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Motivational developments in primary school: Group-specific differences in varying learning contexts

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CHAPTER 4

TEACHER PRACTICES: THE ROLE OF BELIEFS AND CONTEXT¹

Abstract Teacher practices can vary from autonomy-supportive to controlling. The present study examined how teachers' personal beliefs and contextual pressures related to their self-reported teaching practices. Nine grade-six teachers at schools with varying student populations were interviewed. Although almost all teachers favoured autonomy-supportive practices, controlling practices were reported often. Especially in disadvantaged schools, teachers reported frequent use of controlling practices, as most of these teachers believed that 'at-risk' students benefited more from controlling practices. Teachers at other schools reported more autonomy-supportive ways of teaching, but most of them also reported frequent use of controlling practices with the 'at-risk' students within their class. Teacher perceptions of their students appeared to be the main reason for controlling practices. Previous research mainly examined how pressures 'from above' such as national standards or high stakes testing, affect teachers' teaching practices. However, these outcomes suggest that teacher perceptions of their students weigh more heavily in teachers' decision making processes than pressures from above. Outcomes furthermore indicated that more controlling teachers provided a higher degree of relatedness. Implications are drawn and suggestions for further research are provided.

Keywords: *student motivation; student autonomy; teacher beliefs; teaching practices; at-risk students; teacher expectations*

¹ Based on Hornstra, L., Mansfield, C., Van der Veen, I., Peetsma, T., & Volman, M. (resubmitted). Motivating teacher practices: The role of beliefs and context.

INTRODUCTION

One of the most important tasks of a teacher is to enhance and sustain students' motivation and to engage students in learning. The present study focuses on the extent to which teachers' self-reported practices are autonomy-supportive versus controlling and their underlying reasons for these practices.

According to Self-Determination Theory (SDT; Deci & Ryan, 1985; Ryan & Deci, 2000a), autonomy is an innate psychological need for students, and autonomy-supportive teaching practices are believed to foster students' intrinsic motivation (Niemic & Ryan, 2009; Vansteenkiste, Simons, Lens, Sheldon, & Deci, 2004). However, studies in various countries have demonstrated that many teachers rely on controlling practices using extrinsic rewards and punishments to encourage learning (Pelletier, Se'guin-Le'vesque, & Legault, 2002; Reeve, Jang, Carrell, Jeon, & Barch, 2004; Turner, Christensen, & Meyer, 2009; Turner, 2010). This can partly be explained by teachers' underlying personal beliefs about what motivates students, but previous literature also indicated that contextual conditions, such as school regulations, national standards, or high stakes testing, can pressure teachers toward controlling practices (e.g., Reeve, 2009). These have been referred to as pressures from above (Pelletier et al., 2002).

Moreover, teaching practices may also be affected by pressures from below, i.e., their classroom population. Teacher expectancy literature (e.g., Rosenthal 1994) showed that teacher perceptions of their students' ability or background can affect many aspects of teaching and learning outcomes. Yet, little research has examined how teacher perceptions of their students relate to the type of teaching practices teachers believe to be effective and consequently adopt in their classrooms.

Given the importance of teaching practices for students' motivation and learning outcomes, the purpose of this paper is to gain a more thorough understanding of how teachers negotiate their personal beliefs with contextual pressures and how this influences the extent to which they adopt a more autonomy-supportive or controlling teaching style.

AUTONOMY-SUPPORT VERSUS CONTROL

According to Self-Determination Theory (SDT; Ryan & Deci, 1985), teaching practices can vary along a continuum that ranges from very autonomy-supportive to very controlling (e.g., Deci, Vallerand, Pelletier, & Ryan, 1991; Ryan & Deci, 2000b; Vansteenkiste et al., 2004; Vallerand, 1997). Autonomy-supportive practices are aimed at nurturing students' inner motivational resources and volitional intentions to act. Students' autonomy can be facilitated by transferring responsibility of the learning process to students, providing choice, connecting to students' interests, providing explanatory rationales, and by creating meaningful and relevant learning activities. Such practices are aimed at increasing students' own willingness to engage in learning activities.

Conversely, controlling teaching practices are aimed at pressuring students to think, feel, or act in certain ways and overruling students' own perspectives. Controlling teachers motivate students by external incentives, pressure, or control instead of relying on students' inner motivational resources. Such practices include the use of external rewards such as grades or directive language (Jang, Reeve, & Deci, 2010; Niemiec & Ryan, 2009; Reeve & Jang, 2006; Reeve, Deci, & Ryan, 2004; Vansteenkiste et al., 2004). Whereas autonomy-supportive teaching has been associated with students being intrinsically motivated and showing more beneficial educational outcomes, controlling teaching can result in students becoming extrinsically motivated or even amotivated (Jang et al., 2010; Ryan, Deci, 2000a; Reeve et al., 2004; Stroet, Opdenakker, & Minnaert, 2012; Vansteenkiste, Lens, & Deci, 2006; Vansteenkiste et al., 2004). However, the effectiveness of autonomy-supportive teaching may depend on characteristics of the learning context and student characteristics (e.g., Furtak & Kunter, 2012; Iyengar and Lepper, 1999).

TEACHERS' PERSONAL BELIEFS AND THEIR TEACHING PRACTICES

Teachers usually hold very stable long-term beliefs about what motivation is and what type of practices will be beneficial to their students (e.g., Pajares,

1992; Turner et al., 2009; Turner, 2010). Teacher beliefs are developed through teachers' own experiences as learners (Mansfield & Volet, 2010; Richardson, 2003), their initial teacher training (Avalos, 2011; Mansfield & Volet, 2010; Richardson, 2003), as well as their professional experiences as teachers (Avalos, 2011; Turner et al., 2009).

Often, teachers use controlling practices, even though that is at odds with motivational theories (e.g., Reeve, 2009; Turner, 2010). Several reasons may account for this difference between motivational theory and actual teacher behaviours. Teachers' personal beliefs about motivation and learning or their role as a teacher may account for some differences (Eisenhart, Schrum, Harding, & Cuthbert, 1988). Teachers may find controlling strategies more effective in making students work without encouraging students' inner motivational resources (Reeve, 2009). Furthermore, the belief that extrinsic rewards will encourage motivation seems to be deeply rooted for many teachers. Also, some teachers may feel they will more efficiently reach their instructional goals when using controlling strategies (Reeve, 2009).

Previous research has also shown that teachers' practices do not always correspond with their own beliefs (Mansour, in press; Raymond, 1997). Some teachers may have personal beliefs favouring autonomy-supportive practices, but there may be factors in the educational context that constrain teachers from teaching according to those beliefs (Mansour, in press).

