

## Keeping Order in a Thinking and Learning Environment

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### Abstract

This paper is part of a larger study where more than two hundred teachers have been observed and interviewed. The questions guiding this part of the study focus on how the teacher's way of keeping order is connected to the cognitive quality of what is taught.

A 'thinking and learning environment' presupposes that the teacher acts with strong focus on fostering students' habits of mind, keeping order at the same time. However, there is no automatic relationship between orderliness and learning. Two factors are of importance: The teacher's way of exercising control and if the system is perceptible for the students. Five types of learning environments were identified, three less successful in supporting cognitive development of students, and two more successful. The strongest learning outcomes are achieved when teachers use a clear and visible system during the lesson, so the students understand what is expected, a system that promotes their self-control.

Keywords: Cognition, order, praxis theory, teaching environments, thinking

### Introduction

Every teacher is aware of the fact that having structure, order, and productive discipline when teaching a group of students is crucial in preschool, school or afterschool activities. It is not an easy task to create a safe and work-promoting climate and at the same time uphold high quality learning for every student in the group.

There has been little research on order, structure, and discipline in Swedish classrooms (Skolinspektionen, 2015b) and almost none on preschool and afterschool order. The connection between teachers' ways of keeping order and the cognitive content has not been investigated before. This paper focuses on investigating how the teacher's way of keeping order is connected to the cognitive content in schools, preschools and afterschools, and how the teacher's choices might be related to the praxis theory of the teacher<sup>1</sup>. This paper was written during an ongoing assessment of Swedish schools by the Swedish Schools Inspectorate. The pre-results in this paper (cf. Pihlgren, 2015b) has been used in the preparation for and analysis of the results of the national inspection. There is a subject /verb agreement problem here. The results from the inspection (Skolinspektionen, 2016a) are referred to in the literature section.

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<sup>1</sup> Parts of this introduction has been published in previous papers concerning the larger study (cf. Pihlgren, 2014, 2016).

## Results from previous analyses

The paper is part of a larger study (cf. Pihlgren, 2013a, 2014, 2016) including an investigation and analysis of current research literature on how education can meet the demands for cognitive development in schools, preschools, and afterschools, compared with results from observations and teacher interviews. The larger study has also investigated how the teachers' ways of planning and carrying out activities changed after having participated in development programs, and what methods seem to be more effective than others when changing teachers' behavior (Pihlgren, 2015a).

Literature on teaching thinking and creativity in school shows the importance of the teacher planning, assessing, choosing activities and tools, and arranging the setting carefully, with focus on fostering student's habits of mind (Pihlgren, 2013b). Students should have time to make implicit experiences from a variety of angles, gradually taking them to generalized knowledge by challenging explicit cognitive work, training them in analysis, meta-cognition, and formative assessment (Hattie, 2012, Marton, 2006, Wiggins & McTighe, 2011). The learning activities should focus on thinking and helping the students to uncover thinking patterns by presenting complex and authentic problems where the answer is not self-evident. Using thinking routines and contextual mediation will help the teacher to promote thinking and creativity.

The results from the previously presented papers, focusing schoolteachers, preschool teachers, afterschool teachers and caretakers (Pihlgren, 2013a, 2014, 2016), show that the grey marked positions (see Table 1) in Bloom's revised taxonomy (Anderson & Krathwohl, 2001) were met in most of the observed activities. Only some teachers reached higher thinking levels, depending on a productive praxis theory affecting how they planned activities and environment.

Table 1. Frequency of markings for school (within parenthesis), afterschool activities [within brackets], and preschool /within staples/ in positions of Bloom's revised taxonomy in percentage of the total material of marks. The grey areas show the most common positions recorded.

THE KNOWLEDGE DIMENSION	THE COGNITIVE PROCESS DIMENSION					
	1. Remember	2. Understand	3. Apply	4. Analyze	5. Evaluate	6. Create
A. Factual knowledge	(12) [10] /11/	(11) [8] /9/	(10) [12] /12/	(4) [3] /2/	(4) [3] /3/	(2) [4] /5/
B. Conceptual knowledge	(7) [3] /4/	(6) [>1] /2/	(6) [3] /5/	(2) [1] /1/	(1) [>1] /1/	(0) [0] />1/
C. Procedural knowledge	(8) [15] /14/	(8) [12] /10/	(11) [15] /15/	(2) [1] /2/	(1) [1] /1/	(>1) [4] /3/
D. Meta-cognitive knowledge	(2) [2] /2/	(1) [1] /1/	(1) [1] />1/	(<0) [<0] /<0/	(<0) [<0] /<0/	(0) [0] /0/

Though most teachers showed an understanding of what would develop the students cognitively, they lacked the understanding to translate this knowledge into practice. The schoolteachers tended

to plan focusing what should be taught rather than students' cognition. The afterschool teachers tended to plan activities. In preschools, there was a strong tendency towards letting the children's experiment guide the content. Without understanding the differences between this and planning for student's cognition teachers seemed to accept methods and structures mechanically.

### *Teachers' praxis theories*

All teachers act in their everyday practice from a more or less explicit pedagogical 'praxis theory' (Lauvås & Handal, 2001, Pihlgren, 2013b). This is often a concoction of their practical experiences, teacher training, examples from others, and, in time, expertise. At least three main groups of theories affect practice in today's teaching (Håkansson & Sundberg, 2012, Pihlgren, 2011): the behaviorist, the maturity, and the interactive<sup>2</sup>. The interactive theory (cf. the tradition of Vygotsky, Dewey) and the maturity theory (cf. Fröbel, Montessori, Steiner) see the learner as active, as opposed to the behaviorist view that individuals will learn when tempted by rewards or in fear of punishment (cf. Pavlov, Skinner). In the behaviorist tradition, learning and maturing are more or less considered to be the same process (Carlgren, 1999). In the maturity tradition learning is taking place as an effect of the learner maturing. In the interactive theory base, the child will learn in interaction and thereby mature and develop.

Depending on how theories were interpreted they either supported the teacher's intentions to teach students to think, or not. Five teaching environments were found (Pihlgren, 2013a, 2014, 2016):

The *common teaching environment* means controlling the content of what is to be learned by planning the student process closely, by using several different tasks and methods, most commonly lecturing and individual or group training. The knowledge and cognitive processes initiated are concentrated within the grey area of Bloom's taxonomy (table 1). The dialogue is controlled by the teacher, and questions are focused on evaluating the students' knowledge. This plan is closely related to behaviorist theories (cf. Hunter, M. *Instructional Theory in Practice*).

The *student investigative teaching environment* is more common in preschool, classes for younger students, or practical-aesthetic subjects, or as individual skill training. The activity starts by teacher introducing new material that will help the students to develop. The students either explore this or their own areas of interest. The students have time to apply and create factual and procedural knowledge, but analyzing, evaluating, or meta-cognitive reflection are not addressed. Planning this environment is related to theories about learning as maturity.

