

**Student engagement in reader's theater: Underlying factors  
and effects on learning and group management**

Sari Hietala  
Miila Sillgren  
Master's Thesis  
Department of Psychology  
University of Jyväskylä  
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UNIVERSITY OF JYVÄSKYLÄ

Department of Psychology

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## Abstract

This study examined the underlying factors of student engagement, as well as the effects of student engagement on expressive reading and teacher-experienced group management in the context of the reader's theater program. The participants were 99 randomly selected dysfluent readers, who participated in an eight-week reader's theater program. Students were divided into small-groups of five students ( $N = 20$ ), half of whom had a clear goal for their training (i.e., preparing a play for their classmates) and half did not. Expressive reading was measured before and after the intervention. Student engagement and teacher-evaluated group management were measured after the intervention. The data was analyzed using multilevel regression analyses. The results indicated that student engagement had a positive effect on both the group management and the improvement in expressive reading during the intervention. Girls showed higher engagement than boys. In addition, reading-related enjoyment and the goal to perform enhanced student engagement.

Key words: student engagement, reader's theater, group management

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## Tiivistelmä

Tässä tutkimuksessa tarkastelimme kouluun kiinnittymisen taustatekijöitä sekä kouluun kiinnittymisen vaikutuksia ilmaisevaan lukemiseen sekä opettajan kokemaan ryhmänhallintaan lukuteatteriohjelmassa. Aineistona oli 99 satunnaisesti valittua heikkoa lukijaa, jotka osallistuivat kahdeksan viikon mittaiseen lukuteatteriohjelmaan. Oppilaat jaettiin viiden oppilaan pienryhmiin (N = 20), joista puolilla oli esiintymistavoite ja puolilla ei. Ilmaisevaa lukemista mitattiin ennen interventiota ja sen jälkeen. Oppilaiden kiinnittymistä sekä opettajan kokemaa ryhmänhallintaa mitattiin intervention jälkeen. Aineisto analysoitiin monitasoisen regressioanalyysin avulla. Tulokset osoittivat, että oppilaiden kouluun kiinnittyminen vaikutti positiivisesti sekä opettajan kokemaan ryhmänhallintaan että ilmaisevassa lukemisessa tapahtuneeseen kehitykseen intervention aikana. Tytöt olivat keskimäärin enemmän kiinnittyneitä kuin pojat. Lisäksi lukemisesta pitäminen ja lukuteatteriryhmän esiintymistavoite edistivät kiinnittymistä.

Avainsanat: kouluun kiinnittyminen, lukuteatteri, ryhmänhallinta

# 1. Introduction

Small-grouping is generally understood to be an effective way to organize instruction in terms of learning outcomes. Students with learning difficulties especially benefit from working in small groups (Elbaum, Vaughn, Hughes & Moody, 1999). Important factors for learning in a small group are the individual characteristics of the students and the group dynamics, which is the social dimension of the learning environment. Group dynamics and the learning environment in general are affected by the teacher but also the students themselves.

In small group settings the students are generally better engaged (e.g. Hollo & Hirn, 2014), and student engagement is known to be related to learning outcomes (Springer, Stanne & Donovan, 1999). Previous research shows that highly engaged students receive better grades than poorly engaged students (Estévez, Rodríguez-Llorente, Piñeiro, González-Suárez, & Valle, 2021). Student engagement also seems to be a key factor in terms of group dynamics and learning environment in small groups. Highly engaged students are more actively involved in school work and express less inappropriate behavior (Estévez et al., 2021; Ahlfeldt, Mehta, & Sellnow, 2005), making the learning environment more optimal and the group more manageable, and thus enhancing teacher's group management experience.

Therefore, there is reason to believe that engagement mediates the influences of several factors on learning, from the perspectives of both individual and group dynamics. However, there is a lack of studies exploring these associations in the same study. In the present study, we aim to explore what factors improve student engagement, and if student engagement supports learning and teacher's group management experience. This knowledge can be used to promote better and more engaging teaching practices, and on the other hand to understand how the characteristics of individual students in a group can affect the whole group's performance.

