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## Primary Teachers' Instructional Behavior as Related to Learning Engagement and Homework Practices

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### Abstract

The aim of the study was to explore how teachers' instructional behavior in second grade is related to pupils' engagement in learning and homework practices. Autonomy supportive and structured teaching-style classroom observation sheets and homework instruction observation sheets exploring teachers' instructional behavior were used. Also pupils' questionnaire about engagement in observed lessons and parent questionnaire about homework practices were used. We found that a balanced teaching style, rather than a dominance of either structured or autonomy supportive teaching, resulted in more learning engagement but more structure supportive teaching is related with higher need of homework support from parents. Teachers' autonomy supportive teaching style brings pupils more independent and meaningful homework.

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**Keywords:** Learning engagement; teaching strategies; homework.

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## **1. Introduction**

For a decade an unsolved problem has lasted in Estonia where pupils complain about heavy homework load and more than half of them feel constant tiredness (Ruus et al., 2007). This is in line with Walker's (2007) findings which indicate that since 1980s time spent on homework has increased by 51%. Homework has an important part in pupils' learning process which should be constantly guided by teacher and used to motivate children to learn and develop their independent study skills (Cooper, 1989) but if used in a disciplinary way it can harm their learning engagement (Hayward, 2010). Therefore our aim was to explore how teachers' instructional behavior is related to pupils' engagement in learning and homework practices in second grade; and how teachers' teaching styles are related with parents homework supportive practices. Based on the aim following research questions were set: how does autonomy supportive and structured teaching style affect pupils' learning engagement in class; how homework instruction and feedback in classroom are related with pupils' learning engagement; how parents homework support is related with teachers' classroom practices. Classroom observation sheets and pupils' self-report questionnaire (Jang, Reeve & Deci, 2010), also parents' questionnaire about homework practices were used (Arro, 2014).

## **2. Theoretical framework of the study**

Primary teachers' instructional behavior is related to pupils' learning engagement (Jang et al., 2010) and their homework practices (Cooper, 1989). Pupils' homework practices and learning engagement is also related with parents support (Usher & Kober, 2012).

### *2.1 Teachers' classroom practices*

Teachers' behavior almost always has an influence on the initiation and organization while pupils engage in classroom learning (Jang et al., 2010), authors also bring out two organizational ways which teachers can choose to engage pupils in classroom activities – autonomy supportive versus controlling and structure supportive versus chaotic behavior. Pupils value tasks and associate them with positive emotions if they feel teachers support their autonomy. As a result they will most likely show significantly higher behavioral and cognitive engagement (Assor, Kaplan & Roth, 2002). For example Reeve, Bolt and Cai (1999) found that autonomy supportive teachers often listened to pupils and allowed them to change task instructions and ideas, asked about their wishes, answered to questions and were interested in pupils' emotional state. Jang et al. (2010) divided autonomy supportive teachers' activities to three categories: 1) nurturing inner motivational resources 2) using informational language 3) acknowledging and accepting pupils' negative opinions. Authors say that teachers can nurture inner motivational resources by giving opportunities for pupils to show initiative by creating task instructions based on pupils' interests, preferences, individual goals, choices, challenges and curiosity, instead of relying on extrinsic sources of motivation. Using informational language means teachers are flexible in their use of language, provide choices and options, explain importance and benefit of tasks, whereas controlling teachers use pressuring and ego-involving language manner that neglects value and importance of requests. Acknowledging and accepting pupils' negative opinion refers to understanding and collecting

information about pupils' emotions and perspective, taking negativity as a form of feedback which might be caused by boring or devalued activities or unsuitable structure. This can be useful to teachers in order to help them improve classroom activities (Assor et al., 2002).

Nevertheless using autonomy supportive teaching style itself will not result in pupils' high learning engagement as it is also affected by teaching structure (Stefanou et al., 2004; Jang et al., 2010). Teachers can create strong classroom structure by letting pupils know about expectations and instructions in the beginning of the class, give a lot of guidance, explain instructions step-by-step if needed, set limits to activities and make their transition smooth, give constructive and competence relevant feedback.

Assigning homework is usually part of every well-structured lesson and it is important that the instructions are clear and specific. This is essential in primary school where pupils' attention span isn't big and may result in confusion if instructions are long and abundant. (Paulu & Darby, 1998). Cooper (1989) says homework can be defined as any task that's been assigned by teachers and is meant to be fulfilled outside of classroom. Teachers shouldn't assign homework in order to have pupils' something to do, homework's instruction, collecting and checking shouldn't take significant amount of time from class (Hayward, 2010). According to Paulu & Darby (1998) pupils prefer doing homework when they get constant constructive feedback to it. They like to know which subjects they are good at and which they need to work harder at, which means homework helps pupils to study and it is important part of learning process.