The *scaffolding teaching environment* was observed with a small group of teachers, planning what was to be taught and how in ways leading to students' higher order thinking. Analytic, evaluating, and meta-cognitive questions and analysis, guided experiments and tasks, lectures, and exploratory

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<sup>2</sup> This is a merge and a deliberate simplification of several different theoretical perspectives. Håkansson & Sundberg (2012) states that four perspectives have influenced the western world educational research the last century and practice: behaviorism, cognitivism, pragmatism and socio-cultural perspective. The praxis theories, as described here, are focused on how educators have interpreted the perspectives in their practice – cognitivism/constructivism is the foundation of maturity theory, and pragmatism and socio-cultural perspective are the foundations of interactive theory.

and creative elements were used. This environment addressed more cognitive and knowledge targets than any of the other environments, and is connected to interactive theories.

The *'moralistic' teaching environment* was observed in some of the activities, or parts of activities. Neither the product nor the process seemed planned towards a cognitive goal. The teacher seemed occupied with something else, presumably teaching the students how to behave.

The *laissez-fair teaching environment* was not observed in classrooms but in afterschool activities and some preschool activities. Here the staff seems to lack pedagogical intention. The *laissez-fair environment* seems to leave the decisions to the student.

The observed teachers, who participated in quality teacher training for more than 1,5 year were able to develop their teaching to create environments of higher cognitive quality, even if all didn't reach the scaffolding environment level (Pihlgren, 2015a).

### Aim, theoretical model, and method

The questions guiding this analysis have been:

- *How is the teacher's way of keeping order related to the cognitive learning outcome in classroom, afterschool, and preschool teaching?*
- *How is (if at all) the way of keeping order related to the teaching environment and praxis theory of the teacher?*

### Theoretical model

In previous texts discussing teachers' ways to create order a model has been constructed and used (cf. Pihlgren, 2012, 2013b, 2015b). In this paper it will be used to analyze the results. The model takes two phenomena into consideration (see figure 1): (1) The idea of control that is guiding the activities, reaching from full teacher control to student's self-control (cf. Stensmo, 2000), and (2) The idea that the system in which the teacher has organized the activities is visible or imperceptible to the students. Although teaching might aim at student influence and self-regulation, the teacher has to show what behaviors are accepted or not, or else the weak framing will make the system impossible to decode for some students (Bernstein & Lundgren, 1983). This results in four types of contexts as displayed in figure 1.

Imperceptible or vague systems will result in disorder, whether controlled by the teacher or by students. In the first context the teacher controls the actions within a vague system, resulting in disorder and uncertainty. This might mean that the students don't understand the instructions or tasks or what they are aiming at. In the second context the student is expected to exhibit self-control, but as the system is vague, it will be hard to discern for some students, who might deal with other things than the expected learning.

The third context is governed by the teacher, whose system of control is perceivable, predictable, and clear to the students. This is a calm environment. The fourth context displays a system where the teacher has set a perceivable system for the students to navigate within, developing self-regulation and exercising self-control. All students know what is expected and can govern part of their learning by themselves.

	Teacher controlled	Student's self-regulation
Vague system	1. Disorder and uncertainty	2. Weak framing: some students will fail
Perceptible system	3. Teacher authority/ authoritarian teacher	4. Students take on responsibility

Figure 1. Strategies of keeping order resulting in different contexts (Pihlgren, 2012).

## Methods

Observations for 1-3 hours and one hour individual staff interviews were recorded during three years at 125 lessons in grade K-12, 60 sessions in afterschools in grade K-6, and 40 sessions of preschools for children 1-5 years. Children and youngsters will all be called 'students' in the text. The observations included school teachers, preschool teachers, afterschool teachers, and caretakers. They will be called 'teachers' in the text. In interviews, feedback on the observation notes were given and discussed. Written notes on these discussions were recorded during and after the meetings.

Observation notes were taken using a chart where every new sequence in the observed activity was recorded, stating time, actions, and observed outcomes. Contextual information was noted. Bloom's revised taxonomy for learning, teaching, and assessing (Anderson & Krathwohl, 2001) was used, both as an observational tool, and when coding and analyzing data. In contrast to Bloom's (1956) classic 'Taxonomy of Educational Objectives' the revised taxonomy analyzes the content from two dimensions: a *knowledge dimension*, and a *cognitive process dimension*, see table 1. The cognitive content in each sequence has been assessed and coded in the previous analyses as to what cognitive and knowledge dimension it addressed (Pihlgren, 2013a, 2014, 2016).

Focus in this study was how the teachers created order. A phenomenological approach, using Eisner's (1991) 'educational connoisseurship' and 'educational criticism' was used (also cf. Pihlgren, 2008). Knowing the area under investigation thoroughly allows the researcher to sense the important nuances and features, and this is combined with a critical approach where the findings are assessed. Eisner (1991) identifies some important dimensions in this work: describing the events or findings so that the reader can visualize and experience them, interpreting the events or findings so that they are decoded as to why and how they occur, evaluating them as to how they contribute to

educational value, and finally formulating themes and dominant features, by identifying the recurrent messages. Thus conclusions are made from a qualitative, inductive analysis of the effects, trying to find clusters of reoccurring actions and reactions (Patton 1990).

The observation material was systemized using a chart where the teacher's actions and the reactions of students were coded and assessed, see appendix A. During the analysis of the material, the pre-results (presented in Pihlgren, 2015b) and the researcher's knowledge of the area, were used as expertise in a national inspection of Swedish schools (Skolinspektionen, 2016a). The discussions resulted in the observational tools used by the Swedish Schools Inspectorate, and this and the literature review were used to construct the coding chart.

The sequences chosen show some sort of critical event or action connected to discipline and order. Critical events, and if actions taken are successful or not, will reveal vital information of what is important in a situation (Dascal 1985, Maracondes, 1985). It will make the implicit rules of the social "game" explicit (Koschmann et al. 1998). The results from this were compared to and analyzed with the results of the cognitive content in the same sequence, using the previous coding to match each teacher's praxis theory, the teaching environment exposed, and the methods the teacher used to keep order. The result was then analyzed from criteria in the literature section and conclusions were made about consequences of teacher praxis theory on structure, control, and intellectual challenge.

All respondents consented to participate and could at any time refrain from participation. In this paper, all names of individuals and schools have been changed to guarantee anonymity. The work was limited to the respondents' choices, not investigating the cognitive processes or psychological reactions within each student.

