

**Being the Minority Hurts or Helps? A Moderated Mediation Model on Group
Membership, Cross-Cultural Acceptance, and School Adjustment**

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Abstract

This study examined the relations between majority/minority group membership and cross-cultural acceptance, and their linkage to school adjustment. A total of 2016 students (ethnic minority, EM: 51%; boys: 50%) at Grades 2, 5, 8, and 11 from 15 schools in Hong Kong participated in the study. These schools were either of low (below 30%) or high EM concentrations (over 70%). EM students at low EM concentration schools and Chinese students at high EM concentration schools both belonged to the minority groups in their respective schools. Moderated mediation analyses showed that being the numerical minority in school predicted higher school engagement and more positive affect. The associations between numerical group membership and the adjustment outcomes were each mediated by the intention to accept outgroup members. In other words, higher cross-cultural acceptance was found among students who were themselves the minority in school, and stronger outgroup acceptance in turn predicted better adjustment.

Keywords: ethnic minority, majority, cross-cultural acceptance, moderated mediation, school engagement

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Introduction

With increased globalization and widespread migration, cultural diversity seems to be a norm worldwide. The integration of migrants into a multicultural society has become one of the biggest challenges of the 21st century. It is also one of the major concerns in education nowadays. In many places around the world, ethnic segregation of neighborhoods has resulted in high concentrations of migrants within some schools. Specifically in schools with more than 50% of ethnic minority students, the ethnic majority students—presumably the culturally dominant group in the broader society—hence become the numerical minority in the school context. Given that intergroup behaviors are influenced by socio-structural variables such as power status and group size (i.e., numerical majority versus minority), this study examined the interplay between ethnic group membership and numerical group membership on cross-cultural acceptance, and their linkage to school adjustment.

Effects of Ethnic Composition in Schools

Past studies have typically indicated a negative association between the proportion of ethnic minorities in schools and students' academic achievement (Bankston & Caldas, 1996; Driessen, 2002; Felouzis, 2005; Jacobs, Rea, & Teney, 2009; Kristen, 2005; Rumberger & Palardy, 2005; Szulkin & Jonsson, 2006; Westerbeek, 1999). This relation can be traced back to the prior achievement of students and the socioeconomic composition of schools to a large extent (Rumberger & Palardy, 2005). This line of research brings to attention the detrimental effect of high ethnic density on cognitive outcomes, and forms the basis of educational policy that calls for the dispersal of ethnic minority students to enhance ethnic integration in schools.

By contrast, less conclusive findings were generated from research examining the ethnic composition effects on non-cognitive outcomes in schools. Some studies have shown that higher ethnic minority concentration yielded positive behavioral and psychosocial outcomes in students. For instance, a large-scale study based on the U.S. National Longitudinal Study of Adolescent Health ($N = 18,419$) indicated that attending predominantly-minority schools might buffer ethnic minority students from discrimination and enhance their school attachment, which in turn might reduce their risk of experiencing depressive and somatic symptoms (Walsemann, Bell, & Maitra, 2011). In another national study based on data gathered from the Flemish Educational Assessment in Belgium ($N = 11,759$), Demanet and Van Houtte (2014) showed that higher ethnic minority concentration was associated with a lower rate of behavioral misconduct and stronger sense of school membership, especially among the ethnic minority students. Differential compositional effects for the ethnic majority and minority students have also been found in Mok, Martiny, Gleibs, Keller, and Froehlich's study (2016), which examined the sense of belonging in Turkish-origin students and native German students with data based on the German National Assessment Study 2008/2009 ($N = 9215$). Only Turkish-origin students' sense of belonging was positively related to the proportion of Turkish-origin students. German students' sense of belonging was not related to the ethnic classroom composition. Results suggest differential compositional effects for ethnic majority and ethnic minority students.