In primary school homework should be mainly assigned to help pupils develop independent working skills, habits and positive attitude towards school (Paulu & Darby, 1998) and it's also important that assigned tasks are interesting and motivating to pupils (Hayward, 2010). It doesn't mean that homework should be based on pupils' interests and hobbies but it should support their needs and help to better understand subjects. Teachers tend to assign worksheets or tasks from workbooks only which can cause learning engagement to drop.

## *2.2 Learning engagement*

Even though teachers can do a lot to maintain pupils' high learning engagement, it depends on the pupil as well. Engagement can be described from three aspects: behavioral, cognitive and emotional aspect (Fredricks, Blumenfeld & Paris, 2004). Behavioral aspect of engagement reflects in how much attention pupils pay in class and how hard they work. Cognitive aspect shows how much pupils tried to learn during class and emotional aspect reflects in how much they enjoyed the class.

In primary school pupils' learning engagement is high by nature (Kikas, 2005) and their understanding of academic self isn't specific yet (Mägi, 2010). School brings a lot of challenges, constant feedback to activities and results which can cause learning engagement to drop. Previous studies have found constant drop of motivation in later school years and even though primary school hasn't been studied thoroughly, it's likely that the drop in learning engagement starts from

there (Hornstra et al., 2013), especially in classrooms where teachers use competitive activities or praise talented pupils while not rewarding the rest (Kikas, 2005). Thus teachers should make bigger effort to support pupils' learning engagement, for example by supporting their autonomy and structuring instructions.

### *2.3 Parents relationship with pupils' learning engagement*

Parents can also support pupils to keep learning engagement high. Studies have found strong correlation between parent engagement and pupils' educational achievements (Usher & Kober, 2012). Even if parents are not capable of helping pupils in certain homework tasks they can still encourage and support pupils' sense of competence, control and learning engagement.

Parents' beliefs and expectations also have great impact on pupils' motivation. For example, parents who have high expectations, believe in their competence, allow new experiences, encourage curiosity, persistence and solving problems, can support and develop pupils' inner motivation to study. On the other hand controlling parents who use rewards and punishment for academic results, express negativity or anger, can harm pupils' inner motivation. (Usher & Kober, 2012). Although negative feedback can be useful if it is used appropriately, as it can reduce guilt and give a chance to fix mistakes (Berns, 2010).

When parents support pupils' autonomy, pupils are more likely intrinsically motivated and engaged in school, they also have better skills for self-regulation. Some parents' actions like praising intelligence instead of efforts, knowledge and skills, can make pupils believe that intelligence is a set characteristic. That belief can lead to task-avoidance behavior or fear of failure. (Usher & Kober, 2012), raise their anxiety and thus prevent achieving good study results (Kikas, 2005). The more parents understand and share teachers' teaching style, the more they are capable to support homework studies.

## **3. Method**

### *3.1 Participants and context of the study*

Data was collected for 11 second-grade teachers instructional behavior in 29 lessons, their pupils (n = 224) learning engagement in those lessons and parents opinions about homework practices. Purposeful sampling was used to collect data with maximum variation (Palinkas et al., 2013). Second grade pupils (aged 8-9) were targeted because their learning engagement level is high by nature (Kikas, 2005), yet studies have found constant drop in learning engagement when they get older which implies it might start to drop from primary school (Hornstra et al., 2013). Since second grade pupils spend most of their school day with primary teachers, it gives a valid reason to believe their behavior and practices affect pupils' learning engagement. Another aspect is how learning and homework is viewed at home hence parents' opinion was studied. In the study 10 different classes from large municipal schools and one small class from small municipal school were studied. All of the teachers were female primary teachers with teaching experience of 15 years average.

### 3.2 Data collection and analysis

Autonomy supportive and structured teaching-style classroom observation sheets and homework instruction observation sheets exploring teachers' instructional behavior were used (Jang et al., 2010). Also pupil questionnaire about learning engagement in observed lessons (Fredricks et al., 2004) and parent questionnaire about homework practices (Arro, 2014) were used.