Marking the taxonomy as well as analyzing the results meant making choices and interpretations (cf. Green et al. 2003, Rostvall & West, 2003). The results in this paper are based on earlier observations, focused on cognitive content rather than order keeping. Important material might have been lost. All the same, interesting results have been highlighted. The participating staff was aware that the observations were evaluative. Keeping this in mind, the result will probably show what they were capable of doing at best. There was an overweight of female teachers participating. One explanation to this is probably the low representation of men teaching in especially the lower grades. However, Einarsson (2003) found no significant effect of the sex of the teacher on interaction in the classroom. The result cannot presume to be valid in all schools, preschools, or afterschools. However, it points to important trends to investigate further.

## Literature

The Swedish government states that a safe and stimulating environment is one of the most important conditions for learning (prop. 2009/10:165). The teacher has the responsibility to create such an environment and should involve the students in the process (Skolverket, 2013c). The Swedish Schools Inspectorate, *Skolinspektionen*, was recently assigned by the Swedish government to investigate order and teaching environments, in order to improve the results of Swedish students (Skolinspektionen, 2015a). Previous national assessments have shown that that students and teachers have good relationships, although students lack the opportunity of real influence and participation (Skolverket, 2015). However, discipline and order is a frequent problem in Swedish schools according to students (SCB, 2012, Skolinspektionen, 2014a, 2014b, Skolverket, 2013a, 2013b,

2014, 2015), something confirmed in the international comparisons PISA, TIMSS and TALIS (Skolverket, 2013b, 2014), and by Swedish teachers (Lärarnas riksförbund, 2014).

Swedish research on order, structure, and discipline in classrooms has been scarce (Skolinspektionen, 2015b). Preschool and afterschool research on the subject is even more lacking. Some, but not all, of the more extensive international research on classroom management or disruptive student behavior is probably valid for Swedish conditions (cf. Billmeyer, 2015). The recently presented report of the Swedish Schools Inspectorate investigation in classes at grades 7-9 is a thorough study on the subject (Skolinspektionen, 2016a). The literature review takes its base in the results from the inspection and compare them to relevant research.

### Student misconduct

The problem in most Swedish classrooms is not disorder or noise but rather that students are inactive (Skolinspektionen, 2016a). Many of the lessons lack structure and variation. The chief form of working is students working individually with designated tasks, often lacking in challenge or interest to the student (Bergqvist, 2005, Naeslund, 2001). This seemed to lead to bored students and, after a while, lack of focus and increased teacher reprimands (Granström, 2012, Skolinspektionen, 2014c).

Most commonly observed disruptive student behavior in the recent inspection (Skolinspektionen, 2016a) was being inactive (36 % of the lessons), non-teaching-related talk (26 %), and late arrival (24 %). Other behaviors were more infrequent – doing something else like using the cell phone (9 % of the lessons), non-related moving about or not following directives (4 %). Aggressive behavior was not observed at all. These results are confirmed in research (Samuelsson, 2008). The disruptive behavior of students change over the years, and older students are given less support by the teacher.

The student's ability to self-regulation is of vital importance for learning (Andersson, 2012). Students tend to cultivate their interrelations, and this might distract them from the cognitive work (Wrethander, 2007, Tholander, 2002). Furnishing in a way that signals and supports order is of importance (Skolinspektionen, 2015b, 2016a, Ritchhart, 2002, Willingham, 2009, Wolfgang, 2005, Wragg, 2001). In a lot of the classes the students were actually lured into non-teaching-related conversations with the student sitting beside, since the desks are paired up even though the students are supposed to work on their own.

### Teacher corrections

In some schools the students show misconduct, like arriving late or doing non-related things, without getting reprimanded, and it is often hard for the students to discern when and for what the teacher would reprimand (Skolinspektionen, 2015, Granath, 2008, Thornberg, 2007). This is also the case in some preschools (Skolinspektionen, 2016b). The teachers use rather gentle means to correct misconduct. The actions escalate if the misconduct continues, from urging, calling out the student's name to cause a social pressure, or taking a distance from the student (Samuelsson, 2008, also cf. Johansson, 2005). Teachers often use silent correcting as a disciplining method (Liljestränd, 2002, Lindblad & Sahlström, 2001, Pihlgren, 2008, Tholander, 2002). Individual reprimands seem to have a higher effect than collective. Boys are often expected by the teacher to disturb more than girls, and are more often excused when doing so (Wester, 2008). In all, if the teachers' ways of reprimanding seem unclear, the expectations of the teacher is hard to understand for some students, and will make it harder for them to learn and act as expected (cf. Bernstein & Lundgren, 1983).

The recent inspection (Skolinspektionen, 2016a) shows that it is the teacher, and not the group of students, who has the keys to order (cf. Boostrom, 1991). The same observed class acted orderly or disorderly with different teachers. Different teachers use at least two different systems when creating order, some use a more traditional system, governed by the teacher, and some are more open to student influence (Billmeyer, 2015, Richardson & Fallona, 2001). There is a risk that the teacher chooses temporary and quick solutions to problems of disorder, or use easily accessed commercialized materials to deal with ethical dilemmas, with no long-lasting effects, instead of using dialogue and student activating methods (Assarsson et al, 2011, Skolverket, 2011). The inspectorate advocates a more frequent use of group discussions, where disorder, late arrivals, and other problems are addressed and solved with the students as active participants.

An earlier performed study on students and teachers learning to participate in thoughtful dialogues (Pihlgren, 2008) showed that teachers in the beginning of embracing a student active method tended to use silent corrections when disciplining, but as the participants grew more competent in using the method, the corrections tended to alter to group discussions about behavior, initiated by the teacher or by the students. The students went through a stage of confusion, later testing the 'rules' of interplay by breaking them, to finally being able to participate in intricate cooperative interplay with the group and the teacher (also cf. McManus, 1995).

Students seem to manage self-control and democratic interplay gradually, leaning on the teacher and the group to scaffold their attempts (Pihlgren, 2008). The successful teachers have an ability to create good relations to their students (Demanet & Van Houtte, 2011) and they also openly and verbally address discipline problems and means of maintaining order (Stensmo, 2000). Systematic and recurrent routines (Pihlgren, 2012, Ritchart, 2002) as well as how the classroom is organized (Sandberg, 2008) have showed to be important.

### The teacher as leader

The importance of the teacher for student results has been pointed out in various previous research (Hattie, 2009, Nordenbo et al, 2008). The successful teacher leads the work in the group of students and at the same time treats the students as active participants (Granström, 2012, Samuelsson, 2014, Pihlgren, 2015b). They tend to spend time to set the rules and norms (Ritchart, 2002, Wragg, 2001). Lindqvist (2010) calls the leader approach of successful teachers 'humble tenacity' – they are humble when meeting the individual student's needs, and tenacious when it comes to mediating the ideals and norms of society and to lead the group to productive work.