TEACHERS PERCEPTIONS OF CONTEXTUAL PRESSURES AND THEIR TEACHING PRACTICES

Pelletier et al. (2002) described several contextual conditions that may pressure teachers to teach in controlling ways. Contextual pressures can be understood as 'pressures from above' and 'pressures from below'. Pressures from above, that teachers in many countries are faced with, include performance standards (Deci, Spiegel, Ryan, Koestner, & Kaufman, 1982), high stakes testing (Ryan & Brown, 2005; Ryan & Weinstein, 2009; Nolen, 2011) or pressure from school

administrations, colleagues, as well as parents (Reeve, 2009). Contrary to pressures from above, 'pressures from below' arise from the day-to-day interactions within the classroom. Pressures from below refer to the motivational characteristics of the student population (Pelletier et al., 2002). Pelletier et al. (2002) found teachers resort to more extrinsically-oriented controlling motivational strategies when students appear unmotivated. Furthermore, Oakes (1985), found teachers in low-ability schools more inclined toward controlling teaching practices that stress conformity and obedience. Thus far, research on the relation between pressures from below and teachers' autonomy-supportive versus controlling practices is scarce, even though forty years of research on teacher expectancies has shown that teacher perceptions of students are very powerful in shaping teaching behaviours and subsequent learning outcomes (Jussim & Harber, 2005; Jungbluth, 2003; McKown & Weinstein, 2008; Nurmi, Viljaranta, Tolvanen, & Aunola, 2012; Rosenthal & Jacobson, 1968; Van den Bergh, Denessen, Hornstra, Voeten, & Holland, 2010).

Important sources that shape teacher perceptions are students' ability levels (Madon, Jussim, Eccles, 1997), social background (Jussim et al., 1996), or ethnic background (Tenenbaum & Ruck, 2007; Van den Bergh, et al., 2010). In many western countries, teachers are faced with diverse student populations in terms of abilities and background (Bakker, Denessen, Peters, & Walraven, 2011). Perceptions of these characteristics can cause differential teacher behaviours. Teachers have been found to show less warmth toward low expectancy students, give fewer opportunities to respond, and provide less feedback, resulting in lower achievement (Rosenthal, 1994). Tenenbaum and Ruck (2007) furthermore showed that teacher behaviours toward students from different ethnic groups differed significantly. Teachers were friendlier and more encouraging towards European American students than towards ethnic minority students. A recent study by Nurmi et al. (2012) showed that teachers were more actively involved with low achieving students, providing more structure to guide their learning.

Most teacher expectancy studies have focused on within-classroom differences and subsequent differential teacher practices of teachers toward low versus high expectancy students (Rubie-Davies, 2010). Recently, two studies examined how classroom characteristics affect teachers' instructional strategies, showing teacher perceptions of classroom characteristics affect use of extrinsically or intrinsically oriented teaching strategies (Rubie-Davies, Flint, & McDonald, 2012) and students' learning outcomes (Archambault, Janosz, & Chouinard, 2012), suggesting that teaching practices may indeed depend on teachers' perceptions of the whole classroom.

Other than the aforementioned studies, few studies have examined how teacher perceptions of their students affect teachers' controlling versus autonomy-supportive practices. If teaching practices are dependent on their perceptions of the classroom, and teachers in perceived 'at-risk' classrooms resort to more controlling strategies, they may actually be undermining students' intrinsic motivational resources. As such, already existing differences in motivation and learning outcomes may actually be exacerbated.

CONCEPTUAL FRAMEWORK AND RESEARCH QUESTIONS

Figure 1 presents an overview of our conceptual model. In the model, teachers' personal beliefs are negotiated with the pressures from above and below they experience, with some pressures probably weighing more heavily than others. This process can be deliberate and intentional, but in daily interactions with students, negotiation of personal beliefs and contextual pressures can presumably also be unconscious or implicit.

In line with our conceptual model, and aim to investigate how personal beliefs and contextual pressures influence self-reported teaching practices, the following research questions were addressed:

1. What types of teaching practices do teachers report and what are underlying personal beliefs toward autonomy-supportive and controlling teaching practices?

2. What pressures from below do teachers experience and how do these appear to relate to teachers' personal beliefs and self-reported teaching practices?
3. What pressures from above do teachers experience and how do these appear to relate to teachers' personal beliefs and self-reported teaching practices?

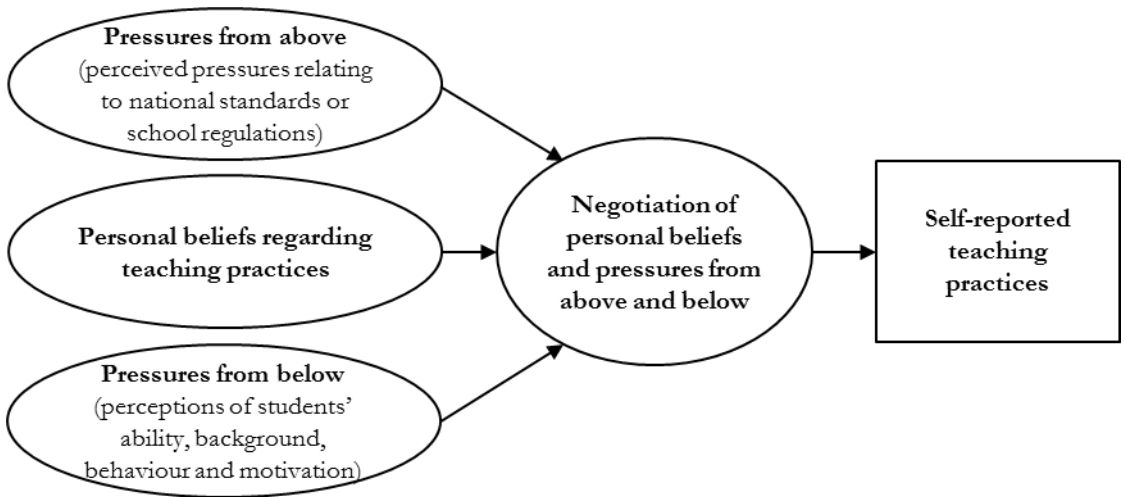


Figure 1. Conceptual model of relations between personal beliefs, contextual pressures and self-reported teaching practices.

METHOD

PARTICIPANTS

Nine grade six teachers (six female, three male) from different primary schools across the Netherlands participated. In grade six, students are eleven to twelve years old. It is the last year of primary school. The average age of the participating teachers was 40 years and ranged from 25 to 57. On average, they had 12 years of teaching experience, ranging from two to 34 years. The teachers were selected from a sample of 37 teachers participating in larger quantitative study about innovative teaching methods. Selection of teachers for interviews was based on self-report questionnaires with intention the sample would represent maximum variation from teachers that used mostly innovative to mostly traditional teaching methods. On these questionnaires, teachers indicated the level of innovativeness of their teaching methods (collaborative learning, process-oriented instruction, authenticity of the learning environment, and student responsibility) on five-point Likert scales. Scores on these subscales were averaged and ranged from 2.9 to 4.6. Table 1 presents an overview of the characteristics of the teachers, classes and schools. Pseudonyms are used in this paper. Even though schools varied in innovativeness, all schools are held to national standards and use national standardized tests (developed by the Central Institute for Test Development, "CITO"). In grade six, students take a final CITO test that weighs heavily in determining the track students will be referred to (Driessen, Slegers, Smit, 2008). This test can be considered high stakes, as students' educational futures are largely dependent on outcomes of these tests and outcomes weigh heavily in how the inspectorate judges quality of schools. The participating schools furthermore varied in their social and ethnic classroom composition, which is typical for the Dutch educational system.

