.20)	−0.40	(0.18)
Vocational track	−1.52*	(0.29)	−1.53*	(0.30)	−1.08*	(0.27)	−1.41*	(0.28)	−1.44*	(0.30)	−0.95*	(0.27)
Comprehensive school/several tracks	−0.97*	(0.17)	−0.94*	(0.18)	−0.71*	(0.16)	−0.96*	(0.17)	−0.92*	(0.18)	−0.67*	(0.16)
Proportion of students with immigrant background in class					−0.57*	(0.08)					−0.58*	(0.09)
Ethnic diversity in class							−0.33*	(0.09)			−0.09	(0.10)
R^2 (L1)		.09		.09		.08		.09		.09		.08
R^2 (L2)		.24		.23		.53		.34		.22		.57

Note. $N_{L1} = 7702$. $N_{L2} = 1643$. Results are standardised (continuous variables STDYX; categorical variables STDY).
[a]Reference group: First generation. [b]Reference group: Turkey. [c]Reference group: Always German. [d]Reference group: Always German. [e]Reference group: Academic track. *$p < .01$.

and all four indicators of classroom composition were simultaneously considered (Model 6), the effects of the school track slightly decreased, but students attending the academic track still reported higher levels of mainstream identity than students attending the vocational track or a comprehensive school/a school with several tracks. The proportion of classmates with immigrant background and the language used with classmates still predicted students' mainstream identity. Yet, ethnic diversity was no longer a significant predictor of students' mainstream identity. Model 6 thus provided partial support for hypothesis 6.

The student characteristics explained 8–9% of the total variance in mainstream identity. The classroom-level indicators jointly explained 57% of the total variance between classrooms. Taken together with the finding that there was some variation between classrooms in adolescents' mainstream identity as indicated by the ICC (7%, see Measures section), the findings suggest that the attended school track and the ethnic classroom composition relate to a limited yet meaningful degree to mainstream identity.

DISCUSSION

The aim of the current study was to determine whether students with particular cultural identity profiles cluster in certain school contexts. Using a large nationwide dataset from Germany, the study investigated how the attended school track and four aspects of ethnic classroom composition relate to the ethnic and mainstream identities of adolescents with immigrant background in Germany. Although there is a broad agreement that the school context and the ethnic makeup of contexts are crucial for adolescents' adaptation, few studies have examined how these school characteristics relate to adolescents' ethnic and mainstream identities. Moreover, the attended school track and ethnic classroom composition and the different aspects of ethnic composition among each other are empirically interdependent and have often been confounded in previous studies. The current study allows disentangling their specific statistical effects.

We observed hardly any variance in ethnic identity between classrooms. In line with this finding, ethnic identity was largely independent from the attended

school track and ethnic classroom composition. Our study thus did not support the propositions derived from social identity theory and self-categorisation theory (Tajfel & Turner, 1986; Turner et al., 1987) and the rejection-identification-model (Branscombe et al., 1999) that a high share of co-ethnics and of students of immigrant background in class affects students' ethnic identity negatively. The findings are also not in line with developmental accounts (e.g., Phinney, 1989) suggesting that the opportunity to explore ones ethnicity through the possibility to interact with many co-ethnics or students of immigrant descent in class increase students' commitment to their ethnic group. The result pattern does also not support the idea that students with different ethnic identities select into different school contexts. While it is theoretically possible that students' ethnic identity levels vary between school tracks when they enter secondary school, it seems implausible that their ethnic identity levels completely align over the course of time and turn out to be zero in grade 9. Rather, our findings suggest that adolescents with certain ethnic identity characteristics do not concentrate at certain tracks of the German school system or in classes with particular ethnic makeups.

This pattern of results is in line with previous findings from studies with smaller samples (Sabatier, 2008; Schachner et al., 2016), who did also not identify associations between the ethnic composition of school and students ethnic identity. Some recent investigations, in contrast, identified links of ethnic diversity (Echols et al., 2018) and the share of co-ethnics (Gharaei et al., 2019) with ethnic identity in pre-adolescence and early adolescence. A potential explanation for the dissentient findings in our study is that the impact of classroom composition is particularly pronounced in early adolescence, reduces during the course of adolescence and is no longer meaningful in grade 9.

