Students' goal preferences, ethnocultural background and the quality of cooperative learning in secondary vocational education

Hijzen, D.M.

Chapter 5

EXPLAINING COOPERATIVE LEARNING IN MULTI-ETHNIC CLASSES; THE LIMITED ROLE OF STUDENTS' ETHNOCULTURAL BACKGROUND

[5]

Abstract

This study explored cooperative learning in multi-ethnic classes. We explored what combination of student characteristics and student appraisals of the school context was related to higher levels of the quality of cooperative learning and whether these varied by ethnocultural group. Eighteen hundred students were clustered into four profiles specifying the characteristic levels of language proficiency, goal preferences, social resources and school/ peer identification/alienation. Four student profiles were identified; a school-disaffected, a weak communication/school bonding, a school-adjusted and a frustrated profile. Students that were grouped in the school-adjusted profile showed the highest scores on CL. This profile was characterized by clear goals, high perceived availability of social support and high scores on school and peer identification. The school-disaffected profile had the lowest scores on CL. This profile was characterized by no clear goals, a lack of social resources and peer/school identification. Students from different backgrounds were disproportionately distributed. The weak communication profile was characteristic of Caribbean students and the school-adjusted profile was characteristic of the Dutch.

Key words: ethnocultural background, goal preferences, quality of cooperative learning

[5] This Chapter is based on: Hijzen, Boekaerts and Vedder (2006). Explaining cooperative learning in multi-ethnic classrooms; the limited role of students' ethnocultural background. Manuscript submitted for publication in: Applied Psychology: An International Review.

INTRODUCTION

Even though school achievements of immigrant students who were born in the Netherlands (second generation immigrants) have considerably improved over the last 15 years, they still do not match Dutch students' performance and are characterized by higher levels of grade repetition and drop-out (Mulder, Roeleveld, Van der Veen, & Vierke, 2005). Many studies have reported a relationship between school performance and students' ethnocultural background, but only a few studies have analyzed the underlying processes and student characteristics that explain immigrant students' educational position in the Netherlands (e.g., Boekaerts, 1998; Teunissen & Mathijssen, 1996). The present study addresses this latter question by exploring what processes and what student characteristics influence the quality of students' learning. We particularly focus on learning in settings that invite students to get involved in cooperative problem solving. Once we have a better picture of the processes and characteristics that underlie the quality of cooperative learning we will explore whether and to what extent these processes and characteristics vary by ethnocultural group. We hope to identify groups of students that allow for a group wise approach in education that goes beyond a general class wide educational approach or an approach adapted to individual students; a class wide approach may lack adaptability to the needs of particular groups of students, whereas an individualized approach is hardly feasible, at least in the Dutch secondary vocational schools that participated in the present study.

In this study we focus on the quality of cooperative learning (CL) of students in secondary vocational schools. The choice of CL is related to the suggestion by some scholars (e.g., Cohen, 1994; Slavin, 1995; Webb & Palincsar, 1996) that CL settings may promote students' involvement with and motivation for school and learning; as well as facilitate integration and prevent discrimination, by functioning as an activity setting where students are able to connect with each other and learn from each other's abilities and skills. This seems particularly important for students in vocational schools in the Netherlands, because many of them drop out of school for motivational reasons and communication problems (e.g., Voncken, Van der Kuip, Moerkamp, & Felix, 2000).

In the last two decades the classroom setting in senior vocational schools in the Netherlands has gradually changed from an exclusively, traditional, competitive, and individualistic educational setting to a setting with more attention for cooperative learning requiring and stimulating both cognitive and motivational self-regulation skills (Boekaerts &

Minnaert, 2003). Cooperative learning refers to 'a set of instructional methods in which students are encouraged or required to work together on academic tasks' (Slavin, 1987). This study deals with three important components that a successful CL situation requires. In the first place, students' *attitudes* towards CL methods should be positive. They need to acknowledge the value of CL, in order to be prepared to engage in CL in the first place. Secondly, students need a number of *cooperation skills*, such as the skills to express their own opinion, stimulate each other, provide and receive help, listen to each other and clarify their current understanding of the task (Cohen, 1994; Ros, 1994; Webb & Palincsar, 1996). A third important component of a successful CL setting is *interdependency*. Students need to feel responsible for each other's learning process and experience a sense of *group cohesion* (Johnson & Johnson, 1994; Ros, 1994). Chin, Salisbury, Pearson, and Stollak, (1999) and Cohen (1994) pointed out that the activity level in the group is at its best when students feel at home in the group.

Person-related explanations for variation in the quality of CL

Dutch language proficiency

Dutch language proficiency is crucial in CL. Learning in CL teams may promote students' language competence. However, for effective CL, students need a number of cooperation skills in the first place (Hijzen, Boekaerts, & Vedder, 2006). These skills heavily depend on their language competences; in order to provide team members with sufficient support, or to be a good listener and debater students have to be fluent in the Dutch language.

Students' goal preferences

Whether students engage in CL depends on the personal significance they attach to the tasks and the context in which it is embedded. The extent to which a task triggers personal significance depends on the type of goal preferences that students have (Baumeister & Heatherton, 1996). In previous studies we explored the extent to which students endorse social support, belongingness, mastery and superiority goals in close relation to the quality of their CL. Studies by Eccles (1987) and Wentzel (1991) suggest that cooperative learning is an effective learning setting for students preferring a combination of mastery (understanding tasks) and social goals (being friends with and, supporting others). In such a setting they can

create a sense of belongingness and security. Mastery goals are associated with high levels of performance on personally challenging tasks in general (Ford, 1992). A combination of social and mastery goals should be most conducive to the quality for CL (McInerney, Hinkley, Dowson, & Van Etten, 1998). It is exactly this combination with mastery goals that is likely to predict the quality of CL.

Also, and in contrast to this goal profile Wentzel and Wigfield (1998) showed that students who prefer superiority and individuality goals have lower scores on the quality of CL than students who prefer social goals. Functioning as a group member may contrast with students' wish to perform well at a more individual level.

Context related explanations for variation in the quality of CL

Social resources, school and peer identification, and alienation

Apart from students' goals we expect students' perceptions of the social environment to be important to the CL process (Vedder & Boekaerts, in press). Samdal, Nutbeam, Wold, and Kannas (1998) found that students' sense of security and feelings of being treated fairly and supported by their teachers were crucial in predicting their general satisfaction with school. Feelings of well-being and school identification are important to the quality of the learning process. Feelings of alienation on the other hand will negatively influence students' learning processes (Deci & Ryan, 2000).