Table 1.

Teacher characteristics, background characteristics of the school, number of students in each class and self-reported level of innovativeness.

| Teacher | Background characteristics of school | Nr of students | Innovativeness (scale 1-5) |
|---------------------|---|------------------|----------------------------|
| Cathy (female, 31) | Public school in a larger town; the school population consists of only ethnic minority students, almost all with low SES. The inspectorate judged the school as “very weak” during multiple inspections, and forced the school to close. The school year in which the interviews were held, was the last year before closure. | 10 (+8 grade 5) | 2.9 |
| Bert (male, 50) | Christian school. The school was originally a Jenaplan school* but decided to change to more traditional teaching methods. The school is in a neighbourhood that is known to be a bit disadvantaged. Mostly medium SES students. There are about 10% ethnic minority students. | 24 | 3.0 |
| Rachel (female, 35) | Public school in a small town. The population consists of mostly low SES students and around 40% ethnic minority students. The inspectorate judged the school as “weak” during the last inspection. | 14 | 3.1 |
| Tom (male, 29) | Protestant school in a small to middle sized town. SES of the students is mostly medium or high, few ethnic minority students. | 20 | 3.9 |
| Sam (male, 38) | Public school in the centre of a middle sized town. SES of the students is mostly medium to high, few ethnic minority students. | 28 | 4.1 |
| Gemma (female 55) | Public school in a small town, it is in a trajectory to become a “BAS” school (“building an adaptive school”). The school has mostly low and medium SES students. There are no ethnic minority students. | 24 | 4.2 |
| Anne (female, 25) | Catholic school in a larger town. The school is in progress of becoming a Dalton school*. Population consists of students of low, medium and high SES. There are a few ethnic minority students attending this school. | 17 (+10 grade 5) | 4.3 |
| Ella (female, 57) | Protestant school in a middle sized town. Jenaplan school*. Mostly high SES students, some average SES students. | 24 | 4.4 |
| Jane (female 36) | Catholic school in a small town. The school consists of students of low, medium and high SES and very few ethnic minority students. | 31 | 4.6 |

* Jenaplan and Dalton schools originate from the reform movement that also Montessori schools originated from. In both types of schools, there is a focus on autonomy, active learning and cooperation.

INTERVIEWS

A single semi-structured in-depth interview was conducted with each teacher. The advantage of using interviews for this study is that it can provide a deeper understanding of the beliefs underlying teaching practices and the contextual pressures they experience. Halfway through the school year, teachers were interviewed at their own schools by either the main researcher or a trained research assistant. Interviews lasted 45 to 60 minutes.

The questions explored what teaching practices teachers were engaged in and their underlying beliefs and reasons behind these teaching practices. To first get a general idea of the practices teachers employed in their classes, teachers were presented with several vignettes describing schools with varying teaching

methods ranging from traditional to innovative. These were used as a starting point to elicit responses regarding why and how they used certain methods, and how they believed it affected student motivation. Teachers were encouraged to give explanations and examples. Next teachers were asked about how they perceived their student population and what types of teaching practices they felt suited their student population and why. We focused on teacher perceptions of the student population, rather than on objective information about classroom composition, because teachers' views of their students are probably affecting their decision making process more than actual classroom characteristics. The last part of the interview was aimed at beliefs about motivating students ('What do you think is motivating to students?', 'Can you describe a student that you feel is very motivated?' 'How do you try to keep this student motivated?', 'Can you describe a student that is difficult to motivate?', 'How do you try to keep this student motivated?').

ANALYSIS

All interviews were transcribed for analysis. All interviews were conducted in Dutch and analysed in Dutch. Each unit of meaning, referring to a consistent theme or idea, was given a code, using a content analysis approach (Miles &

Huberman, 1994). In the first part of the data analyses, the interview data were coded using both inductive and deductive approaches, meaning that predetermined categories were coded, but additional codes were added as new themes emerged during coding. Table 2 presents the final coding scheme. First, all units were coded into five broad target concepts. Next, the units were coded into predetermined subcategories (for example, autonomy-supportive or controlling beliefs) and as analysis progressed, additional subcategories were added. For example, even though this study focused on autonomy-supportive and controlling teaching practices, teachers' personal beliefs about supporting students' competence and relatedness emerged as important themes relating to these teaching practices. Some units were coded more than once as they were simultaneously covering multiple topics.

Next, the first author and a trained research assistant both coded 22% of the interview data independently. Full agreement was reached on 64% of individual codes. The statements where full agreement was not reached were discussed. Disagreement was mostly due to inconsistencies, so the coding system was refined. These statements were then independently re-examined and full agreement was reached on a further 11%, so full agreement was reached on 76% of statements. After examining and discussing disagreements again and refining the coding scheme further, another set of interview data was then independently recoded and final inter-coder agreement was 86%. Table 2 provides the final coding scheme.

In the final part of the analyses, relationships between the target concepts were identified. It could be that in their statements, teachers explicitly addressed such relationships or relationships were inferred by the researchers.

Table 2

Final coding scheme

| Target concepts | Subcategories |
|---------------------------------------|---|
| Personal beliefs or preferences | Beliefs toward autonomy-supportive teaching practices Beliefs toward controlling teaching practices Beliefs about providing structure* Beliefs about other competence-supporting practices* Beliefs about relatedness* |
| Self-reported teaching practices | Autonomy-supportive teaching practices Controlling teaching practices Providing structure* Other competence-supporting practices* Providing a sense of relatedness* |
| Pressures from above | Pressure from school administration Pressure from teaching methods used at the school Pressure from parents |
| Perceptions of the student population | Statements related to at-risk characteristics (low ability, disadvantaged/ethnic-minority backgrounds, difficult behaviour, low motivation) Neutral/average comments about students Statements related to high ability, motivation, good behaviour or high social background Differential perceptions* |
| Pressures from below | Pressures referring to whole-class characteristics Pressures referring to individual students |

* Codes that emerged during coding.

RESULTS

In this results section, the outcomes of the interviews will be presented according to each of the research questions. Within each section different elements that are relevant for answering the research question will be discussed.

1. What type of teaching practices do teachers report and what are underlying personal beliefs toward autonomy-supportive and controlling teacher practices?

