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STUDENT PERCEPTION AS MODERATOR FOR STUDENT WELLBEING

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ABSTRACT. Student motivation as well as student perception of interpersonal teacher behaviour are linked to the sense of wellbeing at student level. However, while most of the variance in the measurement of student wellbeing was situated at student level, eleven percent of variance was found at classroom level. In this article we focus on this variance at classroom level and the moderating role that student perception of interpersonal teacher behaviour has. From an interpersonal perspective on teaching, the relationship between teacher wellbeing, perceptions of interpersonal teacher behaviour, and student wellbeing is examined. Grade 9 students of technical and vocational training schools are participating in this study. In the analyses a distinction is made between teaching academic subjects and teaching vocational subjects. There appears to be a direct link between the wellbeing of the teachers of academic subjects and the wellbeing of their students. Students who perceive their academic teacher as leading, helpful and friendly score higher on wellbeing, while wellbeing decreases when an academic teacher is perceived as strict and admonishing.The relationship between the teacher of vocational subjects who typifies himself as strict and admonishing, and the wellbeing of his students, is moderated by student perceptions of teacher interpersonal behaviour. A direct relationship between the wellbeing of the vocational teacher and the wellbeing of students is not found. Only when the vocational teacher's wellbeing is high and student perceptions of uncertain or dissatisfied interpersonal teacher behaviour is low, does student wellbeing increase. We conclude that for vocational subjects, student perceptions of interpersonal teacher behaviour are crucial moderators. Finally, students who are highly motivated to learn practical subjects, have a higher score on student wellbeing. By contrast, the fact that education is inherently obligatory has a negative influence on student wellbeing.

KEY WORDS: classroom climate, interpersonal teacher behaviour, student perceptions, student wellbeing, teacher perceptions, teacher wellbeing

1. INTRODUCTION

Classroom environment research measures the association between student cognitive and affective learning outcomes and student perception of the psychosocial characteristics of the classroom. Student perceptions often account for significant variance in the measurement of learning outcomes, beyond what could be attributable to background student characteristics.

The classroom environment is often described in terms of atmosphere, climate, etc. The perceptions of students are key components and valuable indicators of that classroom climate (Freiberg and Stein, 1999; Fraser, 1999).

Aside from the field of school effectiveness research, school psychologists have long concentrated exclusively on the role they play in assessing and enhancing academic achievement. The field of classroom environment research provides an opportunity to become sensitized to other important, albeit subtle aspects of school life. Creemers and Reezigt (1999) explicitly incorporated climate factors in a model of educational effectiveness. According to Creemers (1994) climate factors have their own niche next to effectiveness factors. We assume that successful changes in effectiveness factors would be accompanied by changes in climate. Tagiuri (1968) distinguishes four dimensions within the organizational climate (1) the physical environment, (2) the characteristics of individuals and groups participating in the organization, (3) culture, or beliefs and values and (4) relationships between individuals and groups in the organization. In this study we will focus on this last dimension of the classroom climate i.e. the relationship between teacher and students.

According to Kaplan and Maehr (1999) the perception of the school and classroom environment should be considered as a modifier for the general wellbeing of students. It can contribute to good behaviour and facilitates a positive orientation toward life in general. Also the wellbeing of the teacher can be considered as an important component of classroom atmosphere. Starting from a person-environment interactional framework within classroom environment research, we want to examine whether there is a link between the wellbeing of students, the wellbeing of teachers and the perceptions of interpersonal teacher behaviour in the classroom.