There is a covariance between order in the classroom and the teacher meeting the students' needs, creating a safe climate, and gaining students' trust (Hattie, 2009, Jensen, 2011, Nordenbo, 2008, Skolinspektionen, 2015b). If the student has a different lifestyle, characterized by other values than those of the teacher, this might cause disturbances (Demanet & Van Houtte, 2012, Schwartz, 2013). A group of students, often boys, appreciate being in school and see it as a social meeting place but still resist the teaching activities (Lindström et al, 2003, Virtanen & Kourelahti, 2011). However, a trustful teacher-student relationship can counterbalance such negative effects (Demanet & Van Houtte, 2012).

The teacher's ability to give structure and goal focus to the lesson in ways that are perceivable and understandable to the students is vital (Skolinspektionen, 2016a). It is of importance that the teacher shows consistency, and acts in a predictable way (Wragg, 2001). The teacher also needs to assess the



teaching from the interest and motivation shown by the students to make teaching more varied (Skolinspektionen 2016a). However, some teachers tend to teach with the middle level in the class in mind, and not give enough challenge to the lower or higher performing students, even when good order is maintained (Skolverket, 2015). There also seems to be a lack of knowledge on how to organize group learning in some groups of teachers (Nielsen et al, 2011).

The inspectorate (Skolinspektionen, 2016a) summarizes that there was a high connection between orderliness, clear lesson structure, and teacher's leadership. Focused and varied teaching as well as a safe and supportive environment are vital if students will be able to participate. This is also confirmed in previous research (Håkansson & Sundberg, 2012).

### The relation between order and learning

There is a tension between behaving well and orderly on the one hand and high quality teaching on the other, and these doesn't necessarily coincide (Skolinspektionen, 2016a). There is not an automatic relationship between orderliness and cognitive learning (Schwartz, 2013). Marshall (1988) found four types of classroom cultures: Some teachers had focus on the cognitive goals. Other teachers concentrated on covering the curriculum. By doing the assigned tasks the students were supposed to learn what was intended. However, teachers and students in this classroom tended to lose sight of the important cognitive goals. In a third culture, the students tried to avoid working, and the teacher was often inconsistent or vague. In a fourth culture the teacher negotiated with the students, and lowered the expectations to keep them calm and in order.

It seems like the teaching and the social aspects of school partly counteract, and it is hard to conduct teaching at a high cognitive level and at the same time guarantee that all students work (Carlgren, 2011). When the teacher present a difficult task the students tend to ask for clarifications and the task risks trivialization. Giving them an easier task, like filling in known fact in work sheets, will instead keep the class calm. There is hence a dilemma (cf. Pihlgren, 2013b). Not much learning will take place if the teacher doesn't promote social safety. However, no learning will take place if the teacher promote cognitive safety by serving the students with easy and non-challenging tasks. The desired balance is for the teacher to promote social safety and good order and at the same time promote cognitive challenge.

### Results and analysis

The results from coding student disruptions show a similar pattern to the one found in the recent inspection of the Swedish Schools Inspectorate (Skolverket, 2016a)<sup>3</sup>. The observed activities are often orderly and calm, contrary to what has been reported to be experienced by many students and teachers (cf. SCB, 2012, Skolinspektionen, 2014a, 2014b, Skolverket, 2013a, 2013b, 2014, 2015, Lärarnas riksförbund, 2014), but the students do other things than the assigned tasks, especially when the teaching is highly individualized. In the younger classes and in preschool, students move around more frequently, and use more non-verbal and verbal ways to communicate with other students. Very few incidents of crying, aggressive behavior, or throwing things were observed among the 1-8 year old students.

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<sup>3</sup> A pre-study including parts of the results has been published in *Pedagogiska magasinet* (Pihlgren, 2015b).

Teacher's answers to student misbehavior also follow the patterns of what has been found in previous research (cf. Skolinspektionen 2016a, Liljestränd, 2002, Lindblad & Sahlström, 2001, Pihlgren, 2008, Tholander, 2002). Gentle ways are used most frequently, like hushing or looking at the student. Reprimands through bodily contact, close position to the student, raising the voice slightly, or mentioning the student's name, are more frequent with younger than with older students. Teachers used more explicit methods only in a few cases, like telling the student off, reminding of the rules, moving the student, threatening, or grabbing the student. Except from correcting slighter misconduct by gentler means, and escalating the corrections when misconduct continued, as has been shown in previous research, there is no particular pattern as to what kind of misconduct results in what kind of action from the teacher. Not working with the assigned task or participating in the official actions are often not corrected unless the student makes noises or in other ways attract attention from others. This sometimes seems to cause some confusion to students, as it is difficult to see what is considered disruptive behavior (cf. Skolinspektionen, 2016a, 2016b).

### Order in the different teaching environments

A pattern is made visible when comparing the teaching environment created by the teacher and what choices the teacher makes when correcting to create order (cf. figure 1).

### *Social safety and cognitive challenge*

In most of the observed activities the students experienced a fairly open and safe atmosphere. However, not all teachers would challenge the students cognitively, nor show high expectations. What causes reprimands as well as other structures for keeping order is often hard to discern. Maybe this might explain why students (and teachers) experience a higher degree of disorder than was shown in this study or by the recent inspection (cf. SCB, 2012, Skolinspektionen, 2014a, 2014b, 2016a, Skolverket, 2013a, 2013b, 2014, 2015, Lärarnas riksförbund, 2014).

Teacher controlled contexts, where routines and expectations were visible to the students, and where the teacher's behavior was consistent, promoted student work as well as discipline, as in this excerpt<sup>4</sup> from grade 2:

*Excerpt 1. Mr. Josef's reading and writing lesson in grade 2.*

*The teacher Josef asks all students to open their books at page four, pointing at the whiteboard where the number is written.*

*Josef: What happened in the last chapter?*

*Amanda: They went on a journey.*

*Micko: To granny!*

*Josef reads the chapter aloud and the students follow in their books. Josef distributes workbooks and the students start working. Josef walks around, now and then stopping by a student. It's calm and quiet.*

*Lina /pointing at the world steeple in the workbook/: What does this mean? Is it high or low?*

*Josef: Steeple, what do you think?*

*Lina /hesitantly/: High... /Josef nods/*

*A while later Josef asks the students to stand up and sing head-shoulder-knee and toe, and do the moves to the song.*

In the school observations, this was the most common context, about 70-75 % of the material. The passage of events and use of material has been planned, the activity starts and ends on time, there is no loss of time or confusion (cf. Pihlgren, 2012, Ritchart, 2002, Sandberg, 2008). Like Josef in excerpt

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<sup>4</sup> All excerpts have been translated to English from the Swedish original field notes.

