

**Teacher-student relationships in multicultural classes: reviewing the past, preparing the
future**

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Abstract

This contribution reviews research that links students' and teachers' ethnic background to students' perceptions of teacher interpersonal behavior, teacher treatment of individual students, and student achievement and subject-related attitudes. The review mainly includes studies from the United States, Australia and the Netherlands and a few Asian countries (Singapore, Brunei and Taiwan). The literature revealed that ethnicity is consistently associated with students' perceptions of their teachers, that the way teachers communicate varies according to the ethnicity of their students, and that teacher interpersonal behavior may be more important for immigrant minority students' outcomes than for their indigenous peers. The article finishes off by offering suggestions for future research.

Key words Teacher-student relationships, ethnicity, student outcomes

1. Introduction

This review focuses on the effects of ethnicity on students' perceptions of teacher interpersonal behavior. It primarily reviews research in multicultural classes, but also includes some investigations of differences in students' perceptions between countries. Most of the reviewed studies employed the *Model for Teacher Interpersonal Behavior (MITB)* (Wubbels & Brekelmans, this issue) and its main diagnostic instrument, the *Questionnaire on Teacher Interaction (QTI)*.

1.1 Rationale

There are several reasons for this focus:

- a) All over the world the *rise of international migration* has led to an increase in multicultural classes and schools. This has produced a greater need for intercultural communication, with the corresponding risks of misunderstanding, conflict and disappointment (van Oord & den Brok, 2004, following Hofstede, 1986).
- b) Teaching in a multicultural context requires that teachers possess a higher level of communicative competence than is usually found with teachers (Ting-Toomey, 1999).
- c) Past research indicates a strong link between students' perceptions of their teachers' interpersonal behavior and their own achievement and subject-related attitudes (Wubbels & Brekelmans, this issue; Brekelmans, Wubbels & den Brok, 2002; den Brok, Brekelmans & Wubbels, 2004). Since there is a noticeable achievement and attendance gap between students of color and their mainstream counterparts, it is important to analyze the relationship of ethnicity to their perceptions of teachers.

- d) There is a need for instruments that can be applied across ethnic or cultural groups, both for purposes of research and for the professional development of teachers.

1.2 Definitions and assumptions

In this contribution, the term *culture* refers to the perspectives (values, worldviews, etc.), practices and products of a social group, that define how this group interprets and interacts with others (e.g. Eriksen, 2002). We use *ethnicity* to refer to social groups with a shared history, sense of identity, geography and cultural roots (Eriksen, 2002), in particular ethnicity here refers to ‘national origin’, whether in the home country or not. *Western* here refers to European, Northern American and British Commonwealth countries. *Minority, non-Western and non-indigenous students* in this contribution all refer to students who are born everywhere else or who have parents originating from other countries, i.e. Asia, Africa, Latin America and the Middle East. Terms such as Western and non-Western are helpful in the context of this review, but we acknowledge that these are rather broad categories that make distinctions within these groups invisible. *Students of color* may have been born in the country but do not share the mainstream culture and are also minorities (e.g. African Americans in the U.S.). In this review, a class is considered *multicultural* when it contains five or more minority students and when at least two cultural groups (either teacher or students) are present in class.

This review focuses on the effects of ethnicity on students’ perceptions of their teachers’ interpersonal behavior, and not on teachers’ beliefs, knowledge, expectations or self-perceptions. Although teachers’ views are equally valid, the majority of the existing studies focused on students’ perceptions because this perspective has been more highly associated with student outcomes.

Our review is based on several assumptions. First, teacher-student interpersonal behavior can be effectively studied according to the Model for Interpersonal Teacher Behavior (MITB; see the contribution by Wubbels & Brekelmans, this volume, for a complete explanation of the MITB and its two dimensions and eight sectors). The dimensions in the MITB are Influence (which describes the degree to which the teacher demonstrates controlling behavior); and Proximity, which describes the level of teacher-student cooperation). The dimensions have been successfully used in a variety of contexts, and are generally accepted as a means to interpret interpersonal behavior (Adamopoulos, 1988; Lonner, 1980; Triandis, 1994). The dimensions can also serve as a vehicle to describe and interpret perceptual differences. Second, *ethnicity based perceptual variations* can be explored in terms of a number of overlapping aspects that describe group, rather than individual behavior (Hofstede, 1991).