A number of studies showed that perceived availability of social support is a better predictor of well-being than actually received support (Wethington & Kessler, 1986); therefore we will focus on students' *perceptions* of emotional and academic support, in relation to their identification with and alienation from school and peers.

In this study we explore what combination of student characteristics and student appraisals of the school context is related to higher levels of the quality of cooperative learning. Particular combinations will be referred to as profiles.

We hypothesize that students who have profiles characterized by good language proficiency, a preference for social support, belongingness, and mastery goals, negative or low scores on superiority goals, high scores on perceived availability of teacher and peer support and on school and peer identification, and negative scores for school and peer

alienation to report high quality of CL and vice versa for students who report low quality of CL.

The role of students' ethnocultural background

Research findings as regards the question whether immigrant students profit more or less from, and perform better or worse in CL settings than national students are inconclusive. This is logical since the two categories of students compared, i.e., national versus immigrant students, are unspecified, which makes it impossible to compare whatever in-group variation with whatever between-group variation. In this particular study the national students are Dutch adolescents with white west European born parents and the immigrant students are either from the Caribbean (Surinamese or Antilleans) or from the Mediterranean (Moroccan or Turkish).

Nationals and immigrants in the Netherlands

With almost 10% of its 16 million population born elsewhere, the Netherlands has a modest immigrant population in comparison to other Western countries (Berry, Phinney, Sam, & Vedder, 2006). The population's ethnic origin is 94% Dutch, which includes about 125,000 immigrants from the Netherlands Antilles and Aruba (the Antilleans), who have Dutch citizenship (because these are dependent overseas territories), as well as an unknown portion of 295,000 immigrants from Surinam (which is a former overseas territory). The main origins of other immigrants are Morocco, Turkey, and former Yugoslavia.

In this study we focus on second-generation immigrants, defined as those students that were born in the Netherlands with at least one parent who came to the Netherlands as an immigrant. We distinguish Mediterranean students, who are from Turkey and Morocco, and Caribbean students who are from the Netherlands Antilles, Aruba and Surinam. Dutch students clearly differ from immigrant students in educational attainment levels, with Turkish and Moroccan students having the lowest levels, Dutch the highest, while Antillean and Surinamese students are in between (Van Ours & Veenman, 2001).

The migration history of the Caribbean community clearly differs from that of the Mediterranean. The former have a history of contacts with the Dutch, who were the colonizers of these communities. The cultural distance is rather small. This is clearest with respect to

language proficiency. The language of instruction in most schools in Surinam and in the Netherlands Antilles is still mainly Dutch, meaning that they grow up learning Dutch, before they arrive in the Netherlands. Moreover, the legal systems, the health care system, and religious institutions are all rooted in a common colonial history. This is not to say they are similar, but they look very much the same. This is completely different with Turkey and Morocco, which population is mainly Muslim. The cultural distance between the Netherlands and these two countries is large, even larger because Turkish and Moroccan immigrants did not come from the more Westernized large cities, but came and come from rural areas.

The possible impact of ethnocultural background on cooperative learning, student characteristics and student appraisals of the school context

CL methods are based on socio-constructivist theories that strongly emphasize students' autonomy. Palfreyman (2001) suggested that autonomy is contradictory to concepts as tradition, authority and non-Western culture. He clarified that non-Western students are low on feelings of autonomy and therefore encounter problems in Western schools. However, students from more collectivistic cultures than the Dutch, such as Moroccans (Pels, 1998) are more used to participate in group behavior, which might make them better equipped for learning in CL settings than Dutch students. In particular their cooperation skills may be better developed than those of Dutch students. A recent study on the effects of educational settings and instructional approaches that emphasize cooperative learning, discussion, and justifying particular problem solving strategies in mathematics showed that, for disadvantaged students (mainly immigrant students), "modern" settings that stress the role of social interaction are less effective in terms of achieving teacher desired learning outcomes than more structured and teacher guided approaches (Timmermans, 2005). Wittebrood and Keuzekamp (2000) suggested that Turkish and Moroccan students, unlike Surinamese and Antillean students experience difficulty when working with modern, interactive instruction methods. At the same time, Matthijssen (1993) suggested that immigrant students have difficulty in attaching relevance to the knowledge and skills that they are supposed to learn in Dutch schools. Moreover, these students tend to be docile towards teachers, whom they see as authorities. The first characteristic hinders learning and requires additional support, whereas the second impedes asking for help. In fact, these students need greater security and self confidence and they should be encouraged to develop self initiative and autonomy in learning. CL may be quite appropriate in such a situation.

The uncertainty about the possible blessings or risks of CL for immigrant students led us to explore the relationship between such aspects of the quality of CL as perceived group cohesion, cooperation skills or attitudes towards CL and students' ethnocultural background.

For future intervention purposes, ethnocultural background in itself, although interesting, is not a variable that can be manipulated to improve CL processes in secondary vocational education. We will therefore focus on changeable individual and contextual characteristics that can account for ethnic differences in the quality of CL processes, represented by students' Dutch language proficiency, their motivation or goal preferences, and students' identification with school and peers.

The language assimilation model posits that immigrant students' proficiency in the national language is a better predictor of students' academic achievements and social participation than proficiency in the home language (e.g., Vedder & Virta, 2005). For second language acquisition, the actual oral and written contacts between two ethnic groups are important (Bialystok, 2001). Blom and Severiens (2000) found that in the Netherlands immigrant students' vocabulary was significantly smaller than that of Dutch students. In a CL setting students use language to understand the learning tasks, to ask for help and to support other students. Some researchers (e.g., Boers, 2001; Hajer, 1996; Kirchmeyer; 1993) found that immigrant students participated little in collaboration and processes of decision making, because of limited language proficiency. Students who are less fluent in Dutch can hardly participate at the same level as their Dutch classmates do. As mentioned previously, Mediterranean students encounter more language difficulties than Antillean and Surinamese students because the latter groups are more familiar with Dutch customs and language due to historical bonds with the Netherlands.

Earlier studies on goal preferences and students' ethnocultural background yielded contradictory findings. McInerney, Roche, McInerney, and Marsh (1997) studied Anglo, Australian Aboriginal and native American students and found that these groups hardly differed in the appreciation of goals that were related to learning and achievement. Vedder and Boekaerts (2006) also found comparable goal structures between Dutch students and students living in Curacao in the Caribbean. However, Dutch students were just a little more oriented towards superiority than the Caribbean students. Other studies (e.g., Suarez-Orosco, 1998; Valdez, 1998) suggested that differences in appreciation of culture-bound values did influence students' goal preferences.

In this study we will investigate whether students with different cultural backgrounds differ with regard to their goal preferences and whether these differences have consequences for CL.