When students have to use a skill they are already struggling with, engagement becomes even more important (Bryant et al., 2015). Given that the student engagement improves literacy learning, reading-related interventions may also seek to support student engagement (Guo, Breit-Smith, Morrison & Connor, 2015). Our study is conducted in the context of a motivating group activity of a reader's theater (RT) intervention. The idea of RT is to make

oral reading practice engaging with the use of drama pedagogy. Thus, this RT intervention study provides a good opportunity for studying the dynamics of engagement and learning in small groups.

### **1.1 Learning in small groups**

Previous research shows that groups with a small enrollment are effective in leading to better learning outcomes (Springer et al., 1999) and, in addition, engagement is generally higher in small groups than in classrooms (Hollo & Hirn, 2014; Ahlfeldt et al., 2005). Small-grouping enables cooperative learning and students actively participating and interacting with each other, which has been found to promote better learning outcomes and engagement (Johnson & Johnson, 1989, 2019). In sum, implementing small groups is a functional solution towards better engagement and achievement.

Student engagement is commonly thought to consist of three dimensions: emotional, behavioral and cognitive. According to Fredricks et al. (2004), emotional engagement includes positive and negative feelings and attitudes towards school, teachers and classmates. Behavioral engagement represents participation in class and in other school activities. Lastly, cognitive engagement describes students' investment in school, willingness to set goals and work towards them.

Learning and engagement have been studied on a general level in regular classrooms, and multiple studies have shown a link between student engagement and positive academic achievement, with most of the studies focusing on the behavioral dimension of engagement (Fredricks et al., 2004). Longitudinal studies have shown that positive engagement has long-lasting effects, and higher engagement at an early age predicts better learning outcomes at later grades (Fredricks et al., 2004; Master, Cheryan & Meltzoff, 2017). Low student engagement, in turn, is connected with lower grades and higher school dropout rates (Fredricks et al, 2004; Kaplan, Peck & Kaplan, 1994; Marks, 2000; Newmann, Wehlage & Lamborn, 1992).

When it comes to learning, engagement does not only affect grades and general school achievement but also specific skills like literacy. According to previous research, student engagement is known to lead to better reading achievement (Ponitz, Rimm-Kaufman, Grimm

& Curby, 2009; Barber & Klaua, 2020), but it also specifically affects for example reading comprehension (Connor, Lara, Crowe & Meadows, 2009). However, further research is needed on the link between learning and engagement and specifically the link between literacy and engagement in a small group context.

Student engagement has also been studied in the context of low-level readers and various reading interventions, and it seems that engagement appears to promote reading performance among struggling readers (Marchand & Furrer, 2014). Reading interventions, in turn, seem to promote student engagement in addition to learning. Kim et al. (2018) compared student engagement between baseline sessions and shared story reading intervention and the results indicated that student engagement was the same or higher in the intervention, despite the intervention lasting longer in time than the baseline sessions. Bryant et al. (2015) compared traditional teacher-directed intervention and intervention utilising reading applications. They found that students were more engaged in application-based intervention compared to the traditional intervention.

Taken together, previous research suggests that student engagement is a key factor in promoting learning. It is also known that small group working supports learning as well as engagement. However, there is a lack of information about what factors contribute to learning in a small group environment. More research is needed to develop more engaging pedagogies to practice skills such as reading. Reader's theater is one such approach, but previous studies have not studied whether student engagement explains learning results in RT programs. In particular, it is of question whether struggling readers experience RT as an engaging way to practice oral reading skills.

## **1.2 Group management in small groups**

The learning environment in a small group is created by both the students and the teacher. One important aspect of a well functioning small group instruction is appropriate group management. Group management refers to the teacher's ability to maintain order, respond to students' individual needs, provide effective teaching and get students to work together. Its aim is to engage students in school, get them to learn, and limit distractions (Emmer & Stough, 2001). Although teacher's group management skills play a major role in creating a functional learning environment in the group (Hochweber, Hosenfeld & Klieme, 2014),

students themselves also influence the group environment and the teacher's group management experience.