1.3 Cultural aspects

In this review, three cultural aspects are regarded as particularly important, since they are strongly connected to the MITB (e.g. Levy, Wubbels, Brekelmans & Morganfield, 1997; den Brok, Levy, Rodriguez & Wubbels, 2002):

- *Immediacy or approach–avoidance* is anchored on one extreme by actions that simultaneously communicate closeness, approach and accessibility, and on the other by behaviors expressing avoidance and distance (Andersen, 1985). Hall (1966) defined “high-contact” cultures as those in which people display considerable interpersonal closeness or immediacy. He felt that these are often found in South America, the Middle East and Southern and Eastern Europe, whereas North America

and Northern Europe are societies of comparably low contact. In class, strong immediacy is reflected in teacher behavior that is supportive, friendly and occasionally emotional, and leads to the formation of close bonds with students (e.g. Hofstede, 1986).

- A group's orientation toward *individualism or collectivism* determines how cultures emphasize community, shared interests, harmony, and tradition, the public good and maintaining face. In their study on work culture, Hofstede and Hofstede (2004) identified the nine most individualistic cultures as being either Western or European, while the ten least individualistic were all Asian or South American. A collectivist class is characterized by students who prefer small groups to large, and who may not speak unless called upon. There is an emphasis on group grades and graduation, and the retention of "face" or honor. Occasionally, teachers might be expected to give preferential treatment to some students, such as group leaders (Hofstede, 1986).

- *Power distance* (PD) is defined by Hofstede (1991) as the degree to which power, prestige and wealth are unequally distributed in a culture. Cultures with high PD scores believe that control and influence are concentrated in the hands of a few rather than that these are more equally distributed. According to Hofstede and Hofstede (2004), the top three PD countries are located in Latin America or Asia, while low PD countries are in North America and Western Europe. In high-PD classes teachers are greatly respected by students because of their age and profession. The lesson tend to center around the teacher - they initiate most communication and students are rarely proactive or challenging (Hofstede, 1986).

2. The role of ethnicity: a model

As stated, this article assumes that ethnic (nationality of origin) differences exist in student perceptions of teachers' interpersonal behavior. Further, they can be interpreted and analyzed in terms of the Model for Interpersonal Teacher Behavior and the cultural aspects such as those described by Hofstede and others. Differences in students' perceptions that relate to variation in ethnicity can be explained in at least three different ways: through students' *values and norms*, through their *interpretations* of observed teacher behaviors and through *differential treatment* by the teacher (e.g. den Brok, 2001). Indirectly, teacher ethnicity also influences students' perceptions of their teachers' behavior. Naturally, students' perceptions affect learning outcomes, which in turn are influenced by ethnic membership (Brekelmans, et al., 2002; den Brok, et al., 2004). The effect of ethnicity on students' perceptions and learning outcomes is represented by the model in Figure 1. The following literature review describes the evidence (or lack of evidence) for the associations between the various elements of the model, and the model is also used to inform future research.

Insert figure 1 about here

Differences between Western and non-Western students with respect to the three cultural aspects described above support some expectations about possible variations that may be encountered in students' perceptions of their teachers. From the literature it is reasonable to expect that Western students would perceive more Influence and Proximity than non-Western students, and that non-Western teachers are perceived as more dominant and cooperative than Western teachers. These differences can occur at both the individual and class levels.

3. Ethnicity and students' perceptions: a review of research

3.1 Studies included in the review

This section presents a review of research on students' perceptions of teacher behavior that were primarily conducted with the Questionnaire on Teacher Interaction (QTI). The review includes all conference papers and journal articles on multicultural or cross-cultural topics that included the QTI. Only journal articles in the Education Resources and Information Clearinghouse (ERIC) database from 1980-present with the key-words 'teacher behavior', 'interaction', 'multicultural', 'treatment', 'immediacy' and 'student perception' were included. The set of non-QTI-related articles was examined to determine whether differences in perceptions might indeed be the result of differential teacher treatment.

The search for literature on students' perceptions of interpersonal teacher behavior showed that research on this topic mainly has been conducted in the US, though a growing number of studies originated in Australia and Asia (particularly Taiwan, Brunei and Singapore) and the Netherlands. This is a limitation of the results to be reported hereafter, since it implies that most of the research was conducted by Western educators (with a Western mindset) and only can be generalized to Western countries.

Appendix A contains a list of the reviewed studies, which can be characterized as follows:

- The majority of the investigations focused on secondary education, while only a few were conducted in primary or higher education contexts.