In terms of students' feelings of school identification and alienation earlier research reported that particular groups of immigrant students in the Netherlands switch schools so frequently that this impacts on their school identification. They change schools because their parents frequently move into different neighborhoods or even between cities (Mulder, Roeleveld, Van der Veen, & Vierke, 2005). This is even more worrying because in another study (Vedder, Boekaerts, & Seegers, 2005) was found that young Dutch adolescent students rely more on parental academic support than immigrant students, who rely more on instructional support from the teacher. No differences were found for the perceived availability of parental emotional support or the perceived availability of peer support between different ethnic groups. Pels (1998) showed that Moroccan students were brought up with less personal parental attention than their Dutch peers. Also, Distelbrink and Pels (2000) found that Turkish and Moroccan students felt less academically supported by their parents than by their teachers and peers. In short immigrant students in the Netherlands in matters of learning and school tend to depend more on the teachers than on their parents.

In the present study we will explore whether students from different ethnic groups differ in their appraisal of the availability of academic and emotional support from teachers and peers, and in the degree to which they identify with or alienate from school and peers, and what the consequences are for the quality of CL. We hypothesize that immigrant students will rely more on teacher and peer support than Dutch students do. If we find support for this hypothesis this may indicate an additional risk for the immigrant students. Students' higher desire for teacher and peer support may lead to higher feelings of frustration, when their desire for support from teacher and peers is not satisfied.

Based on the evidence presented thus far we expect to find differences between national, Mediterranean, and Caribbean students living in the Netherlands, both as regards the quality of cooperative learning and the profiles representing particular combinations of student characteristics and student appraisals of the school context.

METHOD

Participants

Participants in this study were 1806 students from 11 different secondary vocational schools that were spread evenly across the Netherlands. Students were enrolled in different study programs, namely ICT, engineering, retail and administration, food and tourism, and health and welfare programs. They were predominantly of Dutch origin (N = 1599), and their mean age was 17.11, SD = 3.52 during the first data collection period. About 12 percent of the participating students had an immigrant background, determined by their parents' birthplace. The Mediterranean group (Moroccan and Turkish) consisted of 119 students, while 88 students had a Caribbean (Netherlands Antilles or Surinam) background.

Instruments

Students' *ethnocultural background:* Participants were asked in which country they were born and in which country their parents were born.

Four scales were administered. Table 1 presents an overview of scales, sample items and Cronbachs' alphas of the different scales used in this study. Structural equivalence of the scales in the three ethnic groups was assessed using exploratory factor analyses followed by a test of factorial agreement. Tucker phi coefficients higher than .90 are seen as evidence for factorial agreement (Ten Berge, 1986). Values of these tests are also presented in Table 1.

Table 1: Categories, sample items, number of items, Cronbachs' alpha coefficients and Tucker Phi coefficients.

Category	*Sample item(s)*	*# items*	*Alpha*	*Tucker's Phi Coefficients of Factorial Agreement*		
Students Goal Preferences				Dutch vs. Mediterranean	Dutch vs. Caribbean	Caribbean vs. Mediterranean
Superiority/ individuality	I want to impress others	9	.93	1.00	.99	.99
Mastery	I want to learn more	9	.92	1.00	.99	.99

	about my profession					
Belongingness	I want to get along with my peers	6	.86	1.00	.99	.99
Social Support	I want to help others in case they need help	7	.91	1.00	1.00	1.00
Quality of Cooperative Learning	I perceive myself as part of this group", "When we work on a group task, we make sure that all the team members understand the answers", "I know when another person needs help" and "Together you learn better than alone".	29	.90	1.00	1.00	1.00
Language Competence						
Dutch language competence	I speak (e.g. read) *Dutch* well	4	.87	1.00	1.00	1.00
Social Climate						
Academic support teacher	When I do not understand the lesson, I receive support from my teacher	7	.80	.99	.99	.98
Academic support peers	When I do not understand the lesson the I receive support from my peers	7	.82	1.00	.98	.98
Emotional support teachers	When I am sad my teacher supports me	6	.82	1.00	1.00	.99
Emotional support peers	When I am sad my peers support me	6	.89	.97	.99	.99

School and Peer Identification & Alienation						
Identification with peers	My friends give me self confidence	5	.91	1.00	1.00	1.00
Identification with school	My education gives me self confidence	5	.88	1.00	.99	.99
Alienation from peers	I regularly think about finding new friends	3	.93	1.00	1.00	1.00
Alienation from school	I regularly think about finding another education	3	.91	1.00	1.00	1.00

The quality of CL (QCL) comprised four subscales, namely; students' perceptions of the quality of *group cohesion*, students' perceptions of the quality of *interdependence within the group,* students' perception of the quality of their *cooperation skills* and a subscale that measured *students' attitudes towards CL*. All questions referred to the group learning situations that the students had participated in during the previous four weeks. Students had to indicate on a four-point Likert scale to what extent they agreed with each statement. Response categories ranged from "I disagree very strongly" to "I agree very strongly" (Hijzen, Boekaerts, & Vedder, 2006). These subscales were highly correlated and were all part of the quality of CL. A Principal Component Analysis on these four subscales resulted in a one-factor solution. This factor had an Eigenvalue of 1.8 and it explained 58% of the total variance.

Students' personal goals were assessed with the goal preference list based on the Ford (1992) and Ford and Nichols (1991) taxonomy of broad goals. Students had to report on the importance they attach to each of the goals by giving an indication of the extent to which they want to achieve them. They were asked to choose from five response categories ranging from "not at all" to "very much so". Four goal domains related to the quality of CL, represented by four scales, were selected from the list and used in this study, namely *superiority and individuality*, *mastery, belongingness,* and *social support* goals (For more details see Hijzen, Boekaerts, & Vedder (2006)).

Students' language competence was measured with one subscale assessing students' *proficiency in the Dutch language* (Kwak, 1990)**.** Students had to indicate how well they did

in speaking, writing, understanding and reading Dutch. The scale items were measured on a four-point Likert-type scale (1= not at all, 4= very good). The scale for Perceived Availability of Social Support (e.g., Vedder, Boekaerts, & Seegers, 2005) measures students' *appraisals of the availability of academic and emotional support from their teachers* and *peers*. Students had to indicate on a four-point Likert scale how often they get support. Answering categories ranged from "almost never" to "very often". Four scales were from the Relational and School Identity Scale (Meeus, 1996) and measured *students' identification with their peers and school, students' feelings of alienation from peers and their school*. Response categories (4) ranged from "I disagree very strongly" to "I agree very strongly".