1.1. *Student Wellbeing*

Last decades, research views student wellbeing as an important output factor of the educational process next to cognitive output (Brekelmans, 1989; Knuver and Brandsma, 1993; Samdal et al., 1999; Van Damme and Van Landeghem, 2002). A distinction can be made between current and sustainable wellbeing (Eder, 1995). On the one hand, as indicators of a current, situationally oriented state of wellbeing, Eder (1995) refers to the immediate experience of feeling good at school, satisfaction with aspects of a situation, school related feelings of fear and various psychological and psychosomatic factors induced by the school situation. On the other hand, general self-esteem, the view of one's own capabilities, one's self image, the academic concept of self and the social and the emotional self image of

students are indicators of sustainable wellbeing. In this study the focus is on current wellbeing. The wellbeing of students is defined as "a positive emotional state that is the result of a harmony between the sum of specific context factors on the one hand and the personal needs and expectations towards the school on the other hand" (Engels et al., 2004, p.128). Different components can be distinguished. First, a positive connotation is incorporated. The focus is put on the positive emotional state and not on deficiency, absenteeism, illness or stress. The vision behind this definition is one of dynamic involvement and positive change and corresponds with a movement towards positive psychology (Schaufeli and Bakker, 2001). Secondly, the harmony between context and person refers to endeavouring to a Person-Environment fit model (Kristof, 1996). Students have to be capable of attuning their own needs and expectations to specific context factors and demands of the school. Consequently this is an important precondition for students to feel good in schools. We also have to keep in mind that the wellbeing of students is individual and as a consequence most flexible.

Most of the variance in wellbeing is situated at student level (De Fraine, 2003; Knuver and Brandsma 1993; Opdenakker and Van Damme, 2000; Samdal et al., 1999). The impact of school and classroom characteristics on non-cognitive factors such as wellbeing is limited in comparison with the impact on cognitive factors (De Fraine, 2003). Nevertheless it is interesting to investigate specific classroom, teacher and school characteristics in order to increase student wellbeing. When students are asked what increases their wellbeing at school, they mention education situation related variables and to a lesser extent social or familial conditions. Aspects such as teaching behaviour, subject content etc. are listed (Engels et al., 2004). In this study we also focus on the micro or classroom level of the educational process.

1.2. *Perceptions of Interpersonal Teacher Behaviour*

The classroom environment is thought to make a major contribution to the effectiveness of a school (Creemers et al., 1989). A classroom's climate or environment has an influence on student achievement and attitude (Fraser, 1999). Related to this, Eccles, Lord and Midgley (1991) establish that the decline in motivation and attitude of students can often be associated with school or classroom environment. Climate factors have frequently been operationalised as perceptions of people (Anderson et al., 2004). The perceptions of students are key components in creating an agreeable

atmosphere (Stevens and Sanchez, 1999). Interpersonal relationships between teachers and students are an important aspect of classroom climate.

Wubbels et al. (1987) developed a model of interpersonal teacher behaviour. This model is based on the systems approach to communication (Watzlawick et al., 1967) and inspired by the general model of interpersonal diagnosis of personality designed by Leary (1957). Interpersonal teacher behaviour is situated within the orthogonal axes representing the influence and proximity dimension. The degree in which a teacher leads classroom communication distinguishes dominant teachers from submissive teachers (influence dimension). The distance in relationship between teacher and students is characterised by cooperation or opposition (proximity dimension). As such four quadrants can be distinguished, (1) dominance-cooperation, (2) submission-cooperation, (3) submission-opposition and (4) dominance-opposition. Each quadrant is subdivided into two sectors, depending on the strength of each dimension. The dominance-cooperation quadrant typifies leadership and helpful/friendly teacher behaviour. The understanding teacher, who gives a lot of student freedom, is situated in the submission-cooperation quadrant. The submission-opposition quadrant contains uncertain and dissatisfied teachers while strict and admonishing teachers are situated within the dominance-opposition quadrant. Several teacher types or profiles can be situated within these four quadrants as well. We expect that student wellbeing will increase only when students perceive the interpersonal relationship with their teacher as positive.