Students actively participate and shape instruction by asking questions, expressing their opinions and providing suggestions. The teacher, in turn, responds to these suggestions and wishes, making the relationship reciprocal. Reeve (2013) refers to this as agentic engagement, where students take initiative in shaping the learning environment to be more suitable for themselves. In a small group setting, the expression of agentic engagement may be easier than in larger classrooms, as a smaller number of students allows for better consideration of individual students' needs.

The student-teacher interactions are reciprocal also in that teacher's characteristics and behavior affect the students and vice versa. Previous research shows that students' behavioral engagement influences the teacher. If a student does not focus on a lesson, the teacher may reduce contact with that student, which may impair their learning (Skinner & Belmont, 1993; Pelletier, Séguin-Lévesque & Legault, 2002). Student disengagement can also make the teacher feel incompetent and may also lead to tighter control and coercion (Skinner & Belmont, 1993).

Student engagement also affects student behavior. Because a small group is made up of a small number of students, the role of each individual is emphasized and even a single misbehaving student can have a negative impact on group dynamics, learning environment and the teacher's experience of group management. High engagement is associated with a lesser amount of misbehavior in students (Estévez et al., 2021). Highly engaged students receive good grades, master study patterns better (Estévez et al., 2021) and are also more active in asking questions and working collaboratively with other students (Ahlfeldt et al., 2005), which facilitates the workload of the teacher.

In turn, student misbehavior (e.g. talking out of turn, disrupting other students), which is frequently a consequence of low engagement (Davis, Summers & Miller, 2012), causes stress for many teachers. Teachers report that student misbehavior is related to the stress and burnout they experience, and correcting misbehaving students takes a lot of time (Clunies-Ross, Little & Kienhuis, 2008). Generally, inappropriate behavior disrupts teaching and thus also impairs the learning of other students (Emmer & Stough, 2001).



Girls and boys tend to have differences in their behavior, engagement and relations in the group, which affects the dynamics of the whole group (Curşeu, Chappin & Jansen, 2017). According to Wilkinson & Fung (2002), an ideal group should have the same number of girls and boys so that gender does not negatively affect learning. They also suggest single-gender groups as solutions. In addition, the gender distribution influences collective emotional intelligence, cohesion and conflict in the group (Curşeu, Pluut, Boroş, & Meslec, 2015).

Taken together, in addition to teacher influences on student engagement, students affect how teachers experience their role and manage the group. Research also shows the effects of size and the gender distribution on the functionality and performance of a group. For designing optimal small-group tuition, more research is needed about how group compositional factors and qualities of individual students affect the group manageability.

### **1.3 Promoting student engagement in small groups**

Based on previous studies we have established that student engagement is connected to learning outcomes and group functioning in small groups. Therefore it is important to understand what factors support student engagement individually. Next, we discuss the individual factors that previous studies have found to explain the differences in student engagement.

As suggested by many researchers, gender is strongly associated with student engagement so that girls report higher levels of school engagement than boys (Lam et al., 2012; Lietaert, Roorda, Laevers, Verschueren & De Fraine, 2015). Girls typically report more persistence, focus and management in their school work (Martin, 2003). Generally, the majority of poorly motivated students are boys (Gurian & Henley, 2001) and in terms of reading, research shows that boys are typically less interested in reading and take longer to learn to read (Senn, 2002), which may contribute to gender differences in reading-related engagement.

Emotions and situational interest are a natural part of the academic environment, as every student has subjects and tasks they like or dislike. Emotion usually describes a relationally short-lived emotional state or mood (Ketai, 1975), while situational interest is more of a task- or subject-related appeal a student experiences (Chen & Darst, 2001), and both have a high influence on student engagement (Pekrun & Linnenbrink-Garcia, 2012). Positive emotions

can increase engagement (Frenzel, Thrash, Pekrun & Goetz, 2007; Efklides & Petkaki, 2005), and negative mood, for example boredom, can lead to disengagement and thus reduced performance (Kljajic, Gaudreau, & Franche, 2017; Pekrun, Goetz, Daniels, Stupnisky & Perry, 2010). When it comes to reading, students who enjoy reading show higher levels of reading-related engagement (Bartlett & Elliott, 2018). Reading boredom, in turn, is associated with lower reading comprehension (Zaccoletti, Altoè & Mason, 2020). In general, students exhibit higher levels of engagement when learning tasks with higher situational interest (Chen & Darst, 2001). Besides engagement, students' emotions also affect cognitive processes like information processing and memorization, thus directly affecting learning and achievement in school (Pekrun, 1992).