However, other studies have produced empirical findings that lead to a different picture. For instance, Vervoort, Scholte, and Scheepers (2011) found significantly more negative outgroup attitudes among ethnic majority as well as ethnic minority adolescents in classes where ethnic minority students comprised more than 50% of the students in class, compared to classes with less than 25% of students from ethnic minority background. Vervoort et al. (2011) used

both the intergroup contact theory and ethnic competition theory to explain their observations. They argued that the results pertaining to the outgroup attitudes of the ethnic minority group are partly in line with the contact theory (Allport, 1954), which predicts that less opportunities for intergroup contact for the ethnic minorities (e.g., in classes with high ethnic minority concentration) may lead to more negative outgroup attitudes (Dovidio, Love, Schellhaas, & Hewstone, 2017; Pettigrew, 1997). Nonetheless, the enhanced opportunities for intergroup contact for the ethnic majority students—who were the numerical minority in class—were apparently insufficient to reduce their negative outgroup attitudes towards their ethnic minority counterparts (Vervoort et al., 2011). Based on the ethnic competition theory, Vervoort et al. (2011) hypothesized that the perceived ethnic threat due to an increasing proportion of ethnic minorities in class may have contributed significantly to the more prominent negative outgroup attitudes of the ethnic majority group (Scheepers, Gijsberts, & Coenders, 2002).

Intergroup Contact Theory Versus Ethnic Competition Theory

The intergroup contact theory and ethnic competition theory have indeed been viewed as seemingly contradictory on hypothesizing the relation between outgroup size and anti-outgroup attitudes (Schlueter & Scheepers, 2010). The intergroup contact theory posits that providing more interaction between ingroup and outgroup members may induce more favorable intergroup attitudes (Allport, 1954; Dovidio et al., 2017; Pettigrew & Tropp, 2006; Vezzali, Giovannini, & Capozza, 2010). According to this theory, a larger outgroup size increases the likelihood of intergroup contact and thus reduces negative attitudes towards outgroup members (Schlueter & Scheepers, 2010; Wagner, Christ, Pettigrew, Stellmacher, & Wolf, 2006). Such association is possibly mediated by several mechanisms. For instance, reduced group-based anxiety has been found to mediate the positive effects of intergroup contact on outgroup attitudes (Page-Gould,

Mendoza-Denton, & Tropp, 2008; Voci & Hewstone, 2003). Others reported that intergroup contact, and especially cross-group friendship, enables individuals to take the perspective of outgroup members and empathize with their concerns, which in turn contribute to improved intergroup attitudes (Pettigrew & Tropp, 2008; Wright, Aron, & Brody, 2008). Other potential mediators include changed perceptions of ingroup and outgroup norms generated through extended contact, which may reduce anxiety and prejudice towards developing relationships with outgroup members (Gómez, Tropp, & Fernández, 2011; Turner, Hewstone, Voci, & Vonofakou, 2008).

The ethnic competition theory, however, predicts the opposite, i.e., a larger outgroup size is associated with a stronger perceived threat to the ingroup's interests due to actual and perceived intergroup conflict over resources and values, and eventually leads to antagonistic intergroup attitudes (Blalock, 1967; Bobo, 1988). According to this theory, outgroup size is an indicator of actual intergroup competition (Blalock, 1967; Quillian, 1995, 1996; Scheepers et al., 2002) and perceived group threat operates as a mediator between outgroup size and anti-outgroup attitudes (Scheepers et al., 2002; Schlueter, Schmidt, & Wagner, 2008).

Intriguingly, the few studies set out to test the two competing theories found empirical evidence for both (Savelkoul, Scheepers, Tolsma, & Hagendoorn, 2011; Schlueter & Scheepers, 2010). Based on the data from the Religion in Dutch Society Survey 2000 (Eisinga et al., 2002), Schlueter and Scheepers (2010) found that subjective perceptions of immigrant group size, which corresponded well with objective measures of outgroup size, were positively associated with perceived group threat and anti-immigrant attitudes, lending support to the ethnic competition theory. Yet, intergroup contact facilitated by larger immigrant group size was also indicated to correlate negatively with perceived threat and anti-immigrant attitudes, hence

supporting the intergroup contact theory. Schlueter and Scheepers (2010) concluded that outgroup size operates in a dual way via intergroup contact and perceived group threat to affect outgroup attitudes. Given that only a handful of studies have investigated this, more empirical evidence is certainly needed to corroborate the findings.

Prior research on intergroup phenomena has mostly been based on data from national studies, which focused on broader ecological contexts such as districts and municipalities (Bronfenbrenner, 1979) in the measurements of outgroup size (e.g., Savelkoul et al., 2011; Schlueter et al., 2008; Schlueter & Scheepers, 2010). This may have masked the variations in intergroup settings encountered in much smaller local contexts, such as in one's neighborhood or in a school (Schmid, Tausch, Hewstone, Hughes, & Cairns, 2008). In some cases, using data based on more expansive contextual units may pose the problem of a "natural" ceiling effect due to the maximum outgroup size that can be found in those broader contextual units. For instance, the maximum immigrant group size of 30% per municipality in Schlueter and Scheepers' study (2010) might have affected the generalizability of their findings.