1, the teachers frequently reposition in the room during longer intervals of skill training, and in some cases during lectures, to calm students or groups that might cause disorder. But if the teacher has to leave the group, the students soon start doing other things, like here, in grade 6:

*Excerpt 2. Mrs. May's Swedish lesson in grade 6.*

*A colleague knocks on the door and the teacher May leaves the room for 9 minutes. Soon after she has left, Kenny and Albin start throwing a paper ball between them, giggling. Some of the other students look up and smile.*

*Joe: Hey, throw to me! /Albin throws the ball to Joe, who smashes it back. It hits Anna's iPad/*

*Anna: Really... /sighs/*

*The ball throwing goes on for some minutes, including more and more students. Some students keep writing on their iPads, but some have changed to various internet-sites.*

*Albin: She's back!*

*The students hastily return to their places, change their iPads to the text, and bend over their tasks.*

*May /enters/: What's been going on here?*

Surprisingly enough, most students didn't seem to take any notice of the observer during these and similar events. Like the inspection found, the teacher is the key to order (Skolinspektionen, 2016, cf. Boostrom, 1991). These teacher controlled environments have few incidents of disorder. From time to time, students might lose interest and abstain from work, as here in grade 11:

*Excerpt 3. Mr. Urban's lesson in Biology to students in 11<sup>th</sup> grade.*

*Mr. Urban has started by introducing today's lesson when two girls arrive late. The desks are furnished in a U-shape. All the chairs are occupied and the girls seat themselves at the back, on top of some low cabinets, outside the U.*

*Urban continues his teaching without commenting, asking questions to the students. Most of the students seated in the U participate actively, but the girls at the back don't participate. The students are then assigned groups, answering questions about the area addressed. At the end, when answers are controlled, the girls have answered only a few questions.*

However, the teachers using teacher controlled and perceptible systems (context 3 in figure 1) manage to merge order and learning. The activities had in most cases been categorized as the common teaching environment in previous analyses (Pihlgren, 2013a, 2014, 2016), hitting the grey areas of Bloom's taxonomy (see table 1), but more seldom analysis, evaluation, create, or meta-cognition.

The more advanced cognitive areas were addressed by teachers creating a scaffolding environment (cf. Hattie, 2012, Marton, 2006, Wiggins & McTighe, 2011). They had a somewhat different approach to creating order, and much more frequently supported students' self-regulation by openly discussing disruptions, problems, or ethical dilemmas, and by clarifying rules and their purposes to the group (cf. Granström, 2012, Samuelsson, 2014, Pihlgren, 2015b, Stensmo, 2000).

*Excerpt 4. Class council in 3<sup>rd</sup> grade.*

*The students are seated in various places in the room, the teacher Tuva is sitting with the students. Two student, Alma and Knutte are seated at a desk in front of the other students. Alma is leading the class council, Knutte is taking notes.*

*Alma: There has been some complaints this week from some in the class about others being disturbing during the music lessons. Can someone explain the complaint?*

*Victor: I can. Some people just run around and shout and it's hopeless. We never get to sing or anything.*

*Alma: Someone else?*

*Ansi: Well, it's just some who seem to ignore the teacher AND our rules. It's no fun, even if they seem to think so.*

*Alma: So who is disturbing? Can anyone tell your point of view?*

*Kim: Well, I know I'm one. It's just that it takes so long to get going and I get bored and so we start doing other things.*

*/looks at Terry and smiles/. And the teacher doesn't stop us and...*

*Teacher Signe /raises her hand, Alma nods at her/: So is it the teacher's role to make you keep order or is it a group task?*

*Eric: Well, I guess it's the students AND the teacher. Sometimes, it's just so tempting to just play...*

*Teacher Signe: So how can you all help those who get into that?*

The students know what they are expected to do and have a structure for problem solving. The student Alma lets each side of the matter explain their view. Although the discussion is about another teacher's lessons, the discussion guided towards how the group can take responsibility for the order.

The teachers in scaffolding environments also used different ways to furnish, organize, and vary methods, more or less displaying most of the factors shown by research to be important if to combine order and learning (cf. Håkansson & Sundberg, 2012, Skolinspektionen, 2015b, 2016a, Ritchhart, 2002, Willingham, 2009, Wolfgang, 2005, Wragg, 2001). Here is an example from grade 8:

Excerpt 5. Ms. Märta's literature seminar with students in 8<sup>th</sup> grade.

*The students enter the classroom, sit down and open their notebooks to write down their personal goals for the seminar. Some are having a whispering discussion. Teacher Märta arrives and distributes a copy of an excerpt from 'Pensées' by the renaissance mathematician and philosopher Blaise Pascal. André is asked to read the text aloud.*  
*Märta:* Read the last sentence again. Do you agree or disagree? */Students look down at the text for a while/*  
*Ali /looks up at Märta/:* What do you mean?  
*Märta:* Well, Pascal argues that we don't love people, only their qualities. Is that correct, do you think? Take your stance by thinking it through for a moment. */Some silence follows while students make notes/*  
*Karl /after some time/:* It depends. You can for example learn to love a person who is austere, even if you don't like the mood.  
*Emma:* Yeah. Certainly one likes one's mother, even if one don't consider her qualities very often. It's more of a bond, like.  
*Märta:* How do you interpret the man at the window in the text, what has he got to do with Pascal's reasoning?  
*The dialogue continues for about an hour and ends by the group evaluating the dialogue and their goals.*

Here, as in other scaffolding environments, the students know what they are expected to do, and can thereby control parts of the content and their learning. The teacher introduces challenging assignments – Märta has chosen a complicated text and her questioning shows that she thinks the students capable of taking on the challenge. These teachers generally show high expectations of the students, regardless of student backgrounds, gender, or other social factors. High expectations were also mediated to young preschool children, as in this dressing situation in the hallway:

Excerpt 6. Staff and children age 1-3 at the Cornflower preschool dress before outdoor activity.

*Caretaker Gunilla has put out the younger children's clothes on the floor in the order they will have to be put on: socks, scarfs, overalls, boots, mittens, and headgear. The children move towards their row of clothes and start to dress while Gunilla is helping the youngest, Ali.*  
*Gunilla:* Now where do we start?  
*Afsun:* Socks! */holds up her socks and smiles/*  
*Gunilla:* Right, get your socks on. Well done Ängla! Are you getting them on Klas? Good! There you go Ali, you're ready now! */sits him on the floor and moves on to help Ängla/* You really got those socks on quickly, do you want me to help you with the overall?  
*Ängla:* Mm  
*Gunilla:* Who else needs help? Are you all set Afsun? Maybe you could help Klas with his zipper? Do you want some help, Klas?  
*They dress for 9 minutes while Gunilla and Afsun talk and the other participate by exclamations.*

The preschool here has a set of routine procedures, like the dressing situation, used by all staff members. Putting the clothes in a row is a way of visualizing to the children a system for getting dressed that they later can make use of themselves. The established routines help caretaker Gunilla to create a scaffolding teaching environment and the organization, small groups with one teacher and a visible structure, creates a safe climate and good order.

All of the teachers previously categorized as teaching in scaffolding environments used visible systems and encouraged students' self-regulation (context 4 in figure 1). In the interviews most of them explained that they had started teaching the group with much more teacher control and gradually enhanced student self-control and self-regulation (moving from strategy 3 to 4 in figure 1).