In addition to gender and emotions, engagement is also affected by purpose and goal-orientation, e.g. wanting to perform well. Students who are goal-oriented and value task-mastery are typically more engaged (Caraway, Tucker, Reinke & Hall, 2003; Meece, Blumenfeld & Hoyle, 1988). In the context of the reader's theater, the goal to perform enhances engagement and motivation (Clementi, 2010; Hautala et al., 2022). RT and other small-group-based ways to organize learning typically enable active and cooperative learning where students are encouraged to work together to achieve common goals, leading to higher engagement and achievement (Johnson & Johnson, 1989).

In general, previous research suggests that student engagement is affected by a student's own interest towards the activity (which may be partly influenced by their gender), and the inherent goals of the activity. Knowledge to which extent these factors affect engagement in RT setting may inform the teacher who to select into a small group RT program.

#### **1.4 Reader's theater**

Reader's theater is a playful method to practice oral reading fluency and expression with play or other narrative texts as a group activity. The goal of RT is to develop reading fluency, reading comprehension and expressive reading in an enjoyable and motivating way.

According to previous studies, RT has positive effects on student engagement (Haughey, 2015; Hayden, 2019; Hautala, Ronimus & Junttila, 2022) and on students' attitudes towards reading out loud and reading in general (Corcoran & Davis, 2005). A literary overview

conducted by Mraz, Nichols, Caldwell, Beisley, Sargent and Rupley (2013) as well as a literary overview by Rinehart (2001) found that the RT program is a successful way to enhance reading skills like accuracy, fluency, and comprehension. The effects of the program also carry over to other reading-related tasks (Casey & Chamberlain, 2006).

Hautala et al. (2022) have conducted a study of RT based on the Finnish ReadDrama project. The purpose of their study was to investigate the impact of RT on literary skills and motivation in two different groups: one with a goal to perform for an audience and one without such a goal. Two control groups were also formed, one of which received traditional reading intervention and one who did not participate in any interventions. Group level analysis showed that the RT groups as well as the group who received traditional reading intervention improved their reading speed more than the group without any intervention. RT groups reported higher engagement during RT sessions than during traditional reading instruction.

Overall, RT has positive effects on students' motivation, enthusiasm and reading fluency (Hollingsworth, Sherman & Zaugra, 2007). Based on these findings, RT appears to be generally a favorable setting for exploring the dynamics between engagement and improvement in reading fluency.

### **1.5 Present study and research questions**

Previous research shows diverse positive effects of student engagement on learning. Student engagement, especially the behavioral aspect, also affects the teacher's ability to manage the classroom. Since teacher's group management is connected to their ability to provide a functioning learning environment for their students, it is important to better understand the factors that affect teacher's group management. In this study we provide empirical research on student engagement's effect on group management, which has not been conducted before.

We are also interested in the factors affecting student engagement. While engagement has been the subject of many studies, more knowledge is needed on the factors which promote or hinder engagement. As stated above, it influences a student's own achievement in school as well as the teacher's classroom management. The understanding of what makes students engaged or disengaged can help teachers and educators to design more functioning classroom instruction.

In this study, we explore the dynamics of engagement, learning and group management, which have not been studied in the same study before. The context of the study is the reader's theater program. In RT the students are placed in small groups, which has also been proven to be beneficial to engagement and learning.

Firstly, we focus on the factors that influence student's improvement in expressive reading, which was chosen as it can be seen as a key goal of RT. Based on previous studies, we hypothesize that student engagement has an effect on this improvement. We presume that reading-related emotions might also affect the improvement. We also control other factors that generally affect learning of reading fluency at this age, namely gender and initial skill level. We do not expect the group goal to affect learning gains, as no such effect was observed in a previous analysis of this dataset (Hautala et al., 2022).