SELF-REPORTED TEACHING PRACTICES

When teachers were asked about their teaching practices, they reported a variety of teaching practices from very controlling to mostly autonomy-supportive. In line with previous literature (e.g. Reeve, 2009), all teachers – even the most autonomy-supportive teachers – reported using some controlling teaching practices, such as using extrinsic rewards and directing students without providing choice or rationale. Still, clear differences between the teachers emerged, and based on their self-reported teaching practices three distinct clusters of teachers were distinguished (for an overview, see table 3). Two teachers, Sam and Ella, were classified as *highly autonomy-supportive (HA)*. They reported mostly autonomy-supportive teaching practices. They also reported some controlling practices, but not very frequently. Teachers in this cluster described encouraging student responsibility, for example by cooperative learning or letting students plan their own work. These teachers explained they provided students with choice, gave rationales when choices were limited, and always tried to connect to students' interests. Four teachers, Gemma, Tom, Jane, and Anne, were classified as *moderately autonomy-supportive (MA)*. They also reported mostly autonomy-supportive teaching practices, but to a lesser extent than teachers in the HA cluster. Moreover, the MA teachers also reported using controlling teaching practices quite regularly, such as giving directions without providing a clear rationale. A third cluster

Table 3

Overview of clustering of teachers based on their self-reported teaching practices

| Cluster and members | Supporting statements |
|---|--|
| Highly autonomy-supportive (HA) - Ella - Sam | Mostly autonomy-supportive teaching practices <i>"A while ago, we did a project on Shakespeare. ... With group assignments, often they designate the tasks themselves. ... They plan a lot of the work themselves. ... Children can decide whether they want to work together, what task they want to start with, who they want to work with. They may even choose where in the school they want to work on it."</i> (Sam) |
| Moderately autonomy-supportive (MA) - Gemma - Tom - Jane - Anne | Mostly autonomy-supportive teaching practices with regular use of controlling teaching practices <i>"If they run into any problems [while working on their tasks], I first look: 'What problems are you running into, did you read it carefully?' That way, you try to get the students to think for themselves. 'Well, and how will you solve it?' ... but other times you say 'No, I think you should do it like that'."</i> (Tom) |
| Controlling (C) - Rachel - Cathy - Bert | Mostly controlling teaching practices. <i>"For example, how do you learn words for a dictation? Because, I taught them how. What's the best way to do that? Well, you read, you see the word, you copy it. After you've done that a couple of times, then cover the word and write it down. Is it correct? Yes, okay, then it's good. No, then you made some mistake and I'll tell them to write it down again three times."</i> (Bert) |

consisted of three teachers, Bert, Cathy, and Rachel, who mostly referred to controlling teaching practices. Teaching practices in this *controlling (C)* cluster included using extrinsic rewards, pressure or control and being restrictive. Especially two teachers, Cathy and Bert reported very controlling teaching practices. Rachel sometimes also reported autonomy-supportive practices, although not very frequently. Not surprisingly, the teachers that had rated

their teaching methods higher on innovativeness in the larger quantitative study, also reported higher levels of autonomy-support during the interviews.

PERSONAL BELIEFS

According to Reeve (2009), one of the reasons controlling teaching practices are common is because many teachers have personal beliefs favouring such practices. However, when asked about their beliefs, most teachers in our study expressed preferences towards autonomy-supportive ways of motivating students. As expected, teachers that were clustered as HA or MA based on their self-reported teaching *practices*, also described personal *beliefs* emphasising autonomy-supportive teaching practices:

Question: *“What do you believe is motivating to students?”*

“When you give them the feeling that they are responsible, that they are engaged with the learning materials. If you’ll tell them, already during instruction, why they are learning this. And because of that they want to learn it, not because they have to.” (Ella, HA)

“If you are giving instruction and somebody answers a question correctly you can just continue, but if you ask ‘how did you get to that answer’ then all at once, they have to think and reflect on their own solution. ... They learn very much from that.” (Tom, MA)

Remarkably, two teachers from the controlling cluster, Rachel and Cathy, also expressed very clear preferences toward autonomy-supportive teaching practices, stating the importance for students to be responsible for their own learning and the importance of creating relevant and authentic learning experiences.

“Even at my previous school, education was not child-focused; it was focused at the books. What I would want. . . Well they learn about longitude and latitude from the book. They didn’t get it, not even northern and southern half. Well, then I went to get a watermelon and started cutting.” (Rachel, C)

Only one teacher, Bert, expressed a clear overall preference towards a more controlling teaching style in line with his self-reported teaching practices.

“The teacher decides. A rule is a rule, simple! ... Some students just learn for me. Because the teacher has got to have a high grade for the inspector, so that’s what I’ll work for.” (Bert, C)

Although most teachers were in favour of autonomy-supportive teaching approaches, some teachers found autonomy-supportive teaching methods less efficient or felt external rewards were motivating to students.

“I believe they are really motivated by grades. They want tests and grades.”
(Cathy, C)

Thus, even though a majority of teachers mostly expressed clear preferences toward autonomy-supportive teaching, across all three clusters, teachers also expressed beliefs toward some aspects of more controlling practices.

THE ROLE OF STRUCTURE

According to SDT theory, it is important for teachers to provide students with structure in order for students to feel competent. Structure includes communication of clear expectations, giving directions, providing guidelines, and setting limits. However, according to Reeve (2009), many teachers confuse structure and control, believing they need to be directive or emphasize external rewards to provide structure. This ambiguity between structure and control can come about as structure can be delivered in both controlling and autonomy-supportive ways (Jang et al., 2010; Reeve, 2009; Sierens, Vansteenkiste, Goossens, Soenens, & Dochy, 2009). In some teacher statements, especially among the MA teachers, structure and control indeed appeared to be entangled.

“You’re not going to offer ten strategies to the weaker students, they’ll crash. They have to be told one way, very directive. You’ll do this, this fits you.” (Tom, MA)

In the statement above, Tom limits the choices of his weaker students to provide them with structure, but Tom provides this structure by directing students without offering a rationale. Other statements report more autonomy-supportive ways of providing structure.

“Some children, you’ll keep them closer, because you know that’s what they need. You’ll talk to them about ‘what steps are you taking’, but that really depends on their level.” (Anne, MA)

All teachers referred to structure as an important aspect of teaching. The MA and HA teachers mostly considered structure an important condition for autonomy-supportive teaching practices to be successful.

“There is a lot of freedom, but that freedom requires responsibility. That means that I regularly check ‘how far are you?’. I also tell the children ‘Keep in mind your planning, because at the end of the week it needs to be done’.” (Sam, HA)

“I can let the children work independently, and then it’s checking, helping and guiding them.” (Anne, MA)

Although there were a few statements that referred to autonomy-supportive ways of providing structure, controlling ways of providing structure seemed more common for teachers in all three clusters.

SUPPORTING COMPETENCE

According to SDT, providing structure will support students’ competence beliefs by offering guidelines for students to accomplish goals (Sierens et al., 2009). Other strategies for supporting competence beliefs include positive feedback and promoting opportunities for success (Niemic & Ryan, 2009). Teachers from all three clusters referred to such strategies.

“It’s motivating when tasks are challenging, but only as long as they are able to do it.” (Sam, HA)

“Being positive, it’s just motivating. You shouldn’t tell children every time like ‘this is not right’, ‘you’re not doing this correctly.’ That’s just demotivating.”
(Anne, MA)

“What I find motivating? ... To compliment them, encourage them to show them they can do it. They get good grades, so also show them it’s good.” (Bert, C)

Regardless of teachers’ perceptions and self-reported use of autonomy-supportive versus controlling teaching strategies, all felt it important to encourage students’ competence beliefs. So, irrespective of the type of teaching practices reported, teachers felt they should be accompanied by praise, encouragement and positive feedback.

2. What pressures from below do teachers experience and how do these appear to relate to teachers’ personal beliefs and their self-reported teaching practices?

PERCEPTIONS OF THE STUDENT POPULATION

Teachers were asked to describe the characteristics of their student population. Both HA teachers reported their students were from middle to higher class families and were positive about their students’ abilities.