1.3. *Teacher Wellbeing*

Contrary to much other research, teacher stress and burnout are not the central focus of this study. We focus on positive psychology (Schaufeli and Bakker 2001; Seligman and Csikszentmihalyi, 2000). From this perspective we concentrate on the wellbeing of the teacher. In Creemers' work (1996) the wellbeing of the teacher is considered an acceptable goal for the school as an organisation. It stimulates stability in the organisation which increases output and results in a higher quality of education. Reynolds and Teddlie (2001) state that school effectiveness research establishes the importance of the teacher as a decisive factor in the educational process. The final goal is to increase output. In school effectiveness research the wellbeing of teachers is not a primary goal for the policy, but can have an influence on the final goal i.e. an increased sense of student wellbeing and achievement. As mentioned before, the wellbeing of the teacher is in this study considered as an

important component of classroom atmosphere. The feelings of the teacher can determine his behaviour in the classroom and his interaction with the students. As mentioned above, interpersonal relationships in the classroom are an important dimension of classroom climate. Opdenakker and Van Damme (2000) and Aelterman et al. (2002) found that teachers with high feelings of self-efficacy, are more satisfied. This has a positive influence on the wellbeing and achievement of students. In this study we also want to examine the relationship between the wellbeing of the teacher and that of the students. We expect to find a mutual relationship between teacher and student wellbeing, in agreement with van der Veen's results (1989).

1.3.1. *Statement of the Problem*. The focus of our research is the affective output of students. How can student wellbeing be enhanced? As mentioned before, most of the variance in measurement of student wellbeing is situated at student level (De Fraine, 2003; Knuver and Brandsma, 1993; Opdenakker and Van Damme, 2000; Samdal et al., 1999). However, some variance in this measurement is situated at classroom level with a lesser part at school level. In this study we are interested in those variables that explain this classroom level variance. We are not taking into account the more traditional classroom effectiveness factors such as quality of instruction, time for learning and opportunity to learn. We study the educational process from an interpersonal perspective (den Brok, 2001). The focus is on student perceptions of interpersonal teacher behaviour, based on classroom environment research. We expect that student perceptions are crucial and moderate the relationship between classroom/teacher characteristics and the wellbeing of students. Therefore teacher wellbeing and perceptions of interpersonal behaviour in the classroom should be indirectly related to student wellbeing. It is a relatively recent trend to look simultaneously at methods for classroom interactions (that is, teacher behaviour aimed at student wellbeing) and teacher wellbeing. The main field of inquiry is 'how' students perceive interpersonal teacher behaviour in the classroom. According to Brekelmans (1989) student and teacher perceptions of interpersonal teacher behaviour can differ strongly. We assume that student perceptions are key issues in their wellbeing and that this moderating factor needs to be taken into account. This also means that teacher behaviour is important to both cognitive and non-cognitive output. When teachers succeed in translating their feelings and intentions in concrete behaviour, this needs to be perceived by the students as accommodating their needs and expectations. This is an essential ingredient within the totality of wellbeing.

1.3.2. *Sample*. The entire sample of 1701 Grade 9 students attend technical and vocational training schools in Flanders (Belgium). The students are sampled using a three-stage sampling strategy. First, a sample of 21 schools is drawn from a database of the Inspectorate that consists of all technical and vocational training schools inspected in the academic year 2003–2004. Second, within each of these schools, about one hundred classes of the most commonly taught subjects are selected. Third, all 1701 students in those classes make up the final sample. Forty percent of these students attend vocational training while 60% receive technical training. More female students (63%) than male students (37%) are participating in this study. For the teacher sample, one academic and one vocational teacher of each selected group of students are part of our study. Thirty percent of the theoretical teachers are male and seventy percent are female. However, more male teachers (57%) teach practical courses in comparison with their female colleagues (43%). We are interested in this group of students because of the finding that the climate in elementary schools emerges as more favourable than that of high schools (Freiberg and Stein, 1999). Specifically, students report less favourable interpersonal relationships with their teachers after the transition from elementary school to junior high school (Eccles et al., 1991). This corresponds with the findings of earlier research which states that the wellbeing of Grade 9 students is very low (Engels et al., 2004). Because we assume that the wellbeing of students in technical and vocational training can vary depending on the subject, the analyses for academic and vocational subjects have been separated. Concerning the academic subjects, data of 433 students are available. These students belong to 40 classrooms in 14 different schools. To execute the analyses for vocational subjects, data of 167 students are available. These students are part of 15 classrooms at 8 different schools.