The observation rating sheets (Jang et al., 2010) featured three clusters of items to value the measures of teacher's autonomy support and teacher's structure. For autonomy support three instructional behaviors were rated – nurtures inner motivational resources, relies on informational language, and acknowledges and accepts pupils' negative affect. The bipolar descriptors for these three behaviors based on (Jang et al., (2010) were: relying on extrinsic sources of motivation versus nurturing inner motivational resources, using controlling language versus informational language, countering and trying to change pupils' negative affects versus acknowledging and accepting pupils' negative aspects. For teacher's structure three instructional behaviors were rated – clear and detailed directions, strong guidance during the lesson, and constructive feedback. The bipolar descriptors for these three behaviors were: absent, unclear, ambiguous and confusing directions versus clear, understandable, explicit and detailed instructions, weak guidance during lesson versus strong guidance during lesson, and ambiguous or lack of feedback versus skill-building and instructive feedback (Jang et al., 2010). We summarized every teacher's scores and found averages for all observed lessons.

Each item was scored using a 1-7 Likert scale. To measure each teachers' results scored were divided into low autonomy supportive teaching or teaching structure (1-3), average autonomy supportive teaching or teaching structure (4), high autonomy supportive teaching or teaching structure (5-7). Two trained observers collected observation data in every lesson during one school day and took detailed notes in each lesson if those helped to clarify a situation or who were involved in it, such method also helps to improve reliability of collected data (Key, 1997).

The pupil questionnaire reflects Fredricks et al.'s (2004) three-component conceptualization of engagement that features behavioral, cognitive and emotional aspects. Pupils answered to questionnaire in the end of each lesson which started with "During this class..." and included following items: "I paid attention" "I worked very hard" "I tried to learn as much as I could" and "I enjoyed today's class." The first two items were designed to reflect the behavioral aspects of engagement, the third item was designed to reflect the cognitive aspect of engagement and fourth item was designed to assess the emotional aspect of engagement. We modified the original 1-7 scale to a 5-point scale that ranged from 1 (not at all true) to 5 (extremely true) because we found it would be easier to understand for Estonian second graders as it follows local grading system. To measure each class' learning engagement questionnaires were divided into low engagement (1-2), average engagement (3), high engagement (4-5).

Parent questionnaire (Arro, 2014) consisted of three open ended questions: 1) how do you feel when child comes to you with a complex task and you do not exactly how to solve it either; 2) how

often such situations arise and in which subject most often; 3) what do you think is the reason such situations happen.

Data analysis consisted of four stages. The first stage was quantitative analysis where all data was submitted and sorted by the primary teacher. Pupils' self-reports were organized to match with particular teacher. In the second stage data was summarized from observation sheets about autonomy support and teaching structure for all 11 primary teachers and compared with pupils' self-reports about engagement in observed lessons (Table 1). Based on these results four cases were picked out by the score of autonomy support since variability was highest in that parameter – two strong autonomy supportive teachers and two low autonomy supportive teachers. In the third stage four cases were analysed in more detail to find in which instructional items differences occurred, and compared to pupils' self-reports which were also analysed in more detail in order to find correlation. Based on the results two cases were picked out – strongest autonomy supportive teacher and lowest autonomy supportive teacher. Pupils' self-reports for those particular teachers were analysed in all four aspects, homework practices were described and compared. Eventually parents' opinions about homework practices were organized by last two selected cases. In the fourth stage parents opinions about homework practices were described and compared to particular teacher's instructional behaviors.

**Table 1.** Primary teachers' (n = 11) autonomy supportive teaching and teaching structure, and pupils' (n = 224) learning engagement average scores

Teacher	Observed lessons	Autonomy supportive teaching	Teaching structure	Pupils' learning engagement
1	2	4,5	6,08	4,11
2	1	6	7	4,54
3	3	<b>6,66</b>	6,71	4,53
4	3	<b>3,94</b>	5,55	4,59
5	4	4,58	5,7	4,52
6	2	4,41	6,58	4,51
7	3	5,22	6,72	4,58
8	2	<b>3,91</b>	6,75	4
9	3	4,88	5,88	4,19
10	3	4,99	5,55	4,81
11	3	<b>5,99</b>	6,27	4,5

#### 4. Findings

The aim of this study was to explore how teachers' instructional behavior in second grade is related to pupils' engagement in learning and homework practices. The findings of the study confirmed pupils' high learning engagement in primary school (Kikas, 2005) and its positive

correlation between teachers' autonomy supportive teaching style and teaching structure (Jang et al., 2010).