“On average, these are children with highly educated parents, high social status absolutely. . . . What you notice is that when children come from a family where mom and dad went to college, they are people who perceive life in a different way. They are more explorative, more philosophically oriented.” (Sam, HA)

The MA teachers, with the exception of Gemma, mostly emphasized differences within the classroom.

“You have the extremes. And well, some are average some are . . . Some are just doing fine, others tend to fluctuate, some do well, and others are below average. Well, it differs.” (Tom, MA)

Contrary to the other MA teachers, Gemma described that she was dealing with a more at-risk student population.

“When they came in, their achievement was low, a difficult group. . . . Difficult children, a lot of bullying, bad results. Almost beat the . . . out of each other, so to speak.” (Gemma, MA)

The teachers in cluster C also considered their student population to be at-risk, indicating that their students were either of low ability, from a disadvantaged background, or having behavioural difficulties.

“Their socio-emotional behaviour was like . . . Let’s just say, it was pretty bad. That’s why we decided to seat the students individually, because they were attacking each other with pencils and scissors.” (Rachel, C)

“This neighbourhood is socially pretty weak. The nickname of this neighbourhood is “vale of tears”, that says enough. . . . A lot of people from socially disadvantaged backgrounds came here. The number of ethnic minority children at this school is quite large. All those people, they bring their own culture, their own way of life, and ehm, yes, socially, together. . . . doing things by themselves, it’s not as well developed here.” (Bert, C)

Especially when there were many ethnic minority students in the class, and when there were few opportunities for these students to come into contact with Dutch children – which was especially the case in Cathy’s class, which consisted of only ethnic minority students – students’ language ability levels were considered problematic.

“They live in this neighbourhood, where they have a lot of family. They visit each other but don’t have any contact with Dutch children. . . . If you ask them to read a text and indicate which words they don’t know, they’ll give you a huge list. You think, o my, I didn’t expect there to be so many. So when you tell them you want them to read the text and answer the questions by themselves, you know in advance there’s no use. They just don’t know enough.” (Cathy, C)

PRESSURES FROM BELOW: WHOLE-CLASS PERCEPTIONS AND TEACHING PRACTICES

An interesting pattern thus emerged, suggesting that teachers who perceived their classrooms in more positive ways (with regard to ability level, behaviour, motivation) or indicated that their students were from more privileged backgrounds were also the ones reporting more autonomy-supportive teaching practices. Figure 2 presents an overview of this relationship. The only exception to this pattern was Gemma who described her students to be at-risk in terms of ability levels and behaviour when they first entered her class, yet she reported a teaching style that could be considered moderately autonomy-supportive.

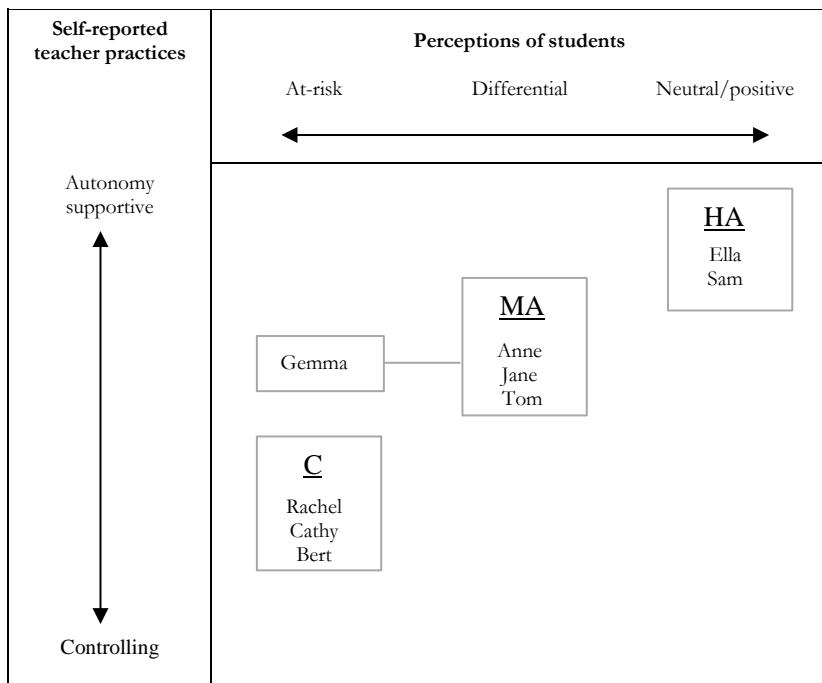


Figure 2. Overview of relation between teachers' perceptions of their students and their self-reported teaching practices.

Gemma explained that the characteristics of her students did not determine her teaching practices. In her opinion, the characteristics of the classroom population do not have to define teaching practices, as long as sufficient structure is offered.

“For years now, I am the grade six teacher at this school, so you hear, that [difficult] group is coming. Well, I actually did not care about that from day one. Yes, well, I do of course, but you try to shape that, to work on that and results are shooting up. . . . You have to be consistent and strict. . . . That’s when they can learn by themselves or together.” (Gemma, MA)

Moreover, Gemma considered the at-risk characteristics of her group something that could be turned around. Conversely, all three controlling teachers felt their students lacked the characteristics necessary for autonomy-supportive teaching, and considered this to be a given. Perceptions of their students’ background and abilities were the main reason behind their controlling teaching practices.

“Most of the students, they cannot handle responsibility. . . . Responsibility is something far out of reach. I doubt whether these children will ever develop that. They don’t even learn that at home.” (Rachel, C)

“Some are like ‘okay, I can decide for myself and not everything gets checked? O, then I’ll just say I finished. Fine!’ They see it is a perfect way to get away with it. Well, then you’ll be like, maybe it’s a process of learning for them too, but it’s not exactly what we envisioned. . . . A bit too loose and independent and they don’t know how to handle freedom” (Cathy, C)

According to Pelletier et al. (2002), teachers that perceive their students as unmotivated are more likely to rely on controlling teaching practices, referred to as pressures from below. In addition, when the teachers in this study perceived their class to include many low ability, low SES, ethnic minority, or many behaviourally difficult students, they also experienced significant pressures from below towards controlling teaching methods. For example,

Cathy felt her class, which consisted of only ethnic minority students with Dutch as their second language, had such severe delays in language and other areas that she had to resort to controlling teaching practices.

“They lag behind in so many areas, that you just pump as much information into them as possible. . . . They’ll drown when they have to do anything by themselves. It’s like ‘I don’t know’ or ‘I don’t get it.’” (Cathy, C)

Based on experiences with autonomy-supportive practices and what they believed would best suit their student population, both Cathy’s and Bert’s schools changed to more controlling practices, which was something both teachers seemed to agree with.