1.3.3. *Questionnaires and Tests*. The wellbeing of students is measured by the Wellbeing Inventory Secondary Education (WISE) questionnaire. This questionnaire was developed by Engels et al. (2000). Based on a confirmatory factor analysis (Lisrel) nine items are selected and form the wellbeing scale ranging from 9 to 45 with an overall mean of 29.6. Factor analysis enables the study of the composition and meaning of constructs thereby validating them. Various aspects related to teaching methods and course content, discipline and participation, interpersonal relationships with teachers and support staff as well as satisfaction with the school's administrative staff are questioned. This scale of nine items has an internal consistency (Cronbach's alpha) of 0.77.

The Questionnaire on Teacher Interaction (QTI), developed by Créton and Wubbels (1984), exists of 77 items and distinguishes between different types of teachers. The focus is on student perceptions of interpersonal teacher behaviour. Furthermore the perception of the teacher about his own interpersonal behaviour in the classroom is investigated. The advantage of asking for the perceptions of all participants (students and teachers) is that data are gathered that otherwise might be missed by an external observer. The students are part of different learning environments. They spend a lot of time in the classroom which makes their opinion complete. Student perceptions are based on experiences over an extended period of time and involve the pooled judgments of numerous students.

The measurement of the perceptions of the participants is called 'beta press'. Murray (1938) defines beta press as "the subject's own interpretation of the phenomena that he perceives" which differs from alpha press, "which is the press that actually exists, as far as scientific inquiry can determine it" (Murray, 1938, p.122). This study is about personal perceptions of students and teachers, i.e. about beta press. A further distinction is made between private beta press and consensual beta press. Private beta press means the subjective or idiosyncratic view of a person of his environment. Consensual beta press stands for the shared view of all the members of a group about their environment. Idiosyncratic as well as consensual views are taken into account in these analyses. More specifically, the difference between the consensual view of interpersonal teacher behaviour as perceived by the students, counted by the global class mean, and the idiosyncratic view of the teacher of his own interpersonal behaviour, is calculated. Based on the different quadrants, certain profiles can be distinguished, linked to different types of teachers (Brekelmans, 1989).

The questionnaire The Wellbeing of the Teacher measures teacher satisfaction (Aelterman et al., 2002). Seven items are considered, based on a confirmatory factor analysis (Lisrel). These items deal with self-efficacy, support from the school board and student orientation. The wellbeing scale of teachers reflects the total score of these items ranging from 7 to 35. Cronbach's alpha of this scale equals 0.82.

The measurement of student achievement in academic subjects uses mathematics and language tests developed in the framework of the LOSO research (Van Damme and Van Landeghem, 2002). These are aimed at Grade 9 learning expectations. The benchmarks take the number of hours each subject is taught into account. This varies within each study area curriculum. The benchmark for mathematics contains number and geometrical knowledge. Language benchmarks evaluate knowledge of spelling,

grammar, language usage and reading comprehension. Student achievement is calculated as the general mean of a language and mathematics test.

1.3.4. *Data Analysis.* A classroom can be considered as a unit within a school and within each classroom a strong relationship can be found amongst the students. Because of this hierarchical structure, multilevel analyses are used (Goldstein, 1997). The application of hierarchical models results in efficient regression coefficients estimates, correct standard errors and significance tests, which generally will be more conservative than the traditional ones which ignore the presence of clustering (Goldstein, 1997). The advantage of these techniques is that not only variables at student level, but also contextual effects can be taken into account, such as variables at teacher/classroom as well as school level. These variables are measured at different levels so it is not necessary to aggregate data to another level. Multilevel techniques can deal with these hierarchical structures. Apart from this, with multilevel analyses it is also possible to examine interaction effects between variables at different levels (Goldstein, 1997).