The Present Study

In this study, we examined the association between intergroup ratio and intergroup attitudes among the ethnic majorities and ethnic minorities in Hong Kong within a more localized context, i.e., the school setting, and explored their relation to the school adjustment of students.

Hong Kong is a predominantly Chinese society, and the non-Chinese ethnic groups constitute approximately 8.0% of the whole population and 4.8% of the student population in Hong Kong (Census and Statistics Department, 2017). About 80% of all ethnic minorities in Hong Kong are Asians (other than Chinese), of which the majority are Filipinos and Indonesians,

followed by South Asians, including Indians, Pakistanis, Nepalese, Bangladeshis, and Sri-Lankans. They are commonly of a lower socioeconomic status than the Chinese in Hong Kong. For instance, more than 70% of the working ethnic minorities—but only about 20% of the whole working population—are engaged in elementary occupations that involve low level of skills, and the median monthly income of the working ethnic minorities was lower than that of the whole working population (Census and Statistics Department, 2017). Among ethnic minorities aged 5 and above, English was reported to be the language most usually spoken at home, and 82% of ethnic minorities claimed that they could speak English but less than half of them (49%) could speak Cantonese (the Chinese dialect used in Hong Kong; Census and Statistics Department, 2017).

Children from these ethnic groups typically study at mainstream schools alongside the native Hong Kong Chinese students. Nonetheless, due to living proximity and differential propensity of schools to accept students from culturally diverse backgrounds, some schools tend to have a higher proportion of ethnic minority (EM) students, while other schools have much lower concentrations of EM students. This natural setting creates the social categorization of majority and minority groups in a school not only based on ethnicities, but also on numerical intergroup ratio. As such, the ethnic minority students at low EM concentration schools, as well as the Chinese students at high EM concentration schools are both the numerical minority groups in their respective schools.

If larger outgroup size predicts more intergroup contact and hence more positive outgroup attitudes, as hypothesized by the intergroup contact theory, we would observe stronger cross-cultural acceptance of outgroup members in the numerical minorities in school (i.e., the EM students at low EM concentration schools and the Chinese students at high EM

concentration schools) due to more chance of interaction with the outgroup, but less so among the numerical majorities in school (i.e., the Chinese students at low EM concentration schools, and the EM students at high EM concentration schools). However, if larger outgroup size induces stronger perceived threat and subsequently more negative attitudes towards outgroup members, as postulated by the ethnic competition theory, we would observe more antagonistic attitudes in the numerical minority groups than their majority counterparts. As there is evidence indicating that the ethnic composition in school might have differential effects for the ethnic minority and ethnic majority students—with the former more affected than the latter (Mok et al., 2016), we included the ethnicity of the students (i.e., EM versus Chinese) as a moderator to examine whether this might affect the relation between numerical group membership and cross-cultural acceptance.

Moreover, we also examined how cross-cultural acceptance of outgroup members predicts school adjustment in the ethnic minority and majority students. Past studies on intergroup dynamics have primarily focused on measuring outgroup attitudes—indicated by outgroup evaluations, outgroup stereotypes, intergroup biases, and discriminatory intentions—as an outcome variable predicted by outgroup size (Riek, Mania, & Gaertner, 2006; Savelkoul et al., 2011; Schlueter & Scheepers, 2010; Vezzali et al., 2010). Only a few studies have explored the linkage between outgroup attitudes—in terms of cross-cultural acceptance—and school adjustment, and how these relate to the ethnic ratio in school. In particular, Schachner and colleagues have shown that perceived equality and inclusion as well as cultural pluralism are positively associated with students' school adjustment, including academic achievement, academic self-concept, psychological well-being, and general life satisfaction (Schachner, Noack, Van de Vijver, & Eckstein, 2016; Schachner, Schwarzenhal, Van de Vijver, & Noack,

2019; Schachner, Van de Vijver, & Noack, 2018). School adjustment can be conceptualized as comprising both sociocultural adjustment and psychological adjustment (Schachner et al., 2018). In the current study, sociocultural adjustment was measured by students' level of engagement in school, while psychological adjustment was indicated by the positive and negative affect of students. Positive and negative affect are the major components of subjective well-being (Huebner & Dew, 1996), and are commonly included as indicators of students' adaptation (Huebner et al., 2014). More knowledge on these relations may further our understanding of the practical significance of ethnic makeup and cross-cultural acceptance on students' adjustment outcomes within the school setting.