Reliability coefficients of all measures were good, Cronbachs' alpha coefficients ranged from .73 to .93. Tucker's phi comparisons for each pair of countries were very high (0.97 – 1.00), indicating overall good structural equivalence for all measures.

Procedure

The scales were administered during regular classroom activities. Researchers were present to assist the teachers, and to answer any questions. All participants were informed that participation was voluntary, and that responses were anonymous. It took students two sessions of 45 minutes to complete all the scales.

RESULTS

The relationship between individual and context related characteristics and the quality of CL

Pearson correlation coefficients were calculated in order to explore the relationships between individual and context related characteristics and the quality of CL. Because of the large sample, almost all correlations were statistically significant. The associations were generally in the expected direction, all person-related (Dutch language proficiency and goal preferences) and context-related (social resources, belongingness and alienation) appraisals were significantly correlated with the quality of CL. Especially students' mastery (r = .23, p = .000) and social support (r = .29, p =.000) goal preferences and their appraisals of the availability of emotional (r = .27, p =.000) and academic support (r = .25, p =.000) and identification with peers (r = .19, p = .000) and school (r = .23, p =.000) were interrelated

with the quality of CL. Contrary to our expectations, *peer* alienation was not significantly related to the quality of CL. We therefore excluded this subscale from further analyses.

Profiles

A person-oriented approach was used to gain insight into student profiles. Cluster analyses were conducted with the following variables: language proficiency, goal preferences, academic and emotional peer and teacher support, school and peer identification, and school alienation scales. We used the *k*-means method, because this method is sensitive to decisions as to the preferred number of clusters and the values for the initial cluster centers. Based on the fit with the dominant theoretical notions guiding the study and on the interpretability of the resulting clusters, we found four clusters. Figures 1.1, 1.2, 1.3 and 1.4 present the four clusters.

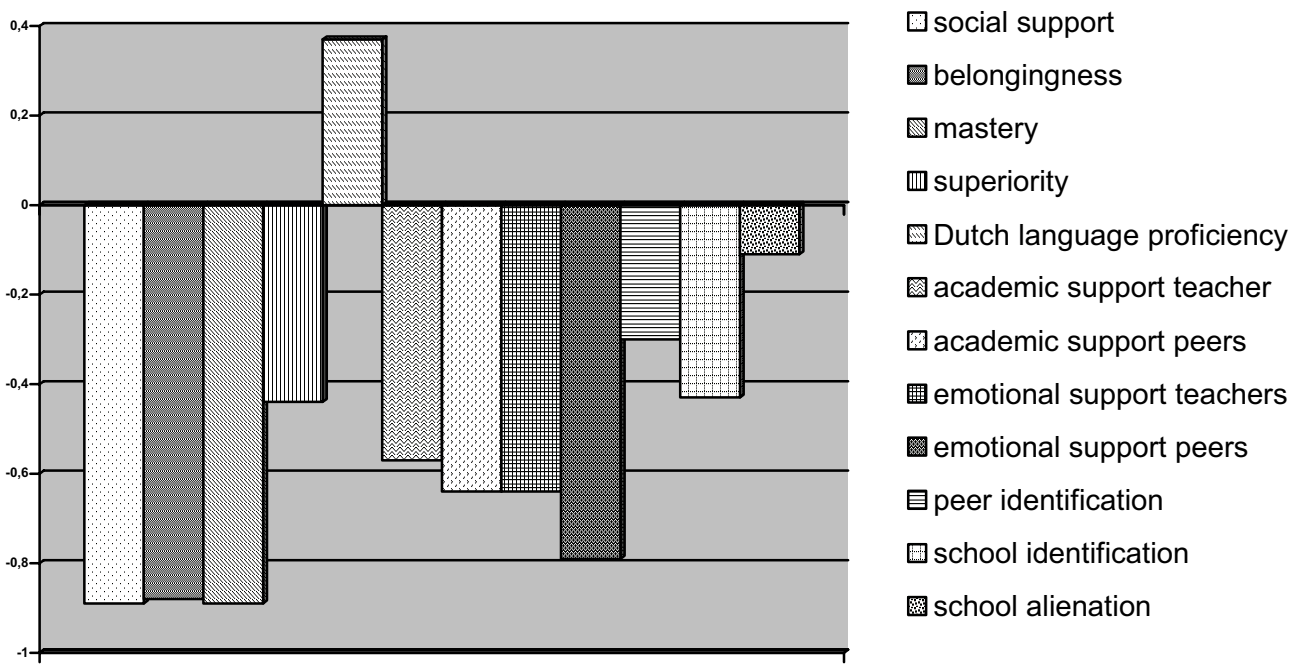

Figure 1.1: The school disaffected profile.

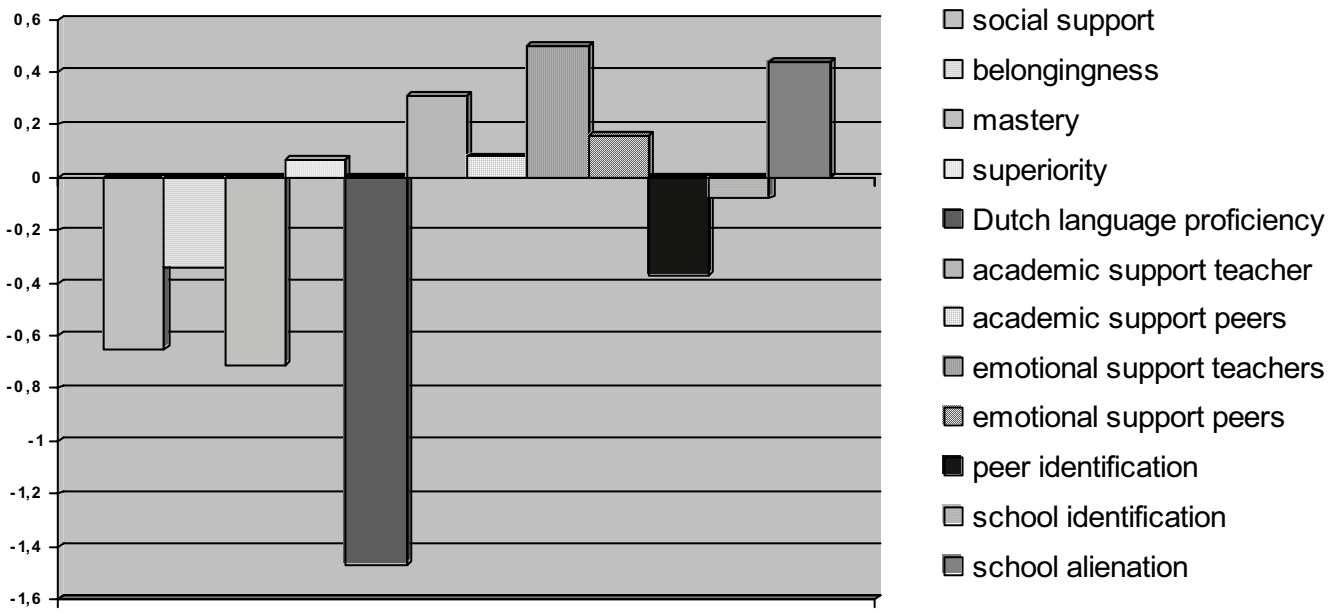

Figure 1.2: The weak communication/ weak school bonding profile.