“We used to be a Jenaplan school. . . . But the school population cannot handle it. Many children are not used to working independently. So we abandoned that Jenaplan idea a couple of years ago.” (Bert, C)

Before, we intentionally introduced independent learning, planning their own work. . . . For many students it did not lead to the results we had hoped for, because they don’t seem to pick up on it. So now there was a conscious decision that, in this last year, we would try to cram as much into them as possible and hope they’ll reach a nice level. And working independently, how useful it may be, it’s not a priority. Well, at least they’ve worked with it. . . . The choice really was ‘the teacher decides and the students have to follow’.” (Cathy, C)

On the contrary, after some negative evaluations by the inspection, Rachel was among a group of teachers hired specifically to implement autonomous teaching methods to improve results. But even though Rachel personally strongly favoured autonomy-supportive teaching methods and felt supported by the school administration, she experienced difficulties implementing that with her current class.

“We hope to work towards [more independent learning], but we are very realistic. We don’t think we’ll ever reach the same level as in our old school.” (Rachel, C)

Like Cathy and Bert, Rachel often felt she could not use autonomy-supportive teaching practices with her students, suggesting that all three controlling teachers felt severe pressures from below. For Bert who preferred controlling ways of teaching, these pressures corresponded with his personal beliefs, but for Rachel and Cathy, who preferred more autonomy-supportive methods, the experienced pressures from below were the main reason they relied on controlling strategies.

Anne (MA), had previously worked at a more disadvantaged school and described being more controlling with those students. She felt her current student population with more privileged backgrounds was more suited to autonomy-supportive teaching methods than the students at her previous school.

“Last year, I taught at ... an “educational opportunities school”. The majority had ethnic minority parents or were from unstable homes. ... You have to adjust to that. ... The kids I have now, I can let them work independently, just because I see that they can do that and they are able to manage that. I just have to check, support them, and guide them. And if I look back at last year, that was not possible. I really had to take them by the hand, I had to keep a close eye on them, and just tell them what to do, all the time.” (Anne, MA)

ADDITIONAL PRESSURES FROM BELOW: DIFFERENCES WITHIN THE CLASS AND TEACHING PRACTICES

All three cluster C teachers already considered their students to be an at-risk group, but experienced additional pressures from below from individual students that were perceived even lower in ability, motivation, or more difficult in behaviour, resulting in more controlling, extrinsically orientated, teaching practices.

“... sometimes it works best to motivate [students] in a harsh way. To just burn them down completely. Take for example this one boy. I just burned him down to the ground, the whole class was there. I punished him unmercifully, because he

point-blank refuses to hand in his assignment. . . . For some students, that motivates.” (Bert, C)

Although the MA and HA teachers did not experience pressures from below from their whole classroom, they did experience differences within their classrooms that affected teaching practices. This was especially the case for the MA teachers. In their experience, some students in their class, mostly those lower in ability, less motivated, or more difficult in behaviour, needed to be offered less autonomy.

“We focus very much on ‘learning to learn’, our text books are also like that. For some students that’s difficult. I’ll just tell them ‘This is how you must do it’, otherwise they’ll get confused. They barely understand one approach and then something else comes up, that confuses them. . . . I offer multiple strategies, that’s just in the text books, and you’ll say to those children just pick that one and forget about the others. Other children are able to do that, they don’t find that difficult.” (Jane, MA)

“With learning stuff it’s hard [to motivate him]. But if you say ‘Come on, than you can go play soccer outside for ten minutes’ then he might go on for a bit.” (Ella, HA)

Contrarily, a few of other statements showed that teachers sometimes also found ways to motivate their at-risk students through more autonomy-supportive practices, such as appealing to students’ own responsibility or addressing their interests.

“He is almost impossible to motivate. We’ll try every trick in the book to get him involved. We try to relate to his interests. He is for example crazy about the Muppets and making puppets, so he can write a story about the Muppets. He loves Alice Cooper, so we did that with music lessons.” (Sam, HA)

“That unmotivated student, I talk with him. What is going on? Why is that? And also address it: Okay, here we are, I’d like to see change. So you’ll know what I want, how are you going to do that?” (Tom, MA)

Although there are exceptions as shown above, in all, the paragraphs above show a pattern that indicates that teachers who perceive their class or individual students within that class to be at-risk find controlling teaching strategies more suitable for those students, feeling that not all students have similar needs for autonomy or that some students lack the skills necessary to handle any autonomy.

PRESSURES FROM BELOW AND THE ROLE OF RELATEDNESS

During the interviews, most teachers (Ella, HA; Tom and Gemma, MA; Rachel, Bert, and Cathy, C) talked about the importance of creating a good relationship with their students as a way of motivating them. This corresponds with SDT theory, which suggests that students need to feel related in order to be intrinsically motivated (Ryan & Deci, 1985).

“They only learn when they are in a nice environment. Nice is nice. Just having a good atmosphere and everybody is themselves. . . . You got to have that flair of teaching, being a fun teacher. I’ll only have to do this [blinks] and they’ll do everything.” (Gemma, MA)

Interestingly, those teachers that considered their classroom population to be at-risk emphasized the importance of relatedness the most. Several reasons may account for that. Creating a warm classroom climate may be more urgent and a bigger challenge to teachers with more difficult classrooms. Because they invest more effort in establishing good relationships with students, they may focus more on supporting students’ relatedness.

“That bond I feel with them, especially now... The first three weeks it was a battle, that bond had to develop, but now I just feel it’s coming from both sides. When I’m enthusiastic, they are.” (Rachel, C)

Moreover, teachers with a more controlling teaching style may also focus more on relationships as they may feel that learning activities are not very

enjoyable to students. Establishing good relationships may be more important under such conditions.

“I build a good relationship with them. The jokes I pull, the things we are able to say to each other... Because of that they are more motivated to do the work.”
(Bert, C)

“They like to relax in between, just to talk and we make time for that. Like ‘guys, who has something nice to talk about?’ or ‘Has anything happened?’ and if somebody has a story, we make time for that or just for a joke. And after that, it’s ‘Let’s go again! Back to work!’” (Cathy, C)

Finally, teachers with students from more disadvantaged backgrounds seemed to experience a greater need for relatedness from their students, as illustrated below.

“You just feel that this student is all alone. At the beginning of the year he was a real bully ... but that totally turned around. I feel like he has to do everything by himself, all alone. ... The first thing he does in the morning is wave until I see him. Just now he came in for his football, but without the ball he would’ve been here too. [He is] just looking for contact. Well, if I can be the save haven in his rough life, I’m happy to do that. ... And there are more students...” (Rachel, C)

Contrary to SDT that emphasizes the universality of needs (Ryan & Deci, 1985), Hamre and Pianta (2001) suggest that students from more disadvantaged backgrounds may have a greater need for relatedness. Especially for students from more disadvantaged backgrounds, school culture may be different from what they are accustomed to at home. A good relationship with teachers may be essential in preventing this disparity between home and school environment from being harmful. Moreover, these students are at greater risk for disengagement and good relationships with teachers may have a preventative, ‘buffering’ effect (e.g., Hamre & Pianta, 2001). Accordingly, the teachers in our sample that considered their students

to be an at-risk population (Gemma, MA, and the cluster C teachers) seemed to experience a greater need for relatedness and addressed this by focusing more on establishing a good relationship and a pleasant classroom atmosphere. Most teachers in the MA cluster and both HA teachers did not mention building a good relationship with their students and among students as a way of motivating them. This could indicate that relatedness is taken for granted by these teachers. It could also be that relationships with their students are already quite good in these classrooms. Teachers may therefore focus more on issues they consider to be more urgent for their population.