Cross-cultural acceptance and school adjustment have been reported to vary with age (Gifford-Smith & Brownell, 2003; Lam, Chan, Shum, & Tsoi, 2018). To obtain an overall picture of the intergroup dynamics for students of different ages, we included participants from Grades 2, 5, 8, and 11 in this study. Prior studies have similarly combined responses from students across a wide age range (Demanet & Van Houtte, 2014; Vervoort et al., 2011; Walsemann et al., 2011). Here, we accounted for the effects of age by including grade level as a covariate in the analyses. Nevertheless, the developmental changes in cross-cultural acceptance was beyond the scope of this study. Another point worth noting was that we only included schools with either low EM concentration (i.e., less than 30% of the student population) or high EM concentration (i.e., more than 70% of the student population) in the current study. Although somewhat arbitrary, we intentionally set the cutoffs at 30% and 70% to create a more distinct contrast in the minority: majority ratio, as previous literature has shown that other mechanisms—apart from those underlying the two theories investigated—may be involved when the intergroup ratio is near 50:50 (Nesdale & Todd, 1998; Rjosk, Richter, Lüdtke, & Eccles, 2017). Hence, by

using 30% and 70% of the student population as the basis for categorizing schools as low or high EM concentration schools respectively, we hoped to create a clear distinction between the numerical minority and majority groups at schools.

The present study aimed to address three important research questions. Firstly, does being the numerical minority in school predict higher or lower cross-cultural acceptance towards the outgroup? Secondly, is this relation moderated by the ethnicity of the students (i.e., EM versus Chinese)? Thirdly, does higher outgroup acceptance translates into better school adjustment such as higher level of school engagement and better subjective well-being in the students? The findings for the first two questions may provide evidence to help settle the debate with respect to the intergroup contact theory and ethnic competition theory on the relation between outgroup size and outgroup attitudes. The findings for the last question may help to map out the uncharted water in the association among numerical minority, outgroup acceptance, and school adjustment.

Method

Participants

A total of 2016 students (mean age = 13.34 years, $SD = 3.47$; boys: 50%) at Grade 2 ($n = 446$; mean age = 8.41 years, $SD = 0.98$), Grade 5 ($n = 439$; mean age = 11.32 years, $SD = 0.67$), Grade 8 ($n = 575$; mean age = 14.42 years, $SD = 0.94$), and Grade 11 ($n = 556$; mean age = 17.50 years, $SD = 0.96$) from 15 schools participated in the study. These schools were selected based on the ethnic composition of their student population, information of which was directly obtained from the school websites or other publicly accessible websites. They represented a spectrum of different school types in Hong Kong, including government schools, aided schools subvented by the government, and private schools. Letters were sent to the school principals to invite the

schools to join this study. Potential participants from the target grade levels were approached through the schools. Parental consent and student assent were obtained prior to data collection. In most of the participating schools, students from the entire grade level agreed to take part in the study. Data on the ethnic composition of the whole school were reported by school personnel based on school records. These schools were categorized according to their EM student concentrations.

Ethnic minorities in our study referred to the non-Chinese ethnic students with origins from South and South East Asian countries, including Pakistan (35.8%), India (13.6%), Nepal (12.9%), Philippines (9.1%), and other countries (e.g., Indonesia, Thailand, and Bangladesh). Parents were asked to report on a demographic questionnaire their own country of birth as well as that of their children. The ethnic minority status of the students was determined based on the country of birth of the parents (i.e., at least one parent was born abroad) and the dominant language spoken at home (i.e., languages other than Chinese).

Schools with EM students comprising less than 30% of the student population were classified as low EM concentration schools ($n = 9$), whereas those with over 70% of their population being EM students were considered as high EM concentration schools ($n = 6$). Ethnic minority students constituted 51.0% of the total sample (EM = 1029; Chinese = 987), and among them, 21.7% studied at the low EM concentration schools ($n = 223$). The number and proportion of EM and Chinese students in the low and high EM concentration schools are presented in Table 1. EM students at low EM concentration schools and Chinese students at high EM concentration schools both belonged to the numerical minority groups in their respective schools in terms of intergroup ratio. Ethics approval for the study was obtained from the Human Research Ethics Committee at the authors' institution.