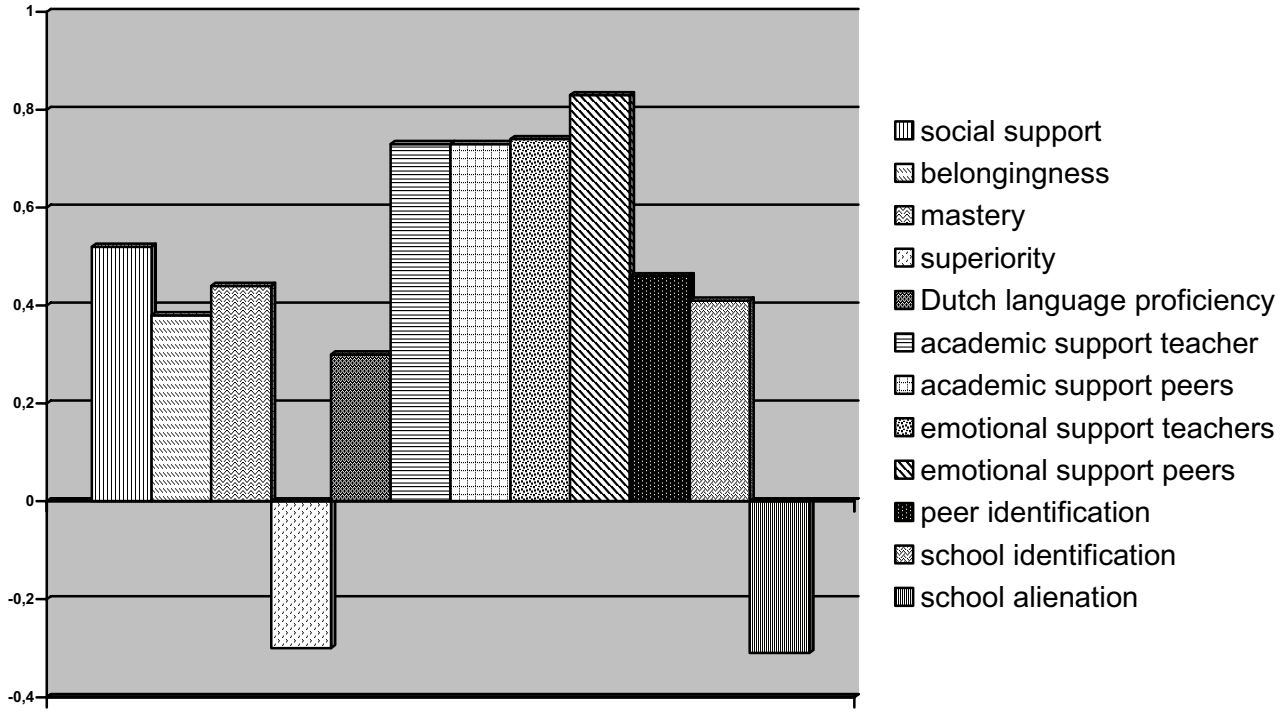

Figure 1.3: The school adjusted profile.

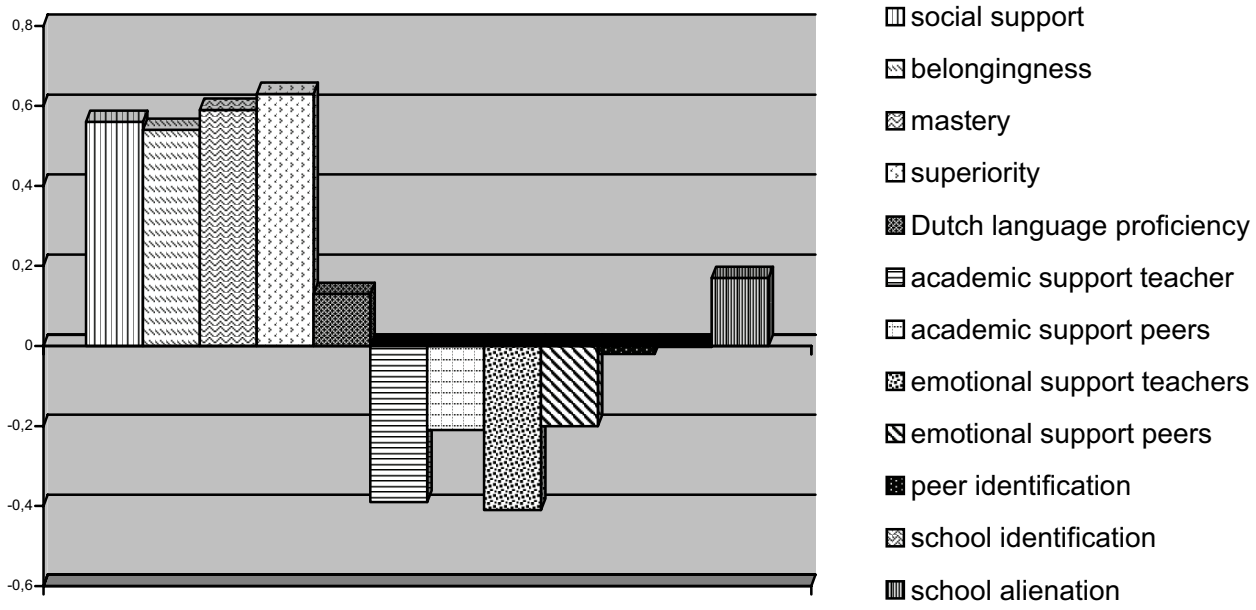

Figure 1.4: The frustrated profile.

Cluster 1 can be described as the *school disaffected* profile. This highly negative profile groups students who score low on the goal domains, meaning that they had no clear goals. They were slightly positive about their proficiency in the Dutch language, but dissatisfied with the availability of academic and emotional support from teachers and peers. These students also lacked a sense of school and peer identification. However, they scored slightly negative on school alienation.