- In most of the studies ethnicity was measured by various indicators, such as student or parents' country of birth, length of residence in the country and language spoken at home. In most of the American studies students defined their own ethnicity, which implied that they could have identified a group that was different from their or their parents' country of birth.
- Most of the U.S. data was treated with multilevel analyses of variance and included covariates to determine the (adjusted) effect of ethnicity on perceptions, while non-U.S. data was examined with traditional analyses of variance or t-tests.
- Most of the research included non-random samples of volunteer teachers and classes. This may have led to a selection of teachers and students who were relatively open to evaluation and research. One might expect that teacher-student relationships in these classes would be more positive, e.g. contain higher amounts of Influence and Proximity and display fewer management problems or cross-cultural misunderstandings. In addition, the Australian and Dutch multicultural class samples did not include many – or, in some cases, any – non-Western teachers, while the American teacher corps was slightly more diverse.

3.2 Student ethnicity-related differences in students' perceptions

A handful of investigations reported differences in student perceptions according to the ethnic background of students, depending on the definition of ethnicity used. The next section discusses these results according to the ethnic indicators employed. In some cases, studies investigated interaction effects between indicators and wherever relevant this will be noted.

3.2.1 Ethnicity self-defined by students

A number of investigations that used self-defined ethnic membership reported that in general, non-Western students perceived more teacher dominance than their Western (e.g. American, Australian or European) counterparts. For example, Levy, Wubbels and Brekelmans (1996) and Levy, et al (1997) found that Latino (but not Asian) students perceived more teacher influence than did Western students and Den Brok and colleagues (2002) also stated that non-Western students observed more dominance. Similarly, Levy, den Brok, Wubbels and Brekelmans (2003) reported that Western students viewed less teacher dominance than African-American, Hispanic and Asian students, although a significant interaction with gender left only African American males perceiving more dominance.

The results with respect to teacher proximity in these “self-defined ethnicity” studies are more ambiguous, since some report greater perceptions of cooperation among Western students while others describe the opposite. For example, in 1996 Levy, et al. found that Asian students viewed their teachers as less cooperative than Western students and those from other ethnic backgrounds, but in 1997 Levy et al. found no ethnicity-related differences in students’ perceptions of teacher proximity. On the other hand, den Brok et al. (2002) reported the reverse: all non-Western groups observed more proximity than Western students. In a study by Levy et al. (2003) Asian students perceived less closeness than Westerners, African Americans and Latinos. Finally, den Brok, Levy, Wubbels and Rodriguez (2003) found that Western students perceived more proximity than non-Western students. However, when ethnicity was examined in relation to language spoken at home this effect disappeared and even reversed.

3.2.2 Ethnicity defined by country of birth

Similar findings to those above— in which Western students perceive less Influence than non-Western students - are reported in the research that defined ethnicity in terms of country of birth. There was also more evidence in this group of studies of non-Western students' greater perceptions of Proximity. Evans and Fisher (2000) found that non-Western students (e.g. students whose father or mother was born outside Australia) perceived more dominance than Western students. They also found an interaction with gender: non-Western girls thought that their teachers were both more direct and cooperative. Rickards, Fisher and Fraser (1998) conducted a cross-national study in which Australian students viewed their teachers as less dominant than their Singaporean peers. They also found that Asian (Singaporean, Hong Kong, Chinese and Bruneian) students felt that their teachers showed greater influence and cooperation than other groups. A similar finding was reported by Rickards and den Brok (2003): Asian students perceived more influence than students from other countries. In the one investigation that examined multicultural schools in the Netherlands, den Brok, Veldman, Wubbels and van Tartwijk (2004) reported that Moroccan students perceived more influence than those from other countries.

3.2.3 Ethnicity defined by language spoken at home

When ethnicity is defined by home language, a few studies found non-Western students to perceive more dominance than those from the West. Levy et al. (1997) reported that non-English speaking students experienced more teacher dominance than their English-speaking peers. With respect to teacher proximity, however, some incongruent results were reached: some research noted greater proximity by Westerners, others less. Den Brok, et al. (2003) found that Spanish-speaking students viewed their teachers as more cooperative than their counterparts who spoke English at home. In Australia, Evans and Fisher (2000) found

that Asian-language students felt that their teachers were more dominant and cooperative than students speaking other languages. Rickards, et al. (1998) had similar findings: students speaking an Asian language at home perceived greater influence and proximity than those from other language backgrounds. Rickards and den Brok (2003) found the opposite: English-speakers perceived more influence and proximity than students from other language groups. In The Netherlands, researchers arrived at yet another result: students speaking a non-Dutch language at home felt their teachers were less cooperative than native, mainstream Dutch (den Brok et al.2004).