Materials and Procedure

Data collection was performed at the students' schools during regular school hours. All students were asked to complete a questionnaire regarding cross-cultural acceptance, school engagement, and affect. The questionnaire was originally developed in English and translated into Chinese by the research team with back-translation procedure (Brislin, 1970). Since the EM students were generally better in reading English than in reading Chinese, they were asked to complete the English version of the questionnaire, while the Chinese students completed the Chinese version. For all Grade 2 and Grade 5 students, the instructions and items on the printed questionnaire were verbally read to them by the researchers, either in English for the EM students, or otherwise Chinese. This was not performed for the Grade 8 and Grade 11 students who completed the questionnaire themselves. Administration of the questionnaire was conducted in groups.

Cross-cultural acceptance. This measure consists of 12 items adapted from the Friendship Activity Scale (Siperstein, 1980) to assess Chinese students' intentions to interact with ethnic minority students, and vice versa. For each item, students were asked to indicate on a 5-point scale ("1" = *very reluctant* to "5" = *very willing*) their willingness to engage in a certain activity with a peer of the ethnic outgroup. Six of the items are related to activities at school (e.g., "Choose an EM/Chinese student to be on your team in PE lessons"), and the other six are related to activities in non-school settings (e.g., "Invite an EM/Chinese student to go out with you and your friends"). These 12 items have been reported to load highly on a single factor with loadings ranging between .54 and .82 (Siperstein, Parker, Bardon, & Widaman, 2007). Hence, we used the average score of the 12 items to indicate the overall level of cross-cultural acceptance. A higher score denotes a stronger intention to interact with peers from the ethnic

outgroup. The Cronbach's alphas for the current samples of Chinese and EM students were .95 and .91 respectively. Reliability analyses were conducted separately for the younger and older participants, and results are shown in the Appendix.

School engagement. School engagement was measured by 6 items taken from the Student Engagement Questionnaire (Lam et al., 2014), which assessed students' feelings about learning and the school they attend (i.e., affective engagement; e.g., "I think what we are learning in school is interesting"), and their effort in school work and participation in extracurricular activities in school (i.e., behavioral engagement; e.g., "I am an active participant of school activities such as sports day and school picnic"). Although cognitive engagement—which evaluates students' use of cognitive strategies in the learning process—has been viewed as the third dimension of school engagement (Lam et al., 2014), it was not included in our measurement as we did not expect this to be relevant to the present study.

Students were asked to indicate how much they agreed to each item on a 5-point scale with "1" = *strongly disagree* and "5" = *strongly agree*. The six items were subjected to an exploratory factor analysis with oblique rotation. The Kaiser-Meyer-Olkin (KMO = .85) and Bartlett's test of sphericity ($\chi^2 = 3194.55, p < .001$) showed that the correlation structure was adequate for factor analysis. Using principal components analysis based on the criterion of eigenvalues greater than 1 (Field, 2009) yielded a one-factor solution that explained 50.3% of the variance with factor loadings ranging from .60 to .79. Hence, the average score of the six items was calculated to indicate the overall level of school engagement, and higher scores denoted higher levels of school engagement. The Cronbach's alphas for the current samples of Chinese and EM students were .78 and .81 respectively. Reliability coefficients calculated for the younger and older participants are given in the Appendix.

Happiness and unhappiness. This was measured using two items adapted from the Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988). Students were asked to rate on a 5-point scale (“1” = *never*, “2” = *rarely*, “3” = *sometimes*, “4” = *very often*, “5” = *always*) how often they experienced feelings of happiness and unhappiness over the past month. A higher score on the item indicated a stronger level of the affect. We were aware of the issue of using single items as measures, but had eventually decided to reduce the scale to measuring only the most basic positive and negative emotions, i.e., happiness and unhappiness, mainly because of the foreseeable difficulty for children as young as the second graders to be able to understand more complex emotions and rate themselves on those items (Laurent et al., 1999).