A second, more diffuse cluster shown in Figure 1.2, can be defined as the *weak communication / weak school bonding* profile. Scores on Dutch language proficiency were extremely low. Students with this profile scored relatively high (and positive) on school alienation, meaning that compared to students in the other clusters, these students were highly unsatisfied with their study program. The scores on the availability of academic and emotional peer and teacher support were positive, meaning that students in this profile were satisfied with the amount of support they received, but their goal preferences were diffuse, implying that they pursued no clear goals. Interestingly, superiority was the most valued goal domain. The marked discrepancy between being satisfied with social resources but feeling alienated at the same time implies that these students' wish to change school program might be related to personal characteristics, such as their lack of Dutch language proficiency.

Cluster 3 is the positive *school adjusted* profile. Scores on superiority goals were negative. Students in this cluster scored positively on the other goal domains and they were also positive about the availability of support. They felt attached to school and peers and had

no intention at all of changing peers or school. Students with this profile enjoyed school and focused on learning.

We labeled cluster 4 'the *frustrated* profile' (Figure 1.4). Interesting about this profile is the overall frustration that it expresses. Students with this profile seem to have good intentions but their resources - or in other words their environment - do not match their needs. They score positively on all goal preferences, are satisfied with their level of Dutch language proficiency, but dissatisfied with the availability of academic and emotional support, especially from teachers (possibly caused by a mismatch between students' social goal preferences and the perceived lack of academic and emotional support from persons in their environment). They were slightly negative on identification with peers and school and were considering changing their school environment. Unlike cluster 2 that grouped students who seem frustrated due to personal characteristics, this cluster expresses frustration as a consequence of a lack of resources. A relatively high proportion of students fell in this cluster. Indeed cluster 4 (see Figure 1.4) was the largest cluster consisting of 704 students, followed by the first and third cluster (see Figure 1.1 and 1.3) that consisted of 652 and 654 students, respectively. The second cluster consisted of 395 students.

The relationship between student profiles and the quality of CL

In order to investigate the relationship between student profiles, the quality of CL and ethnocultural background a four (profiles) by three (ethnocultural groups) ANOVA was conducted with the quality of CL as the dependent variable.

Since students with a disaffected profile had negative scores on social and mastery goals, weak scores on language proficiency, negative scores on the availability of support, a lack of school and peer belonging and a wish for changing school and peer group, we expected that this profile would express the lowest quality of CL. In the school adjusted profile we expected the highest quality of CL, since the scores on social and mastery goals were high, and the Dutch language proficiency satisfactory (also appraisals of the availability of social support were positive, and scores on belongingness to school and peers were high, whereas scores on alienation were low).

The analysis yielded a main effect of cluster only ($F [3, 1442] = 13.81$, $p = .000$, $\eta^2 = .03$). Neither an ethnicity main effect nor an interaction effect was found. Contrary to our expectations, Dutch ($M = 2.83$, $SD = .29$), Mediterranean ($M = 2.86$, $SD=.33$) and Caribbean students ($M = 2.83$, $SD = .31$) hardly differed on the quality of CL. Posthoc tests showed that,

as expected, students with a disaffected profile (M = 2.73, SD = .21), together with students with a weak communication/school-bonding profile (M = 2.76, SD = .27) had the lowest scores on the quality of CL. Students with a school adjusted profile had the highest scores on the quality of CL (M = 2.93, SD = .29). This finding confirmed our predictions namely that positive scores on social goals and mastery goals, negative scores on superiority goals, positive perception of the availability of support, identification to school and peers and no wish for changing school and peers are related to perceptions of high CL. The frustrated profile (Figure 1.4) was characterized by intermediate scores for the quality of CL (M = 2.84, SD = .29).

The fact that students from different ethnic background had similar scores on the quality of CL does not rule out the possibility that a comparable quality of CL is realized on the basis of resources and conditions for CL that vary between ethnocultural groups. We analyzed whether the proportions of students in each profile varied in terms of the students' ethnocultural background.

Figure 2 presents the distribution of ethnic groups over the four clusters. The distribution of clusters clearly differed by group (χ^2 (6, N = 1791) = 20.80, p = .002). Inspection of Figure 2 shows that cluster 2 - the weak communication profile-, is clearly more characteristic of the Caribbean group than of the Dutch and Mediterranean groups. This contradicts our expectation that Dutch *and* Caribbean students would have a higher language proficiency than their Mediterranean peers. Moreover, profile 3 - the school adjusted profile, is most representative of the Dutch group and is least represented in the Caribbean group. Furthermore, profile 4 - the frustrated profile is most characteristic of the Mediterranean students. This latter finding corroborates earlier reported findings that Mediterranean students feel less supported whereas they actually need more support than Dutch students.

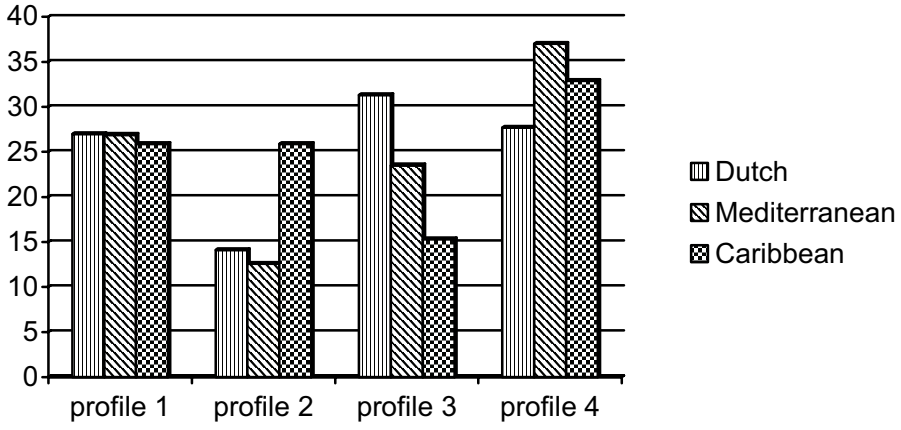

Figure 2: Percentages of Dutch, Mediterranean and Caribbean students by profile.

DISCUSSION AND RECOMMENDATIONS

This study explored what combination of student characteristics and student appraisals of the school context was related to higher levels of the quality of cooperative learning and whether these vary by ethnocultural group. We expected to find differences between national, Mediterranean, and Caribbean students living in the Netherlands, both as regards the quality of cooperative learning and the profiles representing particular combinations of student characteristics and student appraisals of the school context. Cluster analyses resulted in four different profiles, namely a 1) school disaffected profile, 2) weak communication/ school bonding profile, 3) school adjusted profile and 4) frustrated profile.