Secondly, we examine what factors explain teacher-evaluated group management. We presume that student engagement has an effect on group management, specifically that low student engagement of the group has a negative effect on the teacher's evaluation of group management. This is based on the knowledge that student disengagement can hinder teacher's experience of competency (Skinner & Belmont, 1993).

Lastly, we focus on the factors that influence student engagement in small groups. Our hypothesis is that gender has an effect on student engagement, since girls are typically more engaged than boys (e.g. Lietaert et al., 2015). Since previous studies have shown a link between goal-orientation and higher engagement on a task (e.g. Clementi, 2010), we also presume that the goal of the group has an effect on student engagement.

Our research questions are as follows:

1. Do student engagement and reading-related emotions explain students' improvement in expressive reading during the reader's theater program when gender and initial skill level are controlled?
2. Does student engagement explain teacher-evaluated group control during the reader's theater program when gender and group goal are controlled?
3. Which factors explain student engagement in the reader's theater program?

## 2. Methods

### 2.1 Participants

The participants of this study were 99 low-level readers in 3rd ( $n = 46$ ) and 4th grades ( $n = 53$ ) from ten different schools. The reading fluency of the students was assessed by a word list (Häyrinen, Serenius-Sirve & Korkman, 2013) and text reading tasks (e.g., First Steps, Kiuru et al., 2015). The participants of this study had a mean standardized reading fluency score of  $-1.48$  ( $SD = .70$ ). 59 of the participants were girls, and 40 were boys. Mean age of the participants was  $9.96$  ( $SD = .63$ ).

Written consent forms were received from both the students and their parents prior to the study. Information letters, consent forms and questionnaires were provided to the parents by teachers. Ethical approval for the project was granted by the Ethical Committee of The University of Jyväskylä, as well as research permissions from the participating municipalities.

### 2.2 Intervention

The context of this study is a randomized controlled intervention of a reader's theater program. The participants were randomly assigned to 20 small groups, each consisting of five students. The RT groups were directed by pre-service teachers with basics in drama education. 16 of the groups had one teacher, and in four of the groups there were two teachers. The groups got together once a week for a total of eight times, and the duration of each meeting was 90 minutes. Half of the groups had a goal to perform to an audience, while the other half of groups did not have such a goal. The first half of the program was identical for both types of groups, whereas after the midpoint the goal-oriented groups started to rehearse for the performance.

### 2.3 Measures

*Background information:* Prior to the study, parents filled out a background information questionnaire that included gender, suspected or diagnosed ADHD of the student, and the

education level of the parents on a seven point scale. The education level was used in this study as an index of socio-economic status.

*Expressive reading:* Oral reading was measured individually before and after the intervention. The reading was audio-recorded for scoring. First, the student got to read the text silently, and then the student answered multiple-choice questions measuring reading comprehension. The student was then asked to read the same text aloud expressively, with the goal to make the text sound interesting. The student did not have to read the text quickly. Different texts were used in the initial and final measurements. The texts were between 1199 and 1215 characters long, and had five clear points where expression could be used. Expression was rated on four subscales (phrasing, smoothness, pace, and expression) ranging from 1 to 5, and the mean value was used as an index of expression ( $\alpha = .89$ , from Hautala et al. [2022]).

*Group management:* After the intervention, teachers filled out a questionnaire with 6-point Likert scales measuring group management (6 items,  $\alpha = .95$ ). The questionnaire was an adaptation from The Efficacy for classroom management subscale by Tschannen-Moran & Hoy (2001). For the four groups in which there were two teachers, mean values of the two raters were used ( $\alpha = .81$ ).

*Student engagement:* Student engagement was measured twice during the intervention. Students filled out a questionnaire measuring emotional engagement (3 items,  $\alpha = .89$ , from Hautala et al. [2022]) and disaffection (3 items,  $\alpha = .80$ , from Hautala et al. [2022]), behavioral engagement (4 items,  $\alpha = .76$ , from Hautala et al. [2022]), and anxiety (3 items,  $\alpha = .59$ , from Hautala et al. [2022]). For this study, student-evaluated behavioral engagement was chosen as an index of student engagement, since self-assessment has been shown to be a reliable method of measuring engagement (Fredricks & McColskey, 2012), and behavioral engagement has been linked with school achievement (Nguyen, Cannata & Miller, 2016).