Data Analyses

To examine how school ethnic makeup and the ethnicity of students affected cross-cultural acceptance, a two-factor analysis of variance (ANOVA) was performed using the complex samples general linear model procedure in SPSS Statistics 26. This method accounted for observations nested within schools based on the design effect adjusted standard errors approach (Huang, 2016). Cross-cultural acceptance was the dependent variable in this model, and the main effects of EM concentration in school (low vs high) and the ethnicity of students (EM vs Chinese) and their interaction effect were tested, with grade level as the covariate. Post hoc analyses using Bonferroni adjustment (Williams, Jones, & Tukey, 1999) then compared the means of cross-cultural acceptance: 1) between EM and Chinese students in low EM concentration schools, where the EM students were the numerical minority; 2) between EM and Chinese students in high EM concentration schools, where the Chinese students were the numerical minority; 3) between EM students in low EM concentration and high EM

concentration schools; and 4) between Chinese students in low EM concentration and high EM concentration schools. The results of these analyses addressed whether being the numerical minority in school was associated with higher or lower cross-cultural acceptance, and whether this relation was moderated by the ethnicity of the students.

We modeled our analyses on the school level instead of the classroom level primarily due to the local context of schooling in Hong Kong. The class entity may not be as important in many schools in Hong Kong, as students are often regrouped into different “classes” during their Chinese, English, and Mathematics lessons based on their abilities in each domain. Unlike students in North America, Hong Kong students have different teachers for different subjects even in primary schools. Moreover, it is a common phenomenon in Hong Kong that students are heavily engaged in a lot of school activities (e.g., extracurricular activities, sports teams, music teams etc.) apart from the formal curriculum. These school activities provide abundant opportunities for students to interact with others across different classes and grade levels. Hence, we chose to conduct the analyses on the school level.

To explore whether higher outgroup acceptance predicted better school adjustment in the students, we first calculated the partial correlations between the measured variables (i.e., cross-cultural acceptance, school engagement, happiness, and unhappiness) after controlling for school and grade level effects. Moderated mediation analyses were then conducted using the PROCESS macro for SPSS (Hayes, 2012) based on the models presented in Figures 1a-c. In the analyses, the continuous variables were transformed into z-scores. School engagement, happiness, and unhappiness were each entered as the dependent variable in their respective models, predicted by cross-cultural acceptance, which in turn was predicted by group membership. Group membership was generated by categorizing both the EM and Chinese students into the minority or majority

group in terms of their numerical group size in school. Ethnicity (EM vs Chinese) was a moderator in each model. Hence, we tested the association between cross-cultural acceptance and the school adjustment measures, and whether cross-cultural acceptance mediated the relation between group membership and school adjustment, and lastly whether ethnicity significantly moderated these relations. In the bootstrapping procedure, 5000 bootstrap samples were generated through resampling, and the bias-corrected (BC) 95% confidence intervals (CIs) were constructed based on their sampling distributions (Efron & Tibshirani, 1986). Effects were considered to be significant at the $p < .05$ level if their BC 95% CIs did not include zero.

Results

Effects of Numerical Intergroup Ratio and Ethnicity on Cross-Cultural Acceptance

Means and standard deviations of the measured variables are presented in Table 2. Using the complex samples general linear model procedure to adjust for clustering of the sample based on schools, results of the ANOVA with cross-cultural acceptance as the dependent variable showed a significant interaction between ethnic minority concentration in school and the ethnicity of students (Table 3). Post hoc analyses using Bonferroni adjustment showed that cross-cultural acceptance was significantly higher in: 1) EM students than Chinese students in low EM concentration schools; 2) Chinese students than EM students in high EM concentration schools; and 3) Chinese students in high EM concentration than low EM concentration schools. Cross-cultural acceptance in EM students was also found to be higher in low EM concentration versus high EM concentration schools, but this trend failed to reach statistical significance. Figure 2 shows the estimated marginal means of cross-cultural acceptance for the four groups after adjusting for the covariate in the model. Our results suggest that being the numerical minority in

school—whether for EM or Chinese students—was associated with higher cross-cultural acceptance.

Moderated Mediation Analyses on the Relations Between Group Membership, Cross-Cultural Acceptance, and School Adjustment

Table 4 shows the partial correlations between the measured variables after controlling for school and grade level effects. Cross-cultural acceptance correlated positively with school engagement and happiness, and negatively with unhappiness ($ps < .001$).