3. What pressures from above do teachers experience and how do these appear to relate to teachers' personal beliefs and their self-reported teaching practices?

Teachers described how pressures from above, specifically performance standards and broader school educational philosophy, related to their beliefs and teaching practices.

PERCEIVED PRESSURES FROM ABOVE

Similar to previous literature (e.g., Reeve, 2009), all teachers in our study also referred to pressures from above such as performance standards or official regulations as the reason behind controlling teaching methods. In some instances, there was clear friction between such pressures and teachers' personal beliefs, especially for the HA teachers.

"I believe that authentic learning experiences are really important. So, I try to invest time and effort in that, but daily reality shows that it's not always possible, because you're restricted to certain teaching methods or certain standards set by the inspection." (Sam, HA)

According to SDT, high stakes testing can undermine students' autonomous motivation and promotes a controlling instructional approach (Ryan & Weinstein, 2009). As such testing is often mandatory, and teachers held accountable for the outcomes, it can be one of the main reasons for teachers to rely on controlling teacher practices (Reeve, 2009). Across clusters, most teachers did not experience formal assessment pressuring. In fact, it was considered a helpful way to monitor student progress.

"I think it [testing] is important. You keep track of a student, how he or she is doing." (Sam, HA)

"If you notice that most children score sufficiently, and two are really lagging behind, you are going to focus more of your attention on those two." (Jane, MA)

"We use these tests to monitor their progress, see where there are gaps in their knowledge, where extra help is needed. And results are very clear for parents." (Cathy, C)

In general, high stakes testing and rewarding students with grades are believed to undermine students' intrinsic motivation (Ryan & Weinstein, 2009), but their impact tends to depend on the way they are delivered (Deci & Ryan, 1985). Gemma perceived formal assessment to be a pressure from above, but used the tests in such a way that students could reflect own on their progress. Hence, using the external outcomes of formal testing, the grades in an autonomy-supportive way.

"We are obliged to do formal assessments three times a year. It gives an impression. Fine. I'll look at it. I'll have to look at it. But, if it were up to me, we'd be throwing out all of those tests. I know it already. . . . Children reflect on their own progress, why did I get a ten on that test and a four on the other one, it's because of this or because of that. . . . Children have to look at themselves and progress through that. My children know that pretty well, why am I struggling with language and succeeding at math?" (Gemma, MA)

Ella also considered formal assessment to be a pressure from above, dealing with that by putting a greater emphasis on alternative ways of evaluating student progress.

“We have the children write us [the teachers] a letter, we respond to it. We mention a couple of topics that need to be addressed in the letter: ‘How do you feel in the class, who do you like to spend time with, what are you good at, and what would you still like to learn?’. We have a sort of registration book, with a lot of things in it. Which books have you read, what presentations did you do, yes, it also contains their achievement outcomes. Their letters are also included in that.”
(Ella, HA)

Overall, national standards and high stakes testing were considered pressuring by the HA and MA teachers, but these teachers also found ways to deal with these pressures in ways corresponding with their beliefs. National standards or high stakes testing were not considered pressures by the teachers in the C cluster.

ALIGNMENT WITH THE SCHOOLS’ EDUCATIONAL CONCEPT AND SCHOOL ADMINISTRATIONS

Across clusters, teachers mostly felt comfortable with the educational concept, policies, or textbook methods used at their schools. Teachers in the HA cluster were working at rather innovative schools, supporting autonomy-supportive teaching practices.

Well, group work is motivating for example. . . . That’s what’s really appealing about the ‘BAS’ project [reform trajectory the school is in].” (Gemma, MA)

Similarly, teachers in the MA clusters also felt their schools supported their way of teaching.

“We are using textbook method M. That’s with real examples. And with language, we use method P. It’s not like a method, it’s playful, a lot of doing,

experiencing. So they learn, not just by books, but you can really connect to children.” (Ella, HA)

Cathy and Bert were working at schools supporting controlling ways of teaching as their school administrations also felt controlling ways were more suitable to their student population.

“We are doing ‘modelling’, it’s part of a trajectory we have been doing for a while. It means that we show the best way to perform a task. Here is a text, what are you looking at? No, you don’t just start reading it, you first check the title.”
(Bert, C)

Rachel personally preferred an autonomy-supportive teaching style which she was supported in developing at her school. Her difficulties in actually realising more autonomy-supportive ways of teaching were mostly attributed to pressures from below.

DEALING WITH PRESSURES FROM ABOVE

In general, when the HA and MA teachers experienced pressures from above towards controlling teaching practices, they mostly tried to find a balance between satisfying formal regulations and their own personal beliefs.

“I’m pretty much a slave to the teaching method. But within those rules, I try to think of as many ways of working it as I can.” (Sam, HA)

“Our teaching methods already connect to students’ worlds pretty good. But other than that, you think of extra examples, or have it coming from the kids.” (Anne, MA)

Teachers in the C cluster did not report much friction between their beliefs and pressures from above. The MA and HA teachers experienced some pressures from above, but found ways to deal with them. When they

experienced conflict between their own beliefs and pressures from above, they still managed to teach predominantly according to their own beliefs. However, as shown in the previous paragraphs, many teachers considered pressures from below a much bigger challenge to overcome.

DISCUSSION

The purpose of this study was to gain a more thorough understanding of how teachers negotiate their personal beliefs with contextual pressures and how this influences the extent to which they adopt more autonomy-supportive or controlling teaching practices. Although the majority of teachers in our study described a preference for teaching in autonomy-supportive ways, in practice they often relied on more controlling practices, such as extrinsically rewarding students. These outcomes correspond with previous literature indicating that controlling teaching practices are quite common among teachers (Reeve, 2009; Turner, 2010). In line with our conceptual model (figure 1), teachers negotiated their personal beliefs with the contextual pressures they experience. These contextual pressures – especially pressures from below – seemed to influence their decision making process. These outcomes contribute to our understanding of why teachers so often rely on controlling teaching practices. Below, a number of key issues that need further discussion will be addressed.

THE CRUCIAL ROLE OF TEACHER PERCEPTIONS OF THEIR STUDENTS IN EXPLAINING TEACHING PRACTICES

While previous literature has emphasized how pressures from above may explain teachers' controlling teaching practices (e.g., Reeve, 2009; Niemic & Ryan, 2009; Ryan & Weinstein, 2009), the outcomes of the present study suggest that pressures from below weigh more heavily for teachers. In many countries, teachers are faced with diverse student populations, and some schools are mostly populated by at-risk students (Bakker, Denessen, Peters, &

Walraven, 2011). A concerning finding of this study is that especially when teachers considered their students to be at-risk (i.e., low-ability, unmotivated, difficult in behaviour, or from disadvantaged backgrounds), they relied much more often on controlling strategies. Even autonomy-supportive teachers described being more controlling with the at-risk students in their class. Previous literature indicated that autonomy-supportive practices can increase motivation (Jang et al., 2010; Vallerand, 1997), increase deep learning strategies and promote self-regulated learning (Deci et al., 1991; Vansteenkiste et al., 2004; Vansteenkiste et al., 2006). The controlling strategies used by these teachers could thus prevent at-risk students from actually becoming motivated and independent learners. This may actually cause already existing differences in motivation, learning and achievement to be exacerbated. This is especially concerning as previous research suggests that teacher perceptions of their students can be based on biased beliefs rather than actual information about students' ability levels (Van den Bergh et al., 2010).