Another possible explanation for missing associations between the school context factors examined in this study and students' ethnic identity is that German schools typically do not emphasise students' ethnicity and rather focus on preventing discrimination and fostering equality (Schachner et al., 2016), thereby confining their impact on ethnic identity. An alternative explanation is that the present study focused on objective ethnic classroom composition. Yet, students' subjective representation of their classroom's ethnicity may be equally or even more relevant (Syed et al., 2018). Future studies should therefore include adolescents' subjective representation of the ethnic composition of their classroom and their relation to students' ethnic identity. Furthermore, the literature suggests that other contextual influences are more important for ethnic identity, particularly the family (Sabatier, 2008; Umaña-Taylor et al., 2006), embedding in religious groups (Verkuyten & Yildiz, 2007) and whether minorities feel rejected and discriminated (Sabatier, 2008) or valued (Schachner et al., 2016) by the mainstream society. The notion that the family plays a significant role in ethnic identity formation is also supported by the findings from our study that the language used with the family and students' ethnic identity are linked.

In contrast, the attended school track and several aspects of the ethnic classroom composition were associated with students' mainstream identity. We found that students at non-academic tracks were less likely to develop a strong mainstream identity. This finding is in line with the notion of neo assimilation theory (e.g., Alba & Nee, 1997) that structural integration fosters mainstream identity and with the notion that students at non-academic school tracks may feel rejected by the mainstream society, which thwarts their mainstream identity. The finding suggests that it is more challenging for adolescents with immigrant background attending a non-academic school track, which offers restricted societal and occupational prospects, to feel as a part of the mainstream society. As a strong mainstream identity is positively associated with school adjustment, including positive attitudes towards school (Birman, Persky, & Chan, 2010), academic motivation (Kiang, Witkow, & Champagne, 2013) and academic achievement (Schotte et al., 2018; Trickett & Birman, 2005), their low mainstream identity could aggravate the already limited future prospects of students at non-academic tracks. Policy makers and teachers should therefore make special efforts to support the mainstream identity of students with immigrant background at non-academic tracks.

Moreover, a low proportion of classmates with immigrant background was associated with higher levels of mainstream identity. This finding could be interpreted as supporting the notion derived from developmental accounts of cultural identity that contact with mainstream classmates and the opportunity to explore ones mainstream identity promotes minority adolescents' sense of belonging to the mainstream group (e.g., Phinney, 1989). The finding that a low ethnic diversity is associated with higher levels of mainstream identity provides ostensive support of the notion from constrict theory (Putnam, 2007) that high levels of ethnic diversity undermine social cohesion and eventually students' identification with the mainstream group. Always speaking German with classmates was also associated with higher levels of mainstream identity, which supports theoretical accounts and previous findings highlighting how closely language and identity are intertwined. However, the ethnic diversity in class did not relate to mainstream identity when all indicators of classroom composition were considered. Ethnic diversity per se, that is, irrespective of the proportion of immigrant students in class and of the language used with classmates, does apparently not relate to students' mainstream identity. In the end, our findings do thus not support the assumptions of the constrict theory and highlight

how important it is to distinguish different aspects of ethnic composition to avoid false conclusions.

The finding that students attending a class with a high proportion of mainstream students and who frequently use German in class are more likely to exhibit a strong mainstream identity is in line with the assumption that close contact with peers from the majority group supports adolescents' mainstream identity. If future research substantiates this notion, it would be contraindicated for immigrant students' identification with the receiving society to school them separately from mainstream peers—a practice that is not uncommon for newly-arrived immigrants.