Student characteristics and student perceptions of interpersonal teacher behaviour are included in the model which examines the link with student wellbeing. Beyond this basic concept a number of other aspects are introduced into the analysis. These are school, classroom and teacher characteristics (such as the teacher's perception of his interpersonal behaviour in the classroom and the wellbeing of the teacher) (See Fig. 1).

The best fitting model is designed to be as simple as possible and contains only significant results. This model is gradually constructed. Firstly, student characteristics are added to the null model to correct for intake differences

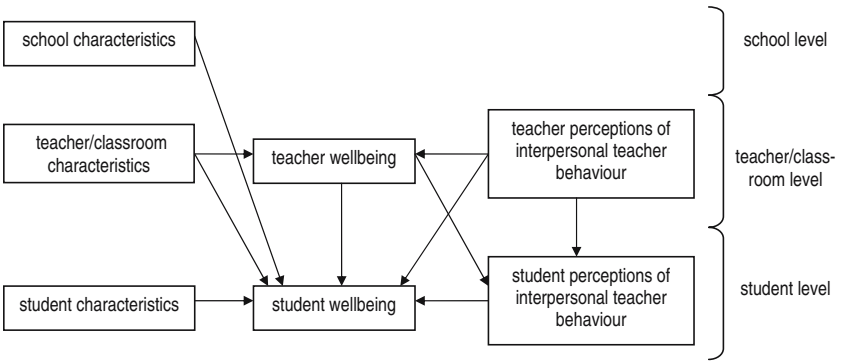

Fig. 1. Hypothetical Model of variables related to student wellbeing.

between schools. As such, the measurement of variance in wellbeing reflects the quality of the institution and of the classroom rather than that of the student population. These student characteristics are gender, motivation, language spoken at home, and achievement. Secondly, the relationship between student perceptions of interpersonal teacher behaviour and their wellbeing is examined. The four quadrants of the typology are added to the model. Thirdly, the link between teacher and classroom characteristics on the one hand and student wellbeing on the other hand is verified. Teacher characteristics such as gender, age, job security, parental status and teaching subjects are added to the model one by one. As for classroom characteristics, not only size, but also student variables aggregated at classroom level are taken into account. These aggregated variables relate to the composition of the classroom (homogeneous/heterogeneous and proportion boys/girls), the academic strength of the classroom (high/low achievers) and the difference between students and teacher perceptions of interpersonal teacher behaviour. Fourthly, the teacher's perceptions of his own interpersonal behaviour in the classroom is added to the model. We want to examine the link between how teachers perceive themselves and the wellbeing of their students. Fifthly, the relationship between the wellbeing of the teacher and the wellbeing of students is studied. Sixthly, the following variables are successively included in the analyses (1) the interaction effect between the wellbeing of the teacher and the interpersonal teacher behaviour from student perceptions and (2) the interaction effect between interpersonal teacher behaviour as perceived by the teacher and the students. We assume that certain relationships are moderated by student perceptions of interpersonal teacher behaviour. Note that for these interaction effects, centred values are used at level 1. Finally, school characteristics such as school type and school size are taken into account as valuable factors.

2. RESULTS

In this study, students perceive the interpersonal behaviour of their academic as well as their vocational teacher mainly as authoritative. Teachers typify their own behaviour primarily as tolerant as well as authoritative. The authoritative type can be characterised as a teacher who insists on structure within the classroom. Rules and agreements are clear and hardly ever have to be repeated. The teacher is enthusiastic and knows how to inspire the students. Moreover lessons are task oriented. Not only achievement is important, but attention is also paid to the needs and expectations of the

students. School can be considered as a learning and living environment. The teacher is very involved and operates in a relaxing atmosphere.