In this context the teacher could leave the group for a longer time, while the students continued to work on their own. The teachers also spent time to foster good relations among the students (cf. Hattie, 2009, Jensen, 2011, Lindqvist, 2010, Nordenbo, 2008, Skolinspektionen, 2015b).

Most of the teachers using strategies 3 and 4 (figure 1) say in interviews that they have spent time, especially in the beginning, to set the “house-rules” in the group (cf. Ritchart, 2002, Wragg, 2001). They also seem to see teaching and order as part of the learning process, and not as two separate things. They teach in a way that will promote order and social safety for the students and the way they do this is also part of their teaching.

### *Social and cognitive safety*

In some cases the teacher seemed to choose to lower expectations or let the students make their own choices as strategies to maintain order (cf. Carlgren, 2011, Pihlgren, 2013b). With older students this frequently was connected to individual assignments as was shown in the recent inspection by the Swedish Schools Inspectorate (Skolinspektionen, 2016a, cf. Bergqvist, 2005, Granström, 2012, Naeslund, 2001, Skolinspektionen 2014c). The material in this study shows that this was more frequent with younger children, and in preschools and afterschools<sup>5</sup>. This excerpt from a reading-aloud sequence is an example:

*Excerpt 7. Reading aloud in grade 4.*

*The students are seated in their desks and teacher Siv is getting ready to read aloud.*

*Agnes: Can we draw when you read?*

*Siv: Why, I don't think that's a very good idea. You won't be able to follow the story then.*

*Several students shout things like: Oh please! Let us draw! We'll be attentive!*

*Siv: Well...*

*Anders: Please Siv, it's so much easier to listen quietly when one draws, please...*

*Siv: OK, but listen attentively. Now let's see what will happen next. Where did we finish now?*

Like in this excerpt, some teachers allow the students to negotiate the level or the structure of the activities, lowering the actual cognitive outcome (cf. Marshall, 1988). The order is presumably teacher controlled but can be manipulated by the students, ending up in strategy 2 in figure 1. This is connected to student investigative teaching environments.

Teachers teaching in a laissez-fair environment also often started out using strategy 2 – leaving actions and decisions to the students. Fewer demands on the students led to fewer corrections from the teacher, but also to more serious conflicts, as the teacher was less present. When conflicts finally occurred, these teachers had to intervene using more force, as in this fight in the afterschool playground:

*Excerpt 8. A fight in the afterschool playground.*

*Alex and Stig are fighting and Mehrnoush have rushed over there and is trying to make them part.*

*Mehnoush: Stop it, I say! You're hurting each other! /holds the boys apart by grabbing their arms/*

*Alex: He started, he called me a whimp!*

<sup>5</sup> This deviation from the findings in the recent inspection can probably be explained by the differences of the samples. Due to the wide material, reaching from teaching environments with 1 year olds to grade 12 in school, this study includes a lower percentage of observations in grades 7-9 and there is a predominance of grade 10-12 when it comes to observations in older grades. This should indicate that highly individualized tasks are more predominant in grades 7-9 whereas the common teaching style dominates in grade 10-12. However, this has to be further investigated.

*Stig: Well you are and I'm not your friend!*  
*Mehrnoush: Stop it, I said! This is no friendly way to act. Let's go in and talk it over.*  
*She tries to drag the boys towards the door but they're resisting. After some discussion the boys seem to be calmer and she lets go of their arms.*  
*Alex: Could we go now?*  
*Mehrnoush: OK, I want you both to say you're sorry.*

The teacher here sets the rules for behavior, rather than help the students to solve the conflict (cf. Assarsson et al, 2011, Skolverket, 2011). The context moves from strategy 2 in figure 1 to strategy 1, making the expectations unclear and probably confusing the students, indicated when Alex asks if they can go now.

### *Disorder and uncertainty*

When teaching was built on students' self-regulation but exposing vague systems for control and routines, the framing often became weak and hard to discern to some students (cf. Skolinspektionen, 2015, 2016b, Granath, 2008, Thornberg, 2007), as in this class council in grade 7:

Excerpt 9. *Class council in 7<sup>th</sup> grade.*

*Ellen: But we're not satisfied with our math classes. It's boring, she just goes on and on.*  
*David: It sucks /turns to the boys in the corner. They gesture back, approvingly/*  
*Teacher Anna /turning to the boys/: David!*  
*Student chairman Evert /taps with his pen on the table/: Let's go on.*  
*Afsun /raising her hand/: In that case, the social science lessons are worse. How will he know what grades to give us when all we do is work in groups?*  
*Ellen /looks at Conny, both girls giggling/: But how IMPORTANT the grades ARE!*  
*Teacher Anna /frowns/: Maybe we should go on Evert?*  
*Mange /with a loud moan/: Is the class council obligatory? Can I go?*

Teacher Anna seems to lack the vital relationship needed to cope with some of the students who seem to take the opportunity to display their attitude of distance to school work in the vaguer context created in this class council (cf. Demanet & Van Houtte, 2012, Schwartz, 2013). Chairman Evert is attentive to the teacher's subtle signals but many of the others are not or choose not to be (cf. Lindström et al, 2003, Virtanen & Kourelahti, 2011, Wester, 2008). The rules also seem to be unclear – the students are allowed to criticize the qualities of Anna's teacher colleagues and Anna corrects David, but not Ellen and Conny, who are acting in a diminishing way towards Afsun. Many of the students are more concerned with nourishing their relations, and use the teacher's reactions when doing so (cf. Wrethander, 2007, Tholander, 2002). There is no social safety nor much cognitive challenge. The system is vague and the teacher leaves the arena open for some students to take command. Most often these contexts were connected to the student investigative teaching environment, with weak cognitive content.

When the teacher controlled the system but the structures were vague or unclear to the students, the structure in itself seemed to cause disorder as in this circle-time in K-1<sup>st</sup> grade:

Excerpt 10. *Ms. Jessica's circle-time in K-1<sup>st</sup> grade.*

*Some children are sitting in the circle; others are not, as the lesson is about to begin. An assistant and a caretaker are also present in the circle.*  
*Ms. Jessica: Good morning please start counting 1, 2, 3*  
*Class: 4, 5, 6, 7, 8, 9, /goes on counting. Jessica goes to the next room to collect students and put them in the circle/*  
*Class /after a while/: 245, 246, 247... /Jessica returns, standing outside the circle/*  
*Ms. Jessica: Sh...*  
*Class: 252, 253, 254 /goes on counting, most students look at Jessica/*  
*Ms. Jessica: Hush now, let's start the lesson. /the students turn silent/*  
*Niloufar: I thought we had started!*

Philip: Boring /he starts moving out of the circle gradually/  
Ms. Jessica: Quiet Philip, please move back into the circle /points at the spot he has just left/  
Following, the misconduct and disturbances becomes more and more frequent. The activity 15 minutes later ends in an outdoor task.