3.2.4 Ethnicity defined by number of years in the host country

Mixed results were found when acculturation (the number of years students have been living in the country) is employed as an indicator of ethnicity. Some reports indicated differences in perception according to acculturation, while others found none. A study by Levy et al. (1997) showed no effect of acculturation on students' perceptions of teacher influence and proximity. In a later study, however, Levy et al (2003) found that the longer students had lived in the U.S., the less dominance they perceived. In Australia, Evans and Fisher (2000) arrived at similar results: students who lived longer in-country perceived less dominance than those who had just arrived. In The Netherlands, den Brok et al. (2004) reported that students born outside the country rated their teachers higher on influence than Dutch-born students.

3.3 Teacher ethnicity and students' perceptions

Studies investigating the relationship between teacher ethnicity and students' perceptions generally used self-identification or country of birth as indicators of ethnicity. In a

study by Levy, et al. (1996) as expected Asian teachers were perceived lower on the influence dimension than Western and other non-Asian teachers.

With respect to the proximity dimension, there is some evidence that Western teachers are thought by students to be more cooperative than non-Westerners. Levy et al (1996) reported that Asians received lower Proximity ratings than colleagues from other ethnic backgrounds. Similarly, Levy et al. (2003) found that Hispanics were seen as less cooperative than other teachers. In Brunei, Khine and Fisher (2002) observed that students perceived more teacher support (as measured with the What Is Happening In this Classroom questionnaire) from Western teachers than from non-Westerners. A cross-national study by Aldridge and Fraser (2000) resulted in greater perceptions of teacher support (using the WIHIC) in Australia than in Taiwan. In another cross-national study on teacher immediacy/closeness that was conducted in the U.S., Finland, the UK and Puerto Rico, teachers in non-Western countries were viewed as more immediate than their Western peers (McCroskey, Fayer, Richmond, Sallinen & Barraclough, 1995). After studying 190 American university students, Neuliep (1995), reported that African-American teachers displayed more “high-contact,” immediate behavior than their White American peers.

3.4 Differential teacher treatment of students

Most of the observational literature reviewed for this paper confirmed the widespread belief that students’ ethnicity, race and gender are important variables in teacher behavior. In a majority of the studies White students were treated differently than non-Whites. For example, Simpson and Erickson (1983) observed 16 primary school teachers and reported that they were more critical of African-American/Black males and more praiseworthy of Black females than White students of either gender. In a series of studies, Irvine highlighted

consistent teacher bias against Black students. In her observation of 61 high school teachers (Irvine, 1985) she found that black students received more negative feedback than Whites. After reviewing previous research Irvine demonstrated that teachers preferred White students over Blacks in a majority of the cases. In a later study in which she observed 58 high school teachers, Irvine (1986) noted that Black females received less academic and non-academic feedback than their White peers. Bellissimo and Sacks (1986) reported different results: in an analysis of teacher-student interaction according to ethnicity, they reported that Black students had more positive communications with their teachers than all others, while Asians interacted the least (both positively and negatively). Marcus, Gross and Seefeldt (1991) investigated students' perceptions of teacher treatment and found that Black females thought they received less feedback and more criticism than White students. In Sanders, Gass, Wiseman and Brusckke's 1992 study Asian students felt that their teachers behaved more aggressively toward them than was reported by other ethnic groups.

Through teacher interviews and video observations, den Brok et al. (2004) found that Dutch teachers corrected Moroccan students' behavior with greater frequency than those from other countries. The teachers mentioned the need to manage behavior (mostly of non-Western students) as a particularly important characteristic of multicultural classes. They indicated that minority students might need more structure and behavioral re-direction than Dutch students, and that collectivistic cultural aspects such as preserving face or being offended, and the need to re-establish rapport after imposing discipline (approach/avoidance) were considered more important for non-Western students.

Wubbels, den Brok, Veldman and van Tartwijk (in press) conducted group interviews with four teachers and a simulated recall interview (including video observation) with one experienced teacher. The teachers (all Western) stated that they used more strategies

associated with high dominance and proximity in multicultural classes than they would with less diverse groups (for a discussion of the links between student perceptions of interpersonal behavior and verbal and non-verbal behavior, see Wubbels and Brekelmans, this issue). Examples include standing at the front of the class, remaining calm in emotional conflicts, providing small and early behavioral corrections, maintaining interpersonal contact with students and especially peer-leaders, negotiating without losing control, providing extensive rewards and compliments, re-establishing rapport after behavioral corrections, and providing positive feedback and a variety of structures.