The tolerant/authoritative type of teacher develops close relationships with students and is characterised by a strong cooperative component. In comparison with the authoritative teacher more attention is paid to the needs and expectations of the students. Next to clear structure, students get a lot of freedom and responsibility. In this stimulating environment, a variety of didactical methods are used. Discipline is present and students work on their task because they view it as pleasant and interesting.

Since it is presumed that student wellbeing can strongly differ for academic subjects in comparison with vocational subjects, two models are fitted. One being the model for the academic subjects and one for the vocational subjects. It is impossible to include both data in one model because data are missing. This could be considered as a limitation of this study. Our conclusions are based on separated equations. Related to this we find that only 167 students are participating for the vocational subjects. So we need to be cautious when interpreting these results (Table I).

TABLE I

Estimates for the two best fitting multilevel models: one for academic and one for vocational subjects

Parameter	Academic subjects		Parameter	Vocational subjects	
	Estimate	SE		Estimate	SE
Fixed			Fixed		
Intercept	30.090	0.330	Intercept	42.801	5.077
Student variables			Student variables		
obliged	−1.789	0.455	*obliged*	−2.140	0.764
			learn	2.040	0.764
			SOstud	0.466	0.238
DOstud	−0.087	0.022	*DOstud*	0.483	0.167
DCstud	0.174	0.020			
Teacher variable			Teacher variables		
			SOteach	−0.192	0.053
			DOteach	−0.012	0.041
wellbteach	−0.208	0.099	*wellbteach*	−0.142	0.098
			*wellbteach*SOstud*	−0.016	0.007
			*DOteach*DOstud*	−0.010	0.003
Random			Random		
Class level	1.773	0.766	*Class level*	0.000	0.000
Student level	16.896	1.204	*Student level*	23.446	2.571
Deviance	2477.604		Deviance	990.737	

2.1. *Teaching Academic Subjects*

In the best fitting model, when students report 'school is compulsory' as their motive for attending school, a significant difference in student wellbeing is found. For these students wellbeing decreases. Other motives to come to school, the gender of the students, the language spoken at home and their academic achievement have no influence on student wellbeing in this particular model.

Of all the various student perceptions of interpersonal teacher behaviour of academic subjects, only the dominance-cooperation and dominance-opposition quadrant are related to the wellbeing of students. Student wellbeing increases when the interpersonal teacher behaviour is characterised as leading, helpful and friendly. Moreover, when students report strict and admonishing interpersonal teacher behaviour, their wellbeing decreases.

A teacher's perception of his own interpersonal behaviour in the classroom is not linked to student wellbeing. A negative relationship is found between the wellbeing of the teacher and the wellbeing of students. For academic subjects, interpersonal teacher behaviour as perceived by the students has no moderating role.

It is found that the variance in student wellbeing is significantly different from zero at classroom level. This means that teachers indeed have an impact on students. No variance in wellbeing is found at school level. School characteristics such as school type and school size appear to have no influence on student wellbeing.

2.2. *Teaching Vocational Subjects*

The best fitting model for the vocational subjects indicates that when 'learning' is a motive for students to come to school, the wellbeing of these students increases. However, the compulsory aspect of education has a negative impact on student wellbeing. Other student motives and characteristics show no significant influence on student wellbeing.

In this model a direct relationship is found between the teacher's perception of his own interpersonal behaviour in the submission–opposition quadrant and student wellbeing. The wellbeing of students decreases when the teacher reports uncertain and dissatisfied behaviour.

As for vocational subjects, the students' perceptions of interpersonal teacher behaviour seem to have a moderating function. An interaction effect is found between the teacher's perception of his own dominant-opposite behaviour and the students' perception on the one hand and the wellbeing of students on the other. When the interpersonal teacher behaviour is scored as very strict and

admonishing by students and teachers themselves, or when the lowest score is ascribed by both participants, then student wellbeing is very low.