All 11 primary teachers who were studied had high teaching structure (mean 5 or higher) but for learning engagement to maintain on high level autonomy supportive teaching style is also needed. Since variability was not significant in teaching structure that parameter was not used to select cases for further analysis. In autonomy supportive teaching style one highest and one lowest autonomy supportive teacher were selected for detailed analysis. Autonomy supportive teaching was rated for three items on a Likert scale of 1-7. Two selected teachers' main difference was in using motivational sources (mean 6,33 versus 3). Teacher with highest autonomy supportive style nurtured inner motivational resources, whereas lowest autonomy supportive teacher relied on extrinsic sources of motivation.

When comparing these two teachers' homework practices highest autonomy supportive teacher checked homework in one observed lesson where whole class was included in giving feedback and teacher helped pupils to analyze complex tasks and explain how those should be solved. Lowest autonomy supportive teacher checked homework in both observed lessons similarly to other teacher but used praise as main verbal form of feedback. Highest autonomy supportive teacher instructed homework in one lesson with the explanation that she found it suitable and enjoyable for pupils, lowest autonomy supportive teacher announced in one lesson that no homework would be given though in another lesson she did assign homework to pupils who did not manage to finish tasks in lesson. Such information can be confusing to pupils and harm their learning engagement.

Learning engagement was lowest overall (4 on a scale 1-5) in lowest autonomy supportive teacher's class, though it wasn't highest overall for highest autonomy supportive teacher (4,5 on a scale 1,5). Detailed analysis of these two teachers' pupils' self-reports indicated main difference in cognitive and emotional engagement, where biggest difference was in cognitive engagement (4,4 versus 3,66). That may be the result of confusing instructions and relying on extrinsic motivational sources as mentioned above.

Parents' opinions from these two classes showed main difference in emotional approach to complex homework tasks. Parents whose pupils' studied in highest autonomy supportive teacher's class reflected more positive emotions and willingness to deal with complex homework tasks, and found reasons to be in poorly worded instructions and lack or forgetfulness in own knowledge. Parents whose pupils' studied in lowest autonomy supportive teacher's class reflected more negative emotions and helplessness when dealing with complex homework tasks, their reasoning was similar with other class parents, but also pointed out possible lack of clear instructions from teacher.

It's notable that even though pupils' learning engagement was high in all observed classes (4 or higher on a scale 1-5), teacher whose autonomy support was lowest had pupils with lowest engagement score, and also parents reflected more negative emotions and found teacher to be possibly one reason why pupils in second grade face complex homework tasks. Highest autonomy

supportive teachers' pupils' engagement was not overall highest but parents reflected more positive emotions when dealing with their complex homework tasks.

## 5. Conclusions

Teachers' behavior almost always has an effect on pupils' learning engagement (Jang et al., 2010) therefore the aim of this study was to explore how primary teachers' instructional behavior in second grade is related to pupils' engagement in learning and homework practices.

We recognize the limits of our study as pupils may tend to respond in socially accepted way to self-reported questionnaire and there was small variation in engagement, hence we do not draw conclusions to larger audiences, but we can highlight important tendencies. As findings revealed the relationships between pupils' learning and teachers' instructional behavior and structured teaching the need of explaining the different teaching strategies in more detailed ways in teacher education is evident. Also the autonomy supportive strategies for fostering pupils' independent and meaningful homework should be in focus both in pre-service and in-service teacher education.

Based on this study we found that teachers who had high autonomy supportive teaching style and also high teaching structure or dominance of either did not have pupils' with highest learning engagement, even though in primary school learning engagement is high by nature (Kikas, 2005) which our results confirmed. Slight difference in pupils' learning engagement was found between highest autonomy supportive teacher and lowest autonomy supportive teacher which proves that pupils value tasks more and show higher behavioral and cognitive engagement if they sense teacher to be autonomy supportive (Assor et al, 2002). Thus that indicated that we have several other factors affecting learning engagement.

We found that teachers' homework practices also affect parents' emotions and willingness to support homework which may be related to Usher & Kober's (2012) finding between parent engagement and pupils' educational achievements. Parents whose children studied in class where teacher's autonomy support was highest experienced more positive feelings when dealing with complex homework tasks and did not mention the reason to be in teacher's instructions, whereas parents whose children studied in class where teacher's autonomy support was lowest experienced more negative feelings when dealing with complex homework tasks and mentioned teacher's possible unclear instructions as a reason.

Based on this study we acknowledge variety of factors which would influence learning engagement and we suggest that it should be further studied how primary teachers' instructional behavior affects pupils' homework practices, their parents engagement, and/or willingness to take part in pupils' learning process.

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