3.5 Ethnicity, students' perceptions, and outcomes

We uncovered little research on the relationship between interpersonal teacher behavior and student achievement and student subject-related attitudes within and across cultural groups. In a study of 952 university students Sanders and Wiseman (1990) found immediacy to be correlated highest to subject motivation for Hispanics. There was a weaker relationship between immediacy and cognitive achievement for Black students than with other ethnic groups. Den Brok, et al. (2004) found a stronger association between influence and proximity and students' subject-related attitudes (e.g. enjoyment, perceived relevance, anxiety and willingness to invest effort) for Moroccan and Turkish students than for Dutch. These findings seem to suggest that for non-Western students teacher interpersonal behavior may be more relevant to their subject-related attitudes than for Western students.

3.6 Students' perceptions in multicultural classes

This section reviews the association between the cultural makeup of the class and student perceptions of interpersonal teacher behavior. In some of the reviewed studies (e.g.

Levy et al., 2003; 1997) the *number of students of one particular ethnic group* (Asians, Hispanics, African-Americans, etc.) was the main variable of interest. In others (den Brok, et al., 2004; Levy, et al., 1996; Rickards & den Brok, 2003; Wubbels, et al., 2003) the *number of Western or non-Western students* was used, or a count was taken of the *different ethnic groups within a class*. There was only one study (den Brok, et al., 2004), in which *whole classes were compared* by distinguishing between monocultural and multicultural groups.

Several of the studies investigating the effect of ethnic makeup of classes on the perceptions of the teachers in these classes indicated that the number of non-Western students is positively associated with teacher dominance (or, the more non-Western students in a class the greater the amount of perceived dominance). Levy, et al. (1997; 1996) found that the greater the number of Western students in a class, the less dominant the teacher was believed to be. They also found that as the number of ethnicities present in the classroom increased, so too did the level of teacher dominance perceived by the students. This finding was also reported in a prior study (Levy, et al., 1996). In addition, Levy, et al. (2003) reported a similar result: the more Asian students there were in a class the more dominance was perceived. In a study by Rickards and den Brok (2003) the authors stated that as the number of non-English speaking students increased in a class, the more influence was perceived. Similarly, their investigation found that the fewer Western students were to be found in class, the more influence was perceived.

Like those studies that investigated ethnicity-related effects for individual students, most research at the class level demonstrated that the number of non-Western students is positively related to the amount of teacher cooperation. Levy et al. (1997; 1996) found that the more cultures were present in the class, the more cooperative the teacher appeared. In

addition to finding greater perceptions of dominance among Asian students, Levy, et al. (2003) also reported a greater amount of proximity.

Den Brok, et al. (2004) stated that in Dutch multicultural classes teachers are perceived as being both more dominant and cooperative than those in monocultural settings. Finally, Wubbels et al. (in press) studied one teacher in a multicultural class and found this teacher was perceived as both more influential and cooperative than teachers with monocultural (e.g. less than 5 non-Western students) classes, which is in keeping with many of the aforementioned studies.

4 Preparing the future: what directions should research go?

This section briefly summarizes the above findings and comments on needed research to set an agenda for future examinations of the association between culture and students' perceptions of their teachers.

4.1 Summary

As noted, the literature can be understood in terms of the variables depicted in Figure 1. It is clear that Western and non-Western students differ in their perceptions of teachers. First, it was found that Western students have different perceptions of their teachers' interpersonal behavior than non-Western students (section 3.2). For all of the indicators presented – language spoken at home, country of birth, self-defined ethnic membership and number of years of residence in the country – there is evidence that non-Western students believe their teachers are both more dominant and cooperative than their Western peers. The findings reported at the class level were similar (section 3.6): a greater number of non-

Western students in class is often associated with greater perceptions of teacher influence and proximity.

Some differences were found in studies that addressed the effect of teacher ethnicity on students' perceptions (section 3.3). Western teachers were perceived as more cooperative than non-Western teachers in most studies, but the effect on teacher dominance has not been fully investigated nor reported.

There is clear evidence that teacher treatment of students is related to ethnicity, race and gender (section 3.4). Limited, but supportive evidence exists for the conclusion that students' perceptions of teacher interpersonal behavior are related differently to student outcomes for various ethnic groups (section 3.5).