Another interaction effect is found between the wellbeing of the teacher and the students' perception of submissive-opposite behaviour on the one hand and the wellbeing of students on the other hand. A remarkably low score of student wellbeing is found when students perceive their teacher as uncertain and dissatisfied, even when the teacher reports a high sense of wellbeing. This finding indicates that the influence of the teacher's wellbeing on student wellbeing is moderated by the perceptions of the students. Both interaction effects are rather low, but significant and meaningful.

No relationship is found between other school, classroom and teacher characteristics and student wellbeing. In the vocational subjects model, there is no variance in student wellbeing at classroom level. This means that most of the variance between different classrooms can be explained by the predictors included in the model. We succeed to explain differences in wellbeing between classrooms. These differences can be attributed to perceptions of interpersonal teacher behaviour and the wellbeing of the teacher. No variance is found in wellbeing at school level.

3. DISCUSSION

3.1. *Teaching Academic Subjects*

According to other research (Wubbels et al., 2006) a positive relationship is established between a teacher perceived as leading, helpful/friendly and the wellbeing of students. Students like a teacher who gives direction to in-class communication and cooperates with the students. Brekelmans (1989) situates the authoritative and tolerant/authoritative type within the dominance-cooperation quadrant. The teacher creates a pleasant learning environment. The finding that dominant-cooperative teacher behaviour has an influence on student wellbeing corresponds with results of effective school studies. These studies establish that a safe and orderly environment, with clear and consistent rules is the most frequently mentioned climate variable within effective schools (Stevens and Sanchez, 1999). Furthermore, this description of interpersonal teacher behaviour corresponds with that of the communitarian school climate of De Fraine (2003). She states that teacher–student interactions are positive and warm in a communitarian school climate. Students feel that they are respected, valued and cared about by the other members. There is also a link with the findings of Opdenakker and Van Damme (2000) who establish that students have a higher sense of

wellbeing when their teachers care for them, are attuned to their needs and are willing to help. So, as expected, we can conclude that student wellbeing increases when they experience the interpersonal relationship with their teacher as positive.

When students perceive their teacher as strict and admonishing, there is a decrease in student wellbeing. This negative relationship is confirmed by the research of Wubbels et al. (2006). According to Brekelmans (1989) the repressive type of teacher is situated within the dominance-opposition quadrant of the typology of interpersonal teacher behaviour. This type of teacher has a negative influence on student wellbeing because a pleasant and cooperative relationship between teacher and students is missing. The teacher is very authoritarian and students are sometimes afraid of the teacher. Also the competitive aspect has a negative influence because students are very sensitive toward social comparison at that age (Eccles et al., 1991).

In the academic subjects model, a direct, negative relationship is found between the wellbeing of the teacher and the wellbeing of students. Various explanations can be given for this finding. Firstly, the wellbeing of students increases when their teacher is leading, helpful and friendly. Students expect dominant-cooperative behaviour from their teacher. An authoritative teaching style is situated within the dominance-cooperation quadrant. Such a teaching style requires a serious effort and a lot of energy from the teacher. High demands can be an important source of stress and decrease a teacher's wellbeing. This finding not only corresponds with the person-environment fit idea at teacher level (Van Petegem et al., 2005) but also with the results of Opdenakker and Van Damme (2000) and Aelterman et al. (2002) who recognise the importance of feelings of self-efficacy to be satisfied. Secondly, some teachers are not situated in the dominance-cooperation quadrant but have another style they are most comfortable with. These teachers are satisfied but the wellbeing of students is low. Thirdly, the wellbeing of students can be low when they view their teacher as authoritarian. A difference in perception can also occur in this situation. What a teacher considers as leading is at times, experienced as authoritarian by students. This confusion is confirmed in other research (Brekelmans, 1989; Wubbels et al., 2006). Teachers often perceive the classroom environment more positively than their students (Fraser and Fisher, 1982; Wubbels et al., 1991). Fourthly, when discipline is lacking, the wellbeing of students is high, because they get a lot of freedom. The attempt of the teacher to take control over the situation fails, so the wellbeing of the teacher decreases. Notwithstanding the teacher's effort, lessons fail because of a lack of interest from the students. Hence the teacher's motivation is reduced (van der Veen, 1989).