Limitations

Our investigation has several limitations. Due to its cross-sectional design, it does not allow us to trace developmental pathways or to identify causal effects. In particular, we cannot differentiate between context effects and selection effects: Theoretical accounts suggest that the school context affects students' identity formation, but are also in line with the assumption that students with certain cultural identities select into certain school contexts and that social contexts outside of school differentially affect students at different school contexts. Moreover, the study is not suited to examine the processes underlying the examined links between attended school track and ethnic makeup of classrooms with ethnic and mainstream identity and how these characteristics might contribute concretely to the formation of students' identity. To resolve the methodological challenges associated with detecting contextual effects on psychological outcomes (Rutter, Pickles, Murray, & Eaves, 2001), future studies should use more elaborate designs that allow causal interpretation and allow determining effects of the school context on cultural identity formation. These designs include regression discontinuity designs (Thistlethwaite & Campbell, 1960) following up students with initially similar cultural identity formations entering different school contexts. Exploiting natural experiments would also be informative. For instance, when school reforms merge formerly separate school tracks or when an influx of students with immigrant background only occurs in selected school contexts, effects of variation in these school context characteristics on cultural identity formation can be analysed.

Another limitation is the operationalization of co-ethnics. We could only identify the proportion of co-ethnics for students belonging to one of the four specified ethnic groups. Moreover, in the case of former Yugoslavia, the former Soviet Union, and Turkey, the families of students grouped as co-ethnics can come from different nations according to present borders and/or different ethnic groups (e.g., Serbs and Kosovars). Yet, due to their common history and similar migration circumstances, a common language and/or a joint group identity ascribed by the mainstream society, it can be assumed that students still perceive the other group members as more similar to them than students from other ethnic groups.

Conclusion and implications

Despite its limitations, the study contributes to our understanding on the role of school in ethnic and mainstream identity. Using data of a large and nationally representative sample, it examined the associations of the attended school track and four different aspects of ethnic classroom composition with ethnic and mainstream identity. This allowed us to disentangle the specific associations of these different factors of the school setting to cultural identity. More generally, the study elucidated how the different socialisation experiences at different school tracks and the ethnic makeup of classmates relate to adolescents' cultural identity.

Overall, our investigation indicates that the ethnic identity of adolescents with an immigrant background in Germany is largely independent from the school track they attend and from the ethnic makeup of their classroom. In contrast, students' identification with the mainstream group differs according to the attended school track and ethnic composition of their class. Emanating from theoretical notions suggesting that the school context affects cultural identity formation, this suggests that socialisation experiences and peers in school shape students' mainstream identity formation.

The finding that different indicators of classroom composition relate differentially to students' cultural identity highlights how important it is to conceptually and empirically distinguish these factors in future research. Moreover, the pattern of results changed when we included different indicators of ethic classroom composition in the analyses, indicating that it is important to consider these aspects simultaneously. It is up to future investigations to examine the dependencies between the attended school track and ethnic makeup of the classroom and cultural identity formation across time, to disentangle school context effects from alternative explanations and to determine the processes that underlie these associations. Future research should also determine whether the school track and ethnic composition of the school context are linked to students' ethnic identity in contexts that attach more importance to ethnic identity formation than typical schools in Germany. Research on the classroom cultural diversity climate suggests that schools can promote both dimensions of cultural identity when students' diverse heritage cultures are explicitly valued and integrated in the curriculum (Schachner et al., 2016). It is not unlikely that in such a climate a more diverse ethnic

composition may also foster students' ethnic identity as an additional resource for adjustment.

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APPENDIX

TABLE A1

Pairwise correlations between indicators of ethnic classroom composition at the student level

		(1)	*(2)*	*(3)*	*(4)*
(1)	Language use with classmates	—	—	—	—
(2)	Proportion of co-ethnics in class	−.21	—	—	—
(3)	Proportion of students with immigrant background in class	−.19	.60	—	—
(4)	Ethnic diversity in class	−.02	−.19	.34	—

Note. $N = 7702$. Pearson correlations. Correlations with language use with classmates were estimated using Spearman's rank correlation.
$p < .01$.