*Reading-related emotions:* Students filled out a questionnaire with 5-point Likert scales measuring reading-related enjoyment (3 items,  $\alpha = .86$ , from Hautala et al. [2022]), boredom (3 items,  $\alpha = .79$ , from Hautala et al. [2022]), reading anxiety (3 items,  $\alpha = .64$ , from Hautala et al. [2022]) and anxiety of reading out loud (3 items,  $\alpha = .74$ , from Hautala et al. [2022]). The questionnaire was an adaptation from Lichtenfeld et al. (2012). Emotions, especially negative emotions, have been found to affect student engagement, which can in turn have an effect on learning (Linnenbrink-Garcia, Rogat & Koskey, 2011).

## 2.4 Statistical analysis

The variables used in this study have been chosen by first examining correlations between different variables. Correlation coefficients were examined with IBM SPSS Statistics v. 26 and the results are reported in Appendix A.

The hierarchy of the data, i.e. individual data (students) being nested within group data (small groups), has been taken into account by examining the intraclass correlation coefficients (ICC) of the individual-level variables. The ICC value describes how much of the total variance of the variable is between-level variance. The ICC analysis as well as the following regression analyses have been carried out in Mplus v. 8.4.

*1st analysis:* Improvement in expressive reading was analyzed using a one-level complex regression analysis, based on the ICC value of expressive reading indicating that a majority of the variation was explained by individual level qualities. Since the data is nested, Full Information Maximum Likelihood (FIML), Maximum Likelihood with Robust standard error (MLR) and the complex methods were used to correct standard errors, thus producing more reliable p-values.

*2nd analysis:* Group management was analyzed using a one-level regression analysis with FIML and MLR. Since group management is a group-level variable, group-aggregated values of gender and student engagement were generated and used for this analysis. The sample size of this analysis was thus the number of small groups ( $N = 20$ ).

*3rd analysis:* Student engagement was analyzed using a two-level regression analysis, based on the ICC of student engagement showing variation in both group level and individual level of the data. By using two-level regression analysis it is possible to analyze variation between the small groups ( $N = 20$ ) and the individual students ( $N = 99$ ) in the same model.

## 3. Results

### 3.1 Correlation coefficients and intra-class correlation coefficients

Correlations are reported in Appendix A. Correlation analysis showed a negative correlation between improvement in expressive reading and the student's initial level of expressive reading measured prior to the reader's theater program ( $r = -.248, p < .01$ ). Improvement in expressive reading also correlated with behavioral engagement ( $r = .429, p < .01$ ), as well as with gender ( $r = -.180, p < .01$ ) and reading-related boredom ( $r = -.133, p < .05$ ). Group management correlated strongly with student engagement ( $r = .374, p < .01$ ), goal ( $r = -.355, p < .01$ ), and gender (girl=0, boy=1;  $r = -.350, p < .01$ ). Additionally, student behavioral engagement correlated with gender ( $r = -.395, p < .01$ ), reading enjoyment ( $r = .388, p < .01$ ), goal ( $r = -.243, p < .05$ ), and reading boredom ( $r = -.216, p < .05$ ). ADHD, educational level of parents, reading anxiety, and anxiety of reading out loud did not have any significant correlations with any of the dependent variables, and thus were left out of further analyses.

Intraclass correlation coefficients were also examined to determine how much of the total variance of the variable is explained by group-level factors. The ICC value for improvement in expressive reading was .036, indicating that a majority of the variation was explained by individual-level factors. The ICC value for student engagement was .136, showing variation in both group level and individual level of the data. Since group management is a group-level variable, it was not included in the ICC analysis.

### 3.2 Improvement in expressive reading

The results of all analyses are reported in Figure 1. The first analysis examined students' improvement in expressive reading during the intervention by independent variables of gender, student engagement, initial level of expressive reading and reading-related boredom. However, gender did not have a significant effect and was dropped from the final model. The independent variables in the final model were the student's initial level in expressive reading, student engagement and reading-related boredom. On average, the intervention had a positive effect on expressive reading (mean score of .30).