To further explore the associations between group membership, cross-cultural acceptance, and school adjustment, and to examine whether cross-cultural acceptance mediated the relations between group membership and measures of school adjustment, moderated mediation analysis was conducted separately on school engagement, happiness, and unhappiness. The path coefficients of the three models are shown in Figures 1a-1c. The bootstrap results are presented in Table 5.

In all three models, being in the numerical majority group predicted lower cross-cultural acceptance. This relation was not significantly moderated by ethnicity. In other words, for both the EM and Chinese students, when they belonged to the numerical minority in their school, they displayed a stronger intention to interact with peers of the ethnic outgroup. Stronger cross-cultural acceptance in turn predicted higher level of school engagement, more happiness, and less unhappiness. Cross-cultural acceptance was a significant mediator in all the models, as indicated by the significant indirect effects from group membership to the school adjustment measures via cross-cultural acceptance. Nonetheless, significant direct effects of group membership on school adjustment outcomes were not observed, except for school engagement in the EM students. Hence, numerical group membership in school for the EM students contributed

to school engagement through other means apart from cross-cultural acceptance, but this was not observed in the Chinese students.

Discussion

This study explored the associations between group ratio, cross-cultural acceptance, and school adjustment in the Hong Kong school context. With reference to Research Questions 1 and 2, we found that being the numerical minority in school—whether for the ethnic minority or ethnic majority students—was related to higher cross-cultural acceptance. With reference to Research Question 3, we found that higher cross-cultural acceptance in turn predicted higher level of school engagement and more positive psychological affect. Cross-cultural acceptance was shown to be a significant mediator between numerical group membership in school and the school adjustment measures.

Our findings corroborate with the propositions of the intergroup contact theory, which posits that a larger outgroup size increases the likelihood of intergroup contact and thus reduces negative attitudes towards outgroup members (Schlueter & Scheepers, 2010; Wagner et al., 2006). In this study, outgroup attitudes were indicated by students' intentions to interact with peers of the ethnic outgroup both inside and outside school. We found that students showed stronger intentions to engage in cross-cultural interactions when they belonged to the numerical minority group in school. This observation applied to the ethnic minority students in low EM concentration schools, as well as the native Chinese students who studied at high EM concentration schools. Importantly, these students on average showed higher cross-cultural acceptance than the numerical majorities within schools and across schools. Here, we did not measure the quantity and quality of contact, but instead assumed that the proportion of ethnic

minorities in a school would be directly related to the amount of intergroup contact. Hence, in schools with low EM concentration, we assumed that the EM students would have more opportunities to interact with the Chinese students than vice versa, and that the opposite situation should occur in high EM concentration schools. In contrast to Vervoort et al.'s study (2011), which found that increased intergroup contact improved outgroup attitudes only in the ethnic minority students but not in the ethnic majority students, our study showed enhanced outgroup attitudes for ethnic minority and majority students likewise, when given more opportunities for cross-cultural interaction. Our results seemed to lend more support to the intergroup contact theory relative to the ethnic competition theory.

It is noteworthy that the stronger tendency of the numerical minority group to reach out to members of the outgroup may also be interpreted in light of theories other than the intergroup contact theory. For instance, the stronger intention for cross-cultural interaction may be viewed as an indication of the need to belong in a diverse group, according to the optimal distinctiveness theory (Brewer, 1991). Nonetheless, this is beyond the scope of the present study as we did not set out to investigate the need to belong (Leary, Kelly, Cottrell, & Schreindorfer, 2013).

Another important finding of this study was that cross-cultural acceptance mediated the relation between numerical group membership in school and school adjustment. While past studies on intergroup dynamics have mostly focused on how outgroup size predicts outgroup attitudes, very few studies have explored the linkage between ethnic ratio in school, outgroup attitudes and school adjustment of students. Our findings suggested that belonging to the numerical minority group in school predicted stronger cross-cultural acceptance, which in turn predicted more positive feelings about learning and the school, more active participation in school, higher level of happiness, and less unhappiness.

Interestingly, we observed a positive direct effect of majority group membership on school engagement for the EM students but not for the Chinese students. In other words, being the numerical majority in school per se predicted stronger school engagement for the EM students, suggesting that the associations between group membership and school engagement involved other factors besides acceptance of peers from the ethnic outgroup. As mentioned earlier, the postulation that other mechanisms (e.g., need to belong; Leary et al., 2013) underlie the relations awaits further investigation in future studies.