Differences in ethnic orientations to the three cultural aspects cited at the outset of this article - immediacy, individual/group orientation and power distance – help to explain the results reported above. Those students whose families come from highly immediate and collectivist societies (for example, those from Latin America) perceive greater teacher cooperation. Those who come from high Power Distance countries (Asia, Latin America) perceive greater dominance. On the one hand, these findings are surprising, since it might be expected that students from collectivist countries would perceive a more individually-oriented Western (e.g. Dutch, American or Australian) teacher as less cooperative compared to indigenous students and that students from authoritarian countries would perceive a teacher that is more open to self-directed learning, class discussions and helping as lacking in leadership (thus less dominant) than students born in the country of study. On the other hand, it has been noted that teachers treat students (as well as classes as a whole) differently according to ethnic background - e.g. students from authoritarian countries receive more negative feedback, reprimands and are corrected more often - and this in itself may have

resulted in differential perceptions. Additionally, students may have projected their needs and inclinations onto the teachers behaviors resulting in altered perceptions, with students from collectivistic countries projecting more proximity and students from authoritarian countries more dominance. A similar projection has been found in research on teacher perceptions, with teachers incorporating their beliefs and needs into their perceptions of their own behavior (e.g. Wubbels, et al., 1992). It seems possible that these aspects of ethnicity immigrate to the host country and remain with the students and their families for a while. Clearly, teachers need to be aware of these differences in background and perceptions.

4.2 Suggestions for future research

Thus far, research using the QTI and its related theoretical framework has resulted in an expanding knowledge base that supports the influence of ethnicity on students' perceptions of their teachers' behavior and, ultimately, on students' school careers. Nevertheless, the review provided in this manuscript also demonstrates the huge amount of work which remains. This section discusses some of the limitations of the work reviewed and provides the basis for future research.

4.2.1 Differential treatment

Research has not fully investigated differential teacher treatment in terms of the Model for Interpersonal Teacher Behavior or in relation to QTI perception scores of students or teachers. Studies that link the interpersonal framework to classroom observations are needed. Such investigations might explicitly relate perception with observation data, both with respect to individual students as well as their classes. Moreover, most of the reported observation

studies were mainly conducted in the U.S., and still need to be confirmed by research in other countries.

4.2.2 Cultural aspects

Studies that focused on student perceptions have interpreted differences in terms of broad cultural aspects (approach/avoidance, individualism/collectivism and power distance), while not explicitly measuring these dimensions in terms of individual students. Naturally, there is a great deal of diversity within ethnic groups, and this has not been carefully examined. Also, students may have different skills in adapting to the host country and the effect of ethnicity may vary from student to student. Assigning cultural ‘labels’ to groups of students as a whole thus risks stereotyping, because subtle individual differences in cultural background are ignored. To avoid this serious problem, future research should measure the associations of both perceptions and cultural aspects at the individual level (a first example of this is presented by Fisher, Waldrip and den Brok in this issue). Research is needed that examines a variety of ethnic indicators and other respondent characteristics.

4.2.3 Research methods

Several studies did not take into account the nested structure of the data. Future research needs to utilize multilevel analyses of variance. In this respect, special attention needs to be devoted to sampling schools, teachers and students. Most of the research reviewed used voluntary participants, who can only partially represent the larger population. Moreover, these samples often included schools in the major (capital) cities, which may have further limited representation. As such, the findings probably pertain to teachers that are relatively open to

evaluation, usually have a great deal of teaching experience, have a Western background and teach at schools with more than 50% minority students.

Most of the QTI-research employed quantitative methods exclusively to investigate the effect of ethnicity on students' perceptions, and didn't expand on or explain the findings qualitatively. Future research could add valuable insight into the mechanisms that are at work between ethnicity, perception and behavior, for example by interviewing individual students for explanations of their perceptions.

Studies investigating students' ethnicity-related interpretations, values and norms in detail have been limited in number and design. In addition, few studies have explicitly focused on differences in the culturally-influenced interpretations of the QTI interpersonal sectors and dimensions. Future research could extract such interpretations from students and teachers through interviews and other qualitative techniques and relate such findings directly to the quantitative data of the same respondents.