Individual's engagement with the group had the strongest influence on the improvement in expressive reading. If a student reported being highly engaged in RT, they improved more in



expressive reading than the less engaged students ( $\beta' = .388, SE .090, p < .000$ ). The initial level of expressive reading was also controlled in the analysis. If a student's initial level in expressive reading was already high before the intervention, the student improved less during the program. In turn, if the student's initial level was low, the more the student improved during the intervention. ( $\beta' = -.283, SE .085, p < .001$ ).

In addition, if a student reported in the pre-intervention questionnaire that they found reading boring, they improved less in expressive reading during the intervention ( $\beta' = -.167, SE .078, p < .05$ ). The  $R^2$  of the model was .284 ( $p < .01$ ), that is, the initial level of expressive reading, engagement to the group and reading boredom explained 28.4% of the learning outcomes in expressive reading.

### 3.3 Group management

The second analysis examined teacher-evaluated group management. Since group management is a group-level variable, a between-level regression analysis was used. Group-aggregated values of student engagement and gender were used for this analysis as independent variables, along with goal to perform, which is also a group-level variable. Mean score of teacher group management was 4.9 (highest possible value being 6), showing that on average the teachers' experience of group manageability was positive.

*Student engagement* affected the teacher's experience of group management. The better the students were engaged in RT, the higher the teacher rated the group management ( $\beta' = .366, SE .185, p < .05$ ). Additionally, the effect of *gender* on the group management experience was controlled. In the groups with more boys than girls, the teacher reported lower group management than in the groups with a balanced gender distribution or in the groups with more girls than boys ( $\beta' = -.445, SE .173, p < .01$ ).

In addition, we examined the impact of *goal* on group management. The results show that the teacher-rated group management was lower in the groups without a goal to perform for an audience. However, the impact of the goal on group management was not significant ( $\beta' = -.248, SE .167, p = .138$ ). The  $R^2$  of the model was .591 ( $p < .001$ ), which is quite high considering that the influence of the group goal was not significant.

### 3.4 Student engagement

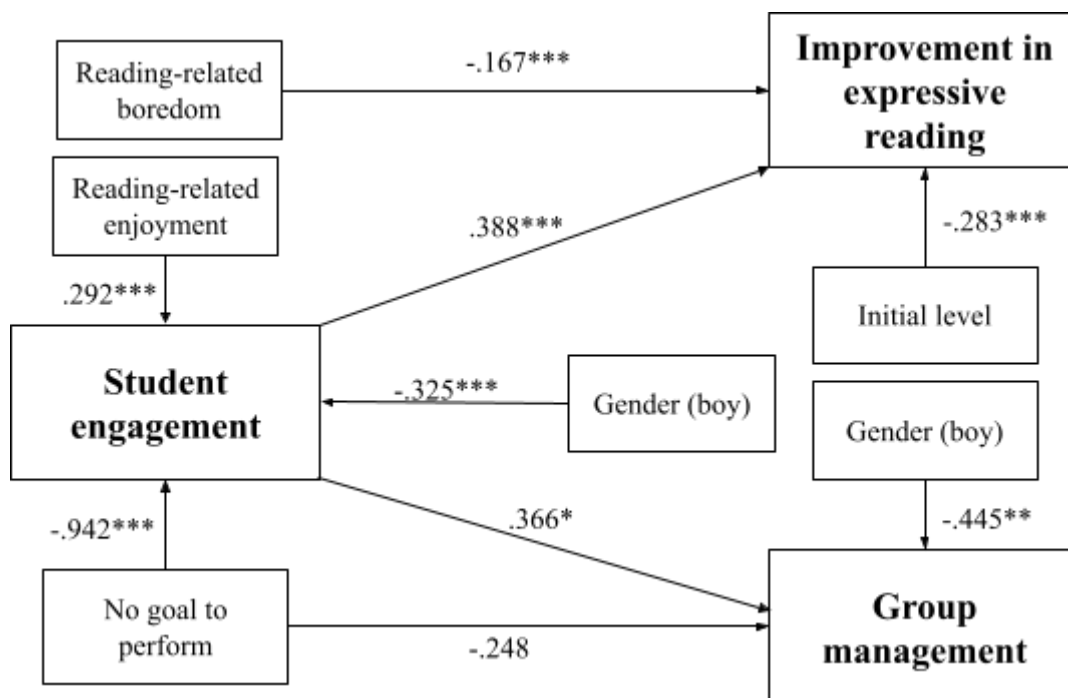
The third analysis examined the factors that explain the student engagement in RT. The method of analysis was a two-level regression analysis in which the within-level variables and the between-level variables were considered separately. Goal to perform was used as a group-level variable, since the goal to perform or not to perform was set for the whole group and not for the individual students. The other variables, gender and reading enjoyment, were individual-level variables. Mean score of student engagement was 4.3, meaning that on average level, students in the program were highly engaged.