We conclude that a negative relationship is found between teacher and student wellbeing. This relationship has to be considered as mutual because no causality is presumed.

3.2. *Teaching Vocational Subjects*

There is a negative relationship between vocational teachers who perceive themselves as uncertain and dissatisfied and their students' wellbeing. This means that student wellbeing increases when teachers report low scores on uncertain or dissatisfied behaviour. This is the only direct relationship between a variable at teacher level and the wellbeing of students. This finding corresponds with the results of Fraser (1994) who states that "teachers who are effective in terms of the psycho-social learning environment dimension actively encourage positive interpersonal relationships within a classroom environment in which students feel comfortable and accepted. The teacher, through verbal and non-verbal behaviours, models enthusiasm and interest in learning, includes all students in learning activities and encourages active involvement." (p.530)

The other relationships are moderated by student perceptions of interpersonal teacher behaviour. First of all we notice that, when interpersonal teacher behaviour is perceived by students and teachers as very strict and admonishing, the wellbeing of students decreases. The same effect is found when both participants perceive that strict and admonishing teacher behaviour is totally lacking. This makes us conclude that a moderate amount of strict and admonishing teacher behaviour is necessary to increase student wellbeing.

Furthermore, an interaction effect is found which shows that the influence of teacher wellbeing on the wellbeing of their students is moderated by their students' perceptions of submissive–opposite interpersonal teacher behaviour. Based on these results we conclude that the wellbeing of students is remarkably low when students perceive their teacher as uncertain and dissatisfied, despite the teacher reporting a high score on wellbeing. Only when the wellbeing of the teacher is perceived as enthusiastic behaviour does student wellbeing increase.

4. CONCLUSION

These results indicate that for academic subjects, a direct link can be found between teacher and student wellbeing. There is also a relationship between how students perceive interpersonal teacher behaviour and their wellbeing. For vocational subjects, the relationships between teacher wellbeing, the teacher's perception of interpersonal behaviour in the classroom and student

wellbeing are mainly moderated by the students' perceptions of interpersonal teacher behaviour.

In this study, for academic as well as vocational subjects, no variance in student wellbeing is situated at school level. Other researchers found that schools have a larger impact on student achievement than on student wellbeing (Opdenakker and Van Damme, 2000). According to De Fraine (2003) an explanation can be found in the fact that wellbeing has no explicit place in the curriculum.

It is important to note that most prior classroom environment research has been correlational in nature, so causal conclusions cannot be strictly drawn. As a consequence no conclusions can be made in terms of cause or effect. We have only a model which confirms some (mutual) relationships. From a theoretical perspective, certain directions are presumed. Therefore no other alternative explanations are rejected. To gratify our desire to enhance student wellbeing, certain variables at student and classroom/teacher level are included in this model. We expected a moderating effect of students' perceptions of interpersonal teacher behaviour. This effect is confirmed by the interaction effects that are found, however this is only evident for vocational subjects. Further research has to examine if there is indeed a difference in interpersonal relationships and perceptions between teachers and students, depending on subjects taught.

As mentioned before, in this study the focus is on current wellbeing but a study of Marsh et al. (2006) examines the relationship between surface (multiple dimensions of self-concept) and core (Big Five factors) personality characteristics and their relations with wellbeing and academic success. It would be interesting for further research to include these more sustaining aspects into our model.

Further research should include a greater emphasis on school level environment. School climate variables should be integrated within the same study. The link with effective teaching, that is teaching aimed at high cognitive outcomes, also needs more exploration.

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