4.2.4 Student outcomes

Only a few studies focused on the link between student outcomes and their perceptions of interpersonal behavior within multicultural classes and the possible culturally-related differences in these associations. In addition to general research in this realm, future studies should pinpoint effective interpersonal behaviors for specific ethnic groups that help to 'affirm' some of the differences found in perceptions between students. This is significant because prior research has shown that students' perceptions of their teachers' interpersonal behaviors are strongly connected to their achievement and subject-related attitudes (e.g. den Brok, et al., 2004). Also, more variation is needed in the variety of student outcome measures that are utilized in such studies; for example, specific cognitive tests, student behavior

indicators or subject-related attitude questionnaires might be utilized. This is important recommendation, since some of the outcome measures may be more representative of Western than other countries.

4.2.5 Students' and teachers' perceptions

This review has not included the few studies on teachers' perceptions of their own behavior. Research (and review of the existing work) that investigates these perceptions as well as the possible effect of ethnicity on differences between students' and teachers' perceptions is needed. Such work may help to explain how conflict, misunderstanding and misinterpretation occur when teachers and students of different groups interact (e.g. Banks & Banks, 1993; Hofstede, 1986; Ting-Toomey, 1999). Investigating culturally-related differences in perceptions between teachers and students may also inform professional development and teacher training.

4.2.6 Teacher ethnicity and class composition

Few studies focused on the role of teacher ethnicity in students' perceptions, mainly because the samples either did not include any non-Western teachers (most Australian and Dutch studies) or because they were uniquely non-Western (U.S.). As a consequence, studies also did not focus on the association between teacher ethnic background and their behavior displayed (and observable) in the classroom.

More research on this topic is needed, especially because the teaching corps in many Western countries is becoming more culturally diverse. Knowledge about how these pre and in-service teachers are managing and developing in multicultural contexts can also inform teacher education.

In terms of class composition, more comparisons are needed between mono- and multicultural classes, as measured by both students' perceptions and observed teacher behaviors. These results might then be related to teaching practices in different countries. Such investigations could help to detect possible instructional skills that are particularly important or unique in multicultural settings.

5. Concluding remark

The model proposed in this manuscript (in Figure 1) has not been studied as a whole. Only separate or specific links have been investigated in most studies, and as such, many of the associations and differences have only been partially confirmed. Further, these links have been examined often in only one particular way, with one method or instrument. Future research should try to investigate larger parts of the model at once, thereby controlling for some of the proposed factors or by investigating their relative importance.

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Appendix A

Overview of studies reviewed and some general characteristics.

Authors (year)	Country	Sample	Ethnicity indicators	Instrumentation and method of analysis
Aldridge & Fraser (2000)	Aus & Taiwan	2 samples of high school students. approximately 1000 students each	Country of sample	WIHIC for students, t-test
Bellisimo & Sacks (1986)	U.S.	9 teachers, Western teachers	Researcher assigned categories (B/W)	Observation in class, frequency of behavior, regular analysis of variance (ANOVA)
den Brok, Levy, Rodriguez, & Wubbels (2002)	U.S.	1973 students, 126 classes, non-Western teachers	Self-defined ethnic membership	QTI by students and teachers, interviews with teachers, multilevel analysis

				of variance
den Brok, Levy, Wubbels, & Rodriguez (2003)	U.S.	78 students, 4 teachers, diverse teachers	Self-defined ethnic membership, country of birth, language at home	QTI by students and videotaped lessons of teachers, regular analysis of variance (ANOVA)
den Brok, , Veldman, Wubbels, & van Tartwijk (2004)	Neth	365 students, 18 classes, Western teachers	Country of birth student, country of birth father, country of birth mother, duration of stay, language at home	QTI by students, observations in class, stimulated-recall interviews with teachers, regular analysis of variance (ANOVA), correlations
Evans & Fisher (2000)	Aus	2986 students, 153 classes, Western teachers	Country of birth mother, country of birth father, language at home	QTI by students, regular analysis of variance (ANOVA)
Irvine (1985)	U.S.	61 teachers, diverse teachers	Researcher assigned categories (B/W)	Observation in class, frequency of

behavior, t-test

Irvine (1986)	U.S.	58 teachers, Western teachers	Researcher assigned categories (B/W)	Observation in class, frequency of behavior, regular analysis of variance (ANOVA)
Khine & Fisher (2002)	Brunei	1188 students, 54 classes, diverse teachers	Country of birth teacher	WIHIC for students, regular analysis of variance (ANOVA)
Levy, Wubbels, Brekelmans (1996)	U.S.	3528 students, 259 classes, diverse teachers	Self-defined ethnic membership	QTI, multilevel analysis of variance
Levy, Wubbels, Brekelmans, & Morganfield (1997)	U.S.	550 students, 38 classes, Western teachers	Self-defined ethnic membership, language at home	QTI by students and teachers, multilevel analysis of variance
Levy, den Brok, Wubbels, & Brekelmans (2003)	U.S.	3023 students, 168 classes, diverse teachers	Self-defined ethnic membership, country of birth, duration of stay,	QTI by students, multilevel analysis of variance