Teacher Jessica has to manage getting the missing students to the circle, and at the same time keep the order. She does this by asking the students to count, and they seem to think it's an assignment to count as far as they can. When Jessica tries to stop the counting they react with surprise and confusion, probably uncertain as to her intentions. Many of the teachers using similar strategies seemed unsure of how to organize group teaching and how to implement group "house-rules" (cf. Nielsen et al, 2011). In this excerpt Jessica collects the missing students instead of discussing the problems that late arrival causes with the group and solve the problem on a long term basis. The other present staff members are not active. It is rather common in the observations of moralistic teaching environments for other staff member, than the performing teacher, to be present. In the interviews the teachers reveal that they are working as assistants to one or some students. However, their often passive posture, and student- resembling position, most likely also contribute to the students' confusion of how to interpret the situation.

In these contexts the furnishing and the (lack of) organization often causes disruptions. Students' sitting on the carpet is in many observations connected to many corrections:

*Excerpt 11. Preschool teacher Lena and caretaker Elise in circle-time with children age 3-5 at the Moon preschool.*

*The children are sitting in a circle together with Lena and Elise. It's Monday morning and the circle-time has been going on for 15 minutes.*  
*Preschool teacher Lena: What did you do this weekend, Tuva? /Albin lies down on the rug/  
Elise: Albin /Albin sighs and sits up/  
Tuva: I was at my grandmother's. She has a cat /smiles/  
Katja: My granny has a cat! /Smiles at Tuva and then at Ninni, who is seated beside her. They move closer together/  
Lena: Katja, it wasn't you who was telling now. Do you want to tell us something more, Tuva? /Tuva shakes her head. Albin sighs and starts pressing his foot against the leg of Tage. Tage tries to push the foot away/  
Elise: Albin, did you hear what Tuva said? /Albin draws back his foot/  
Lena: Arman, what did you do this weekend? /Arman shakes his head. Lena looks in Katja's and Ninni's direction. The girls are giggling and hugging/ Sit properly on the rug, or I'll have to reseat you. /Lena turns back to Arman, who is looking down at the rug/  
Albin's name is used six times in the 20 observed minutes to reprove his behavior. Katja and Ninni are also reprimanded a couple of times.*

The subject is probably not particularly interesting to the children, but sitting on the carpet on the floor also invites students, as Albin in the excerpt, to lie down or take body contact with others. The environment is not safe enough for all children to participate, even though it's controlled by the teacher. Albin protests visibly, and seems to find the content uninteresting. Katja and Ninni are occupied with bonding. Arman shows anxiety. Teacher Lena is also using some of her questions to correct misconduct, rather than actually wanting an answer, as when she says "Albin, did you hear what Tuva said?" This is a notable difference to for example the teacher Signe, in scaffolding excerpt 4, who seems interested in the students' thoughts and who asks questions to make thinking visible to all participants.

In excerpt 10 and 11 the teachers control the structure, but the rules and the structures are vague, position 1, figure 1. Teachers using this strategy was with few exceptions working in the moralistic teaching environment, with low cognitive content. They spent a lot of time correcting the students in various ways and frequently pointed out in the interviews that their chief problem and main goal at this point was to get the group in such order that teaching could take place.

## Conclusions

The results show that there is a clear connection between the cognitive level of the teaching and the way the teacher keeps order. There are also links between how the teacher keeps order and how he/she teaches. These are visualized in figure 2:

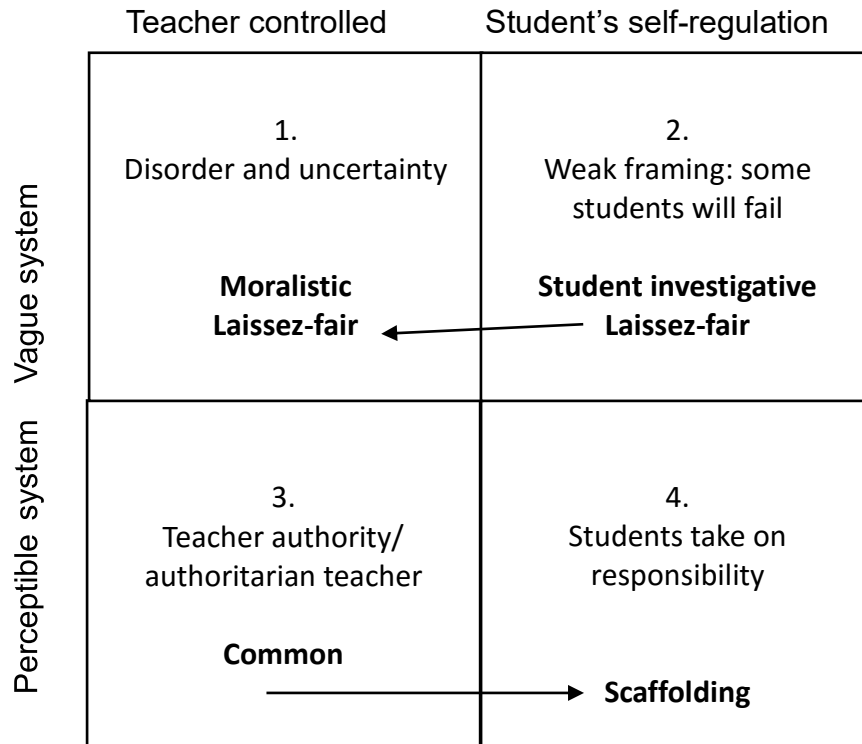


Figure 2. The learning environments' relation to different order keeping contexts.

The teachers creating a common teaching environment most often were observed using the teacher controlled and perceivable strategy 3. The common teaching environments normally show good order, and the teacher, when needed, most commonly uses the gentle means mentioned above. The cognitive outcome reaches basic skills and knowledge but fewer higher cognitive levels. In these environments students' self-regulation and influence is not stressed, and some students lose interest in the activities when the teacher leaves, when the task is boring, or when they don't understand. However, these teachers manage to merge order and learning, using mostly behaviorist influenced methods.

Discussions in the group of students about disruptions are almost only initiated in the scaffolding environment. These teachers also use open discussions about ethical and social dilemmas more frequently, and are more likely to use preventive means, like moving around in the room, refurnishing, and using a variety of methods. The scaffolding teaching environment is connected to strategy four, where student's self-regulation and a perceivable system is the goal, but most teachers state that the system from the beginning was teacher controlled to a higher degree, using strategy 3. The arrow in figure 2 indicates this move. It is a time consuming activity to teach the students to pass from a teacher controlled context to self-regulation and the teacher has to build trust to each student and within the group. However, taking the time to set the climate is probably part of generating the high cognitive level that these activities display. The teachers see teaching and order



as part of the learning process, a productive and necessary fusion, highly connected to interactive praxis theories.