The relationship between student profiles and the quality of CL

We expected a relationship between the different profiles and the quality of CL. In line with Wentzel and Wigfield (1998) and McInerney, Hinkley, Dowson, and Van Etten (1998), we anticipated that students with high and positive scores on social and mastery goals would express high quality of CL. Furthermore, we expected that positive scores on Dutch language proficiency, appraisals of the availability of academic and emotional support from teachers and peers, and identification with school and peers, and negative scores on school and peer alienation would be associated with the quality of CL. As expected, we found that students in the school adjusted profile had the highest scores on the quality of CL, while -in line with our expectations- students in the school disaffected and the weak communication/ school bonding profiles had the lowest scores on the quality of CL. Students with a frustrated profile had intermediate scores on the quality of CL. Inspection of the distribution of students over the different clusters showed that most students had a frustrated profile. While these students did not display low scores on the quality of CL, many students felt unsupported by their environment and alienated from their schools. Future interventions in the schools should explicitly focus on strengthening the social environment. It is vital that schools shape an environment where it is logical that students support each other, for example by investing in social skill development and improving group attachment. Teachers need to create a classroom atmosphere where emotional and academic support is promoted and valued. At the same time, this type of environment will stimulate students to pursue their social support goals, which are crucial for successful CL as well (Hijzen, Boekaerts, & Vedder, 2006). Many students (profile 1 and profile 2) had no clear goal preferences. Having clear goals is very

important for successful learning (e.g., Conti, 2000). Hence, suggestions for interventions concern goal setting. Teachers should invite students to think about their personal goals and the way these goals connect to school goals. Talking about personal goals in order to make students conscious of the role these goals play in the learning process might be a significant move towards more successful CL. Fortunately, a high number of students were in cluster 3, the school adjusted profile, that was associated with the highest quality of CL and satisfaction with the availability of support.

Ethnocultural background and the quality of CL

Dutch and immigrant students were not evenly distributed over the different profiles. Only the disaffected profile comprised comparable proportions of Dutch, Caribbean and Mediterranean students. As expected, the weak communication/ school bonding profile was more typical of immigrant students than of the Dutch. However, the difference concerned only the Caribbean students, while we expected more language difficulties for Mediterranean students. This cluster was characterized by negative scores on Dutch language proficiency and school and peer identification and positive scores on school alienation. Besides, students from this cluster had no specific goal preferences; superiority was their most outspoken goal preference. This finding contradicts our expectations that immigrant students would value superiority goals less than Dutch students and it contradicts an earlier finding reported by Vedder and Boekaerts (2006) that showed that Antillean students had lower scores in the superiority goal domain than Dutch students. These researchers measured Antillean students' goal preferences in Antillean schools, while our research took place in the Dutch context. Perhaps Antillean immigrant students are more prone to prove themselves and show off their abilities in a Dutch environment than their peers who are living in the Caribbean. The high scores on school alienation seem to confirm our prediction that immigrant students feel less attached to their school environment than Dutch students. This finding may have been caused by several factors, such as differences in cultural background, or in other words, a gap between the home cultural background and the school culture, frequently changing schools (Mulder, Roeleveld, Van der Veen, & Vierke, 2005), or language difficulties. A comparison revealed that students in both the school disaffected profile and the frustrated profile lack social resources. Students in the former cluster report low emotional support from peers and students in the latter cluster report low social support from their teacher. The main differences between the two clusters is having or not having clear goals and reported language proficiency. Obviously having clear

goals and language proficiency are important in learning, particularly in CL. As such it deserves to be given special attention in students' curriculum and class organization. Actually, in senior vocational high schools in the Netherlands generally, students' Dutch language proficiency is taken for granted. Suggestions for future intervention programs therefore concern enhancing communication competence and paying attention to differences between Dutch and immigrants' language proficiency in class. For example in composing CL teams.

The frustrated profile was most representative of Mediterranean students and least of the Dutch group, which confirms our expectation that more Mediterranean students feel alienated and unable to identify with school and peers, compared to Dutch and Caribbean students.

References

Baumeister, R., & Heatherton, T. (1996). Self-regulation failure: An overview. *Psychological Inquiry*, *7*, 1-15.

Berry, J., Phinney, J., Sam, D., & Vedder, P. (2006). Immigrant youth in cultural transition: Acculturation, identity and adaptation across national contexts. Mahwah, NJ: Lawrence Erlbaum Ass.

Bialystok, E. (2001). *Bilingualism in development: Language, literacy and cognition*. New York: Cambridge University Press.

Blom, S., & Severiens, S. (2000). *Zelfstandig leren van autochtone en allochtone leerlingen in het Studiehuis* [Independent learning of Dutch and immigrant students in the Studiehuis]. PMVO; Amsterdam.

Boekaerts, M. (1998). Do culturally rooted self-construals affect students' conceptualization of control over learning? *Educational Psychologist, 33*, 87-108.

Boers, F. (2001). *Remembering figurative idioms by hypothesising about their origin*. Prospect 16(3): 35-42. BVE monitor-deelnemersmonitor 2003-2004.

Chin, W., Salisbury, D., Pearson, A., & Stollak, M. (1999). Perceived cohesion in small groups. *Small Group Research, 30*, 751-766.

Cohen, E. G. (1994). Restructuring the classroom: Conditions for productive small groups. *Review of Educational Research, 64*, 1-35.

Conti, R. (2000). College goals: Do self-determined and carefully considered goals predict intrinsic motivation, academic performance, and adjustment during the first semester? *Social Psychology of Education, 4*, 189-211.

Deci, E. L., & Ryan, R. M. (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry, 11,* 227-268.

Distelbrink, M., & Pels, T. (2000). Opvoeding in het gezin en integratie in het onderwijs [Upbringing in the family and integration at school]. In: Pels, T. (ed.). *Opvoeding en integratie. Een vergelijkende studie van recente onderzoeken naar gezinsopvoeding en pedagogische afstemming tussen gezin en school* (pp. 114-139). Assen: Van Gorcum.

Eccles, J. (1987). Gender roles and women's achievement-related decisions. *Psychology of Women Quarterly*, *11*, 135–72.

Ford, M. E. (1992). *Motivating humans: goals, emotions, and personal agency.* Newbury Park, CA: Sage.

Ford, M. E., & Nichols, C. W. (1991). Using a goal assessment to identify motivational patterns and facilitate behavorial regulation and achievement. In M. Maehr & P. R. Pintrich (Eds), *Advances in motivation and achievement*: Vol 7. Goals and self-regulatory processes (pp. 61-84). Greenwich, CT: JAI Press.