language at home

Marcus, Gross, & Seefeldt (1991)	U.S.	80 students, 4 high schools	Researcher-assigned categories (B/W)	Questionnaire, regular analysis of variance (ANOVA)
McCroskey, Fayer, Richmond, Sallinen, & Barraclough (1995)	4 countries	4 samples of university students	Not reported	Questionnaires for students, regular analysis of variance (ANOVA)
Neuliep (1995)	U.S.	190 university students, 17 teachers, diverse teachers	Not reported	Questionnaire for students, regular analysis of variance (ANOVA)
Rickards & den Brok (2003)	Aus	3994 students, 191 classes, Western teachers	Country of birth mother, language at home	QTI by students, multilevel analysis of variance
Rickards, Fisher, & Fraser (1998)	Aus	3589 students, 173 classes, Western teachers	Country of birth father, language at home	QTI by students, regular analysis of variance (ANOVA)

Sanders & Wiseman (1990)	U.S.	952 university students	Not reported	Questionnaire for students, correlations
Sanders, Gass, Wiseman, & Brusckke (1992)	U.S.	555 university students	Self-assigned ethnic membership	Questionnaire, regular analysis of variance (ANOVA)
Simpson & Erickson (1983)	U.S.	16 primary ed teachers, Western teachers	Researcher assigned categories (B/W)	Observation in class, frequency of behavior, regular analysis of variance (ANOVA)
Wubbels, den Brok, Veldman, & van Tartwijk (in press)	Neth	4 teachers, 1 teacher, Western teachers	Country of birth student	(group) interviews with teacher, observation in class, QTI for students, regular analysis of variance (ANOVA)

Note: Aus = Australia; U.S. = United States of America; Neth = the Netherlands; B/W = Black/White.

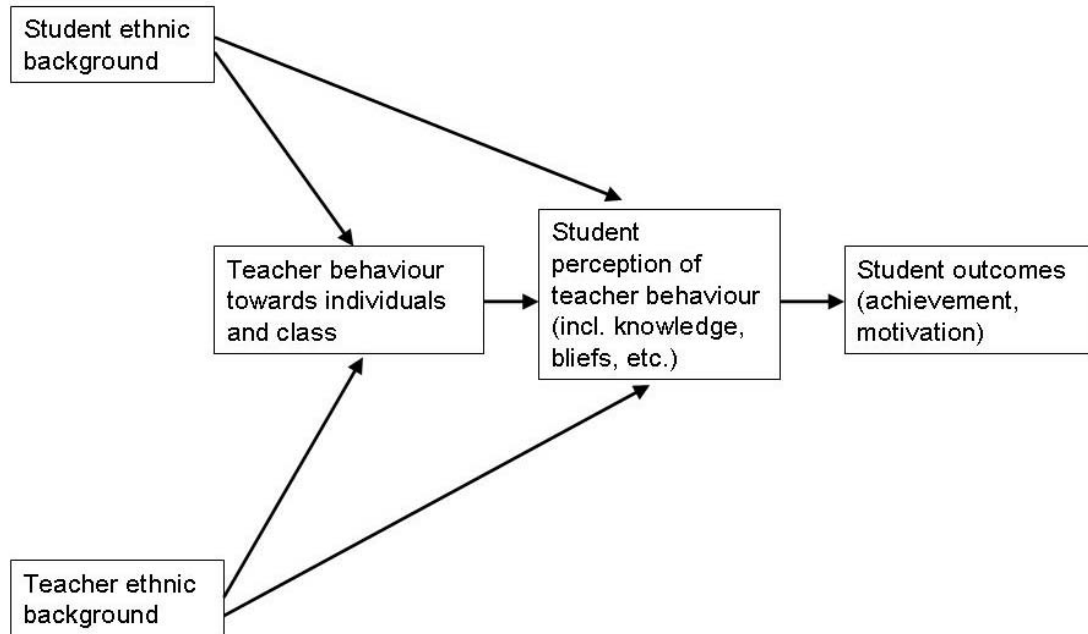


Figure 1: The effect of ethnicity on students' perceptions and student outcomes.