The student investigative teaching environment shows a much higher degree of students working on their own, with some cognitive content of basic skills and knowledge. This results in fewer disruptions, but also in more students doing other things than studying. In most of the cases, students' self-regulation is expected, but the systems are less perceivable, sometimes to some and sometimes to all students. In the 1980's, when the maturity theory guided many western curricula, Basil Bernstein (Bernstein & Lundgren, 1983) warned that the loose and vague framing of what he called progressive education would make some students fail. This appears to be the case in the student investigative environment. Sometimes the system seems to be controlled by the teacher, but negotiations and manipulations from students make the teacher lower the expectations or change the assignment or method to lower cognitive levels.

The moralistic teaching environment shows a higher degree of teacher corrections, and also larger escalations to more explicit methods. The teacher uses teacher controlled, often vague or inconsistent strategies to keep order. Teachers spend a lot of time correcting the students, and this will take time from the learning activities, resulting in a low cognitive content. The teacher seems to reason that order and discipline first have to be created in the group, if teaching should be able to take place. This is different from how teachers in the common and in the scaffolding environments; they see teaching and order as a merge.

The furnishing and choice of context for the activities seem to be less planned in the moralistic environment and often cause disruptions. The teacher's ability to handle group teaching seems limited, and a frequent problem solving strategy in this environment seems to be to bring in more adults to handle disruptive students, paradoxically making the system even more unclear to the students. The underlying theory is connected to behaviorism but displays three vital differences to the common teaching environment, which also is based on behaviorist praxis theory. First, the moralistic teaching environments uses unclear and inconsistent methods; secondly, they separate order keeping and teaching into two different processes; and thirdly, they don't enhance learning skills and knowledge.

The laissez-fair environment shows very few corrections at all, and when they appear, they are answers to quarrels or fights among students, or destruction. Students here make their own choices to a much higher degree, which might explain why there are fewer, but more severe, conflicts and disruptions. However, when conflicts appear, teachers in this environment most often set the rules for behavior, rather than coaching the students in conflict solving. The laissez-fair environment will most commonly move from using strategy 2 when there are no conflicts, to using strategy 1 when conflicts burst out. This move is indicated by the arrow in figure 2. The environment will hence send two contradicting messages: it is a place where students can do what they want, but it will also be unsafe and unpredictable, at least in some situations. In previous analyses (Pihlgren, 2013a, 2014, 2016) this environment shows a much higher degree of staff members without a university degree or high school studies in pedagogy. This might explain the contradictions – they act out of their former experiences rather than from a theoretical base.

The difference between the high level scaffolding environment and the lower lever student active environment can be hard to detect. Both environments have a high degree of student activity and

few disruptions. The same confusion occurs separating the higher level common teaching environment and the moralistic. Both environments use similar methods but where the methods are used to enhance students' learning in the common environment, they are used to try to reach order in the moralistic, often with little success.

Is every teacher always constructing the same sort of teaching environment by his or her planning and order keeping? As shown, the results suggest that this is not always the case. However, there seems to be a consistency in the way that most teachers choose to act in the classroom or activities, especially when their actions can be traced to an underlying praxis theory, even if this is not explicit to the teacher (cf. Billmeyer, 2015, Lauvås & Handal, 2001, Håkansson & Sundberg, 2012, Pihlgren, 2013b, Richardson & Fallona, 2001). Knowing more about this consistency is an area for further research. One of the previous analyses (Pihlgren, 2015a) makes clear that teachers will change and develop their practice after extensive quality teacher training, and then enhance other strategies when teaching, but that this is no "quick fix" (cf. Pihlgren, 2008, McManus, 1995).

### Discussion

Will better order and discipline in Swedish classrooms, preschools, and afterschools result in higher student achievement, as the Swedish government hoped when initiating the inspection 2015 (cf. Skolinspektionen, 2015a, prop. 2009/10:165)? This is not an easy question to answer. There is no direct causality of orderliness resulting in high cognitive teaching, as this paper shows. The relationship seems to be rather the reverse: When there is high quality teaching, there is most likely orderliness. The trick seems to be to create social safety and at the same time cognitive challenge, not the opposite: Social challenge and cognitive safety.

After the Second World War many curricula of the western world pointed out the importance of democratic values in teaching (cf. Skolverket, 2013c), something that presupposes other means to handle power and leadership than before. To be a competent and skillful teacher today means balancing between taking responsibility for student learning, using democratic methods, and creating a safe climate where students will take intellectual risks. Not an easy task. The methods of navigating in this new practice of discipline and order is relatively uncharted, and there are few role models.

There is reason to help the group of teachers who spend most of their order-keeping using the less productive strategies 1 and 2 (see figure 2). Their students would benefit greatly, both cognitively and socially. Teacher environments where strategy 3 or 4 are used are likely to be safe learning environments, but there is a qualitative difference: The fourth strategy challenges the students' cognitively to a higher degree (cf. Andersson, 2012). When meeting new student groups these teachers spend time consequently making rules clear by discussing them and other mutual agreements in the group. They build honest relations to every individual and between the group members, and they have high expectations on every student. If we are able to visualize how they do this we most likely will improve student results.

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## APPENDIX A. Chart for coding and assessing the teacher's actions to create order

Teacher's preparations, setting etc. (cf. Skolinspektionen, 2016a).

Criteria	Supportive examples	Non-supportive examples
Open, safe atmosphere/climate		
Positive expectations/motivates		
Furnishing, settings supports order		
The content is adapted and challenging		
The goal is understandable		
Activity starts and ends on time		
The structure is visible and clear		

Critical incidents: Trigger, action, reaction chart

Time	Trigger	Teacher's action	Reaction group/individual

Coding distraction/disorder and teacher move (cf. Skolinspektionen, 2016a).

Distraction/disorder	No
Late arriving	1
Not working	2
Non-related talk	3
Makes noises, faces, mimics, glances	4
Uses non-related artefacts (mobile phone, toys...)	5

Teacher move	No
Positioned close to the student	A
Takes bodily contact (puts hand on shoulder, knee...)	B
Repositions in the room	C
Hushes, looks at the student	D
Mentions the student's name	E

Moves around without learning purpose	6
Uses bad language	7
Doesn't change when corrected	8
Cries	9
Throws things	10
Self-aggressive behavior	11
Aggressive behavior towards teacher	12
Aggressive behavior towards other student	13
Leaves the room/activity physically	14

Asks student to change behavior	F
Explains why the action has to stop	G
Discusses the problem in the group	H
Reminds of the rules	I
Raises the voice when talking	J
Raises the voice when correcting	K
Gives the student a new task	L
Moves the student to another place	M
Asks the student to leave	N
Makes threats	O
Grabs the student	P