Hajer, M. (1996). *Leren in een tweede taal. Interactie in vakonderwijs aan een meertalige mavo- klas* [Learning in a second language. Interaction in didactical education with a multi language mavo-class]. Groningen: Wolters Noordhoff.

Hijzen, D., Boekaerts, M., & Vedder, P. (2006). The relationship between students' goal preferences, perceptions of contextual factors in the classroom and the quality of cooperative learning. *Scandinavian Journal of Psychology, 47*, 9-21.

Hijzen, D., Boekaerts, M., & Vedder, P. (submitted). Exploring the links between students' engagement in cooperative learning, their goal preferences and perceptions on contextual factors in the classroom.

Johnson, D. W., & Johnson, R. T. (1994). *Learning together and alone: Cooperative, competitive, and individualistic learning*. Englewood Cliffs, NJ: Prentice-Hall.

Kirchmeyer, C. (1993). Multicultural task groups. An account of the low contribution level of minorities. *Small Group Research*, *24,* 127-148.

Kwak, K. (1990). *Second language learning in a multicultural society: A comparison between the learning of a dominant language and a heritage*. PhD thesis Queen's University, Kingston, ON, Canada.

Matthijssen, M. (1993). *Lessen in orde voor immigranten: leerling perspectieven van allochtonen in het voortgezet onderwijs* [Lessons alright for immigrants: students' perspectives of immigrants in vocational schools].Amersfoort: Academische Uitgeverij.

McInerney, D. M., Hinkley, H., Dowson, M., & Van Etten, S. (1998). Children's beliefs about success in the classroom: Are there cultural differences? *Journal of Educational Psychology, 90,* 621-629.

McInerney, D. M., Roche, L. A., McInerney, V., & Marsh, H. W. (1997). Cultural perspectives on school motivation; the relevance and application of goal theory. *American Educational Research Journal, 34,* 207-236.

Meeus, W. (1996). Studies on identity development in adolescence: An overview of research and some new data. *Journal of Youth and Adolescence, 25*, 569-598.

Mulder, L., Roeleveld, J., Van der Veen, I., & Vierke, H. (2005).*Onderwijsachterstanden tussen 1988 en 2002: ontwikkelingen in basis- en voortgezet onderwijs* [Educational

backlog between 1988 and 2002: developments in primary- and secondary education]. ITS Radboud Universiteit, Nijmegen.

Palfreyman, D. (2001). *The socio-cultural construction of learner autonomy and learner independence in a tertiary EFL institution.* Unpublished PhD thesis. Canterbury: Canterbury Christ Church University College, Department of Language Studies.

Pels, T. (1998*). Opvoeding in Marokkaanse gezinnen. De creatie van een nieuw bestaan* [Upbringing in Moroccan families. The creation of a new existence]. Assen: Van Gorcum.

Ros, A. A. (1994). *Samenwerking tussen leerlingen en effectief onderwijs* [Cooperation between students and effective education]. Dissertation, Rijksuniversiteit Groningen.

Samdal, O., Nutbeam, B., & Kannas, L. (1998). Achieving health and educational goals through schools-study of the importance of the school climate and the students' satisfaction with school. *Health Education Research*, *13*, 383-397.

Slavin, R. E. (1987). Developmental and motivational perspectives on cooperative learning: A reconciliation. *Child Development, 58,* 1161-1167.

Slavin, R. E. (1995). *Cooperative learning: Theory, research, and practice* (2nd ed.). Boston: Allyn and Bacon.

Suarez-Orosco, M. (1998). *Commentary*. Paper presented at Transnationalism and the Second Generation, Harvard University.

Ten Berge, J. M. F. (1986). Rotatie naar perfecte congruentie en de multiple groep methode [Rotation to perfect congruence and the multiple group method]. *Nederlands Tijdschrift voor de Psychologie*, *41*, 218-225.

Teunissen, J., & Matthijssen, M. (1996*).* Stagnatie in onderwijsonderzoek naar de etnische factor bij allochtone leerlingen [Stagnation in educational research on the ethnic factor amongst immigrant students]. *Sociologische Gids*, *43*, 87-99.

Timmermans, R. (2005). *Addition and substraction strategies: assessment and instruction.* Dissertation: Radboud University Nijmegen.

Valdez, G. (1998). The world outside and inside school: Language and immigrant children. *Educational Researcher*, *27*, 4-18.

Van Ours, J., & Veenman, J. (2001). *The Educational Attainment of Second Generation Immigrants in the Netherlands*, IZA Discussion Papers 297, Institute for the Study of Labor (IZA).

Vedder, P., & Boekaerts, M. (in press). *Motivation in senior secondary vocational education; a cross-cultural comparison.* Cross Cultural Psychology.

Vedder, P., Boekaerts, M., & Seegers, G. (2005). Perceived social support and well being in schools; the role of students' ethnicity. *Journal of Youth and Adolescence, 34*, 269-278.

Vedder, P., & Virta E. (2005). Language, ethnic identity, and the adaptation of Turkish immigrant youth in the Netherlands and Sweden. *International Journal of Intercultural Relations*, *29,* 317-337.

Voncken, E., Van der Kuip, I., Moerkamp, T., & Felix, C. (2000). *Je bent jong en je weet niet wat je wilt:* Een inventarisatie van push- en pullfactoren die leiden tot voortijdig schoolverlaten in de BVE-sector [You are young and you do not know what you want: an inventory of push- and pull factors that lead to drop-out in secondary vocational education]. Amsterdam: SCO-Kohnstamm.

Webb, N. M., & Palincsar, A. S. (1996). Group processes in the classroom. In: D.C. Berliner & R.C. Calfee (Eds), *Handbook of Educational Psychology* (pp. 841 - 873). New York: Simon & Schuster MacMillan.

Wentzel, K. R. (1991). Relations between social competence and academic achievement in early adolescence. *Child Development, 62*, 1066-1078.

Wentzel, K. R., & Wigfield, A. (1998). Academic and social motivational influences on students' academic performance. *Educational Psychological Review, 10,* 1555-1575.

Wethington, E., & Kessler, R. (1986). Perceived Support, Received Support, and Adjustment to Stressful Life Events. *Journal of Health and Social Behavior 27*, 78-89.

Wittebrood, K., & Keuzekamp, S. (2000), Rapportage Jeugd 2000. Trajecten van jongeren naar zelfstandigheid [Trajectories of youngsters to independence]. Den Haag: Sociaal en Cultureel Planbureau.