We acknowledged that the current study could not assess the causal directionality of the relations among the variables. Given that cross-sectional data were obtained only at one time point, we could not rule out the possibility that students (or their parents) with higher level of cross-cultural acceptance self-selected into schools with higher proportions of ethnic outgroups and thus became the numerical minority in school. Similarly, there is the possibility that children with higher level of school engagement and more positive affect tend to show more positive attitudes towards members of ethnic outgroups. Future studies employing a cross lagged panel design will help to illuminate the temporal sequence between the variables.

Future research should also explore the effects of a 50:50 interethnic ratio on students' cross-cultural acceptance and school adjustment. In schools where the ethnic minority and ethnic majority students each constitutes about half of the student population, they are neither the numerical minorities nor majorities in school. If outgroup size and the likelihood of intergroup contact are the pivotal determining factors on outgroup attitudes, it is expected that the level of cross-cultural acceptance measured in the medium EM concentration schools will be somewhere between that of the low and high EM concentration schools for both the ethnic minority and majority students. However, if other factors (e.g., sense of belongingness) are significant in the

processes, patterns other than a linear relation between ethnic proportion and intergroup acceptance maybe observed (Rjosk et al., 2017).

Positive and negative affect were included in this study as measures of psychological adjustment (Huebner et al., 2014; Schachner et al., 2018). We were mindful that students were asked to report on their feelings of happiness and unhappiness without being explicitly told to refer to their school experience. As previous studies have shown that positive school experience is linked to general affective well-being (Stiglbauer, Gnambs, Gamsjäger, & Batinic, 2013), we would argue that general feelings of happiness and unhappiness might still serve as indicators of the psychological aspect of school adjustment. That said, future studies might consider measuring school-related affect to better assess the adjustment of students at school.

Another limitation of this study pertains to the generalizability of the results. Although we were particularly careful to include a spectrum of different school types (e.g., government schools, aided schools funded by the government, and private schools) in our selection process, the 15 participating schools were certainly not entirely representative of all the schools with EM students in Hong Kong. As such, the results here should be interpreted with caution.

Conclusion and Implications

Being the minority hurts or helps? The results of this study apparently suggest that belonging to the numerical minority group in a school is related to the display of more receptive attitudes towards members of ethnic outgroups, higher affective and behavioral engagement in school, and better subjective well-being. Our findings are in line with the propositions of the intergroup contact theory, supporting that a larger outgroup size facilitates more intergroup contact and subsequently lowers negative outgroup attitudes.

Based on our work, we would further propose that intercultural contact is important for enhancing cross-cultural acceptance between ethnic minority and ethnic majority individuals. Without taking the quality of contact into account, our results imply that increasing the amount of intercultural interactions may help to improve social cohesion. Schools, workplaces, and the communities are contexts where intercultural interactions can occur naturally in daily lives. In Hong Kong, for instance, ethnic minority students with origins from South and South East Asian countries are over-represented in a handful of the high EM concentration schools, while the majority of the primary and secondary schools in Hong Kong have very few EM students or even none. Intercultural contact with the ethnic minorities in the society is very limited or non-existent for most children in Hong Kong. Education policy makers may consider allocating resources to a larger proportion of schools in Hong Kong to support their intake of ethnic minority students so as to increase intercultural contact within the school context. With this policy instated, we can imagine that there will be more opportunities for the ethnic majority children in Hong Kong to interact with the ethnic minority children in the school context, even when the ethnic minority students only constitute a relatively small proportion of the school population. To further foster Chinese students' acceptance of EM students, multicultural education should be promoted. Schools may organize intercultural programs both within and beyond the formal curriculum to facilitate intercultural contact. The enhanced opportunities for interactions may benefit cross-cultural acceptance for both the ethnic majority and ethnic minority students. We believe that the improved cross-cultural relationships potentially resulting from more intergroup contact in schools will eventually translate into more harmonious intercultural relationships in the society beyond the school context.

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Appendix.

Cronbach's alphas for the measures calculated separately for the younger (Grades 2 and 5) and older (Grades 8 and 11) participants

	EM		Chinese	
	Younger (n = 375)	Older (n = 654)	Younger (n = 510)	Older (n = 477)
Cross-cultural acceptance	.85	.94	.94	.96
School engagement	.77	.77	.76	.75