All teachers indicated the importance of structure, especially for at-risk students. According to theory, structure can be delivered in either autonomy-supportive or controlling ways (Reeve, 2009), but in this study, teachers reported mostly controlling ways of providing structure for at-risk students. Within teacher expectancy literature, it has been suggested that teachers' perceptions of their students can explain a wide variety of teaching behaviours (e.g., Rosenthal, 1994). The outcomes of the present study clearly show that the extent to which teachers act autonomy-supportive or controlling toward their class or individual students indeed depends on their perceptions of students.

These results furthermore indicate that the definition of 'pressures from below' by Pelletier et al. (2002) referring only to low student motivation, may benefit from including other types of at-risk students, as not only teacher perceptions of students' motivation, but also perceptions of students' academic ability levels, background characteristics and behaviour appeared to be very influential.

Our results also suggest that the conceptual model presented in figure 1 may be cyclical in nature. Teachers' prior experiences appeared to inform their personal beliefs and preferences toward either controlling or autonomy-supportive teaching practices. Prior experiences of success or failure of their teaching practices with certain student populations seemed to confirm or dismiss previously held beliefs about the extent to which they felt autonomy-supportive teaching practices were suitable for their students. Teacher perceptions of their students as well as their prior experiences thus seem very important to take into consideration when examining teaching practices.

ARE STUDENTS' NEEDS UNIVERSAL?

SDT suggests that students' needs for autonomy, competence and relatedness are cross-cultural universal needs that apply to all students (Reeve et al., 2004; Ryan & Deci, 1985). Contrarily, most teachers in this study expressed the view that students can differ in the strength of their needs. At-risk students were perceived to have less need for autonomy, but a greater need for relatedness in comparison to other students. Whereas SDT emphasizes the disadvantageous effects of a controlling approach on students' motivation, teachers using controlling practices were often well intentioned, believing that such practices suited their students' needs better. Teachers expressed the view that controlling strategies actually nurtured the specific needs of their at-risk students. To them, this was an adaptive approach, based on their assumption that not all students had similar needs for autonomy. It could be that in general at-risk students indeed prefer more controlling strategies, however, that does not necessarily mean that they also benefit most from that. Moreover, teachers in these classes were more concerned with the socio-emotional climate of the classroom as they experienced a greater need for relatedness from these students for whom a good relationship with the teacher may act as a buffer to protect them from negative motivational outcomes for which they are more at-risk (e.g., Hamre & Pianta, 2001).

Several studies, especially cross-cultural studies, have been addressing the issue of universality, suggesting that the strength of students' needs may depend on their backgrounds. In these studies, it is argued that autonomy is a value of Western, individualistic societies and that it may not be as beneficial to students who have a background from more collectivistic cultures (Kitayama, Snibbe, Markus, & Suzuki, 2004; Markus & Kitayama, 1991). Iyengar and Lepper (1999) for example showed higher levels of autonomy increased motivation of Anglo-American children, but Asian children were more motivated when trusted authority figures made choices for them. Sheldon, Elliot, Kim, and Kasser (2001) showed that members from collectivistic cultures find relatedness more fulfilling than members from other cultures. Moreover, Deci, Ryan, Gagné, Leone, Usunov, and Kornazheva (2001) found that people from Bulgaria were less negatively affected by a controlling climate.

In all, the outcomes of these studies do not claim people from some cultures lack the need for autonomy, competence, or relatedness, *but* they do suggest – in line with beliefs expressed by teachers in our study – that there may be cross-cultural differences in how strong needs are and that there may be different ways to meet those needs. Moreover, the views held by teachers also suggest that students' needs not only depend on their ethnicity or culture, but that students' needs, or ways to fulfil those needs, also depend on other characteristics, such as ability levels, SES, and motivational or behavioural characteristics.

INTERACTION BETWEEN CONTROL AND RELATEDNESS

Another interesting issue emerged from our study. Particularly the controlling teachers thought it was important to create a warm classroom climate and to develop a good relationship with their students. Also other studies have shown a positive relation between control and relatedness (Nichols, 2006). As discussed, the controlling teachers experienced a greater need for relatedness from their students, but they also indicated they needed that bond to encourage students to engage in learning activities they may not autonomously want to

engage in. Abundant research has shown that students' affective relationship with their teacher (e.g., Cornelius-White, 2007; Roorda, Koomen, Spilt, & Oort, 2011) is crucial to their motivation. That may especially be so when teachers use controlling strategies. None of the teachers in the controlling cluster seemed to think their students felt controlled or pressured, particularly because of the strength of the teacher-student relationship. This indicates that when students experience an affectionate bond with their teacher, yet experience controlling practices, they may not perceive these as frustrating their needs. Control, when delivered in a highly affectionate way, may perhaps not necessarily undermine students' motivation. Although SDT has not specifically addressed the issue of potential interactions between relatedness and control, this has been described in interpersonal theory (Leary 1975 in Wubbels & Brekelmans, 2005). According to this theory, a teaching style which involves both control and affiliation is most beneficial for students' engagement.

IMPLICATIONS FOR TEACHER EDUCATION

This study also has implications for teacher education. First, the study shows that teachers find it harder to teach at-risk students in autonomy-supportive ways. This highlights the need for (pre)service teachers to develop understandings about motivating students in classrooms with diverse student populations. Second, teacher education programs have the potential to provide experiences where (pre)service teachers can examine the factors that influence their beliefs about students (for example, SES, ability levels, ethnic background). Building awareness of how such beliefs are formed and influence teacher behaviour may provide a grounding with which future teachers may exercise some caution in their own practice.

FUTURE DIRECTIONS

Before discussing implications for further research, a number of limitations of the present study need to be addressed. First, only teachers' self-reported practices were taken into account. Although leading to a deeper understanding

of teachers' experiences, self-reports may not fully reflect the actual practices they employ in their classrooms. Future research could address this by including classroom observations of teacher behaviours. Also, the specific characteristics of Dutch educational context and the small sample size – however representing a broad diversity of teaching practices and school populations – may limit the generalizability of our findings. Further research is needed to examine whether similar patterns can be observed across different educational contexts. Nevertheless, the outcomes of the present study point to a number of important implications for future research.

The outcomes show that theoretical notions and teacher views of what motivates students are clearly distinct. The beliefs held by teachers suggest that controlling teaching practices – for some students and under certain conditions – may not be as harmful as suggested in literature and may sometimes even be beneficial. As this study focused on teacher perceptions, more research is needed to unravel whether different student characteristics actually relate to the strength of students' needs and the ways teachers can meet students' needs. Moreover, future research is especially needed to uncover how socio-emotional aspects of the teacher-student relationship may interact with controlling teaching practices. It thus seems important to not only consider *what* teaching strategies teachers use, but also *how* these are enacted.