At the between-level ( $N = 20$ ), the effect of the group's *goal to perform* on student engagement was examined. Student engagement was highly affected by whether the group had a goal to perform for an audience. Student engagement was higher if the student belonged to a group that had a goal to perform ( $\beta' = -.942, SE .295, p < .001$ ).

At the within-level ( $N = 99$ ), *gender* affected the student engagement in a way that boys were less engaged in the group compared to girls ( $\beta' = -.325, SE .082, p < .000$ ). Another of the within-level variables, *reading enjoyment*, in turn affected student engagement in a way that engagement was higher if the student had reported in the pre-intervention questionnaire that he or she enjoyed reading ( $\beta' = .292, SE .082, p < .000$ ).

The  $R^2$  of the between-level model was high: whether the group had a goal to perform or not explained 88.8% of the student engagement. However, the  $R^2$  was not significant ( $p = .110$ ). There are some uncertainties related to the between-level  $R^2$ . Although the  $R^2$  is high, the standard error is also high ( $SE = .556$ ), which must be taken into account. The small number of groups ( $N = 20$ ) and the fact that there were only two different kinds of groups (goal-oriented and non-goal-oriented) might have an effect on the  $R^2$  not being significant. The  $R^2$  for the within-level factors was .257 ( $p < .001$ ), which means that gender and reading enjoyment explained 25.7% of the student engagement.

**Figure 1.** The results of the regression analyses.



Note. The results of the three analyses are summarized in the figure. \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

## 4. Discussion

The goal of this study was to deepen the understanding of the dynamics of student engagement, learning and teacher’s group management in a small-group setting. Our main focus was student engagement, which was seen as the key element. We explored which factors improve student engagement, and if student engagement supports learning and teacher’s group management experience. The study was conducted within a reader’s theater program, where dysfluent readers were divided into small groups to practice reading with a play text.

Our first research question was do the student engagement and reading-related emotions explain students' improvement in expressive reading during the reader’s theater program when gender and initial skill level are controlled. The results indicate that engagement enhanced the improvement in expressive reading and reading-related boredom, in turn, impaired the improvement of expressive reading with the student’s initial reading level controlled. Our second research question was does the student engagement explain

teacher-evaluated group control during the reader's theater program when gender and group goal are controlled. Results show that student engagement affected teachers' group management experience, along with the gender distribution of the group. The group's goal did not have a significant impact on group management. The third research question was which factors explain student engagement in the reader's theater program. Findings indicate that the student's level of engagement was affected by gender, reading-related enjoyment and the group's goal. As we presumed based on previous research, student engagement seemed to have a central role in both learning and the group dynamics in the context of a small group.

In previous studies, student engagement has been linked with general learning achievement (Fredricks et al., 2004) as well as specific skills like reading (e.g. Barber & Klaua, 2020). The results of this study further establish this connection. The students who reported higher levels of engagement also improved their expressive reading skills more during the intervention, and the students with lower engagement improved less. In order to achieve better reading skills, promoting student engagement seems to be a key factor. As stated in previous studies, the role of engagement is crucial especially for poor readers for their motivation to keep working on difficult tasks (Marchand & Furrer, 2014).

Students with lower initial level of expressive reading improved more than the students with higher initial level during the intervention. Since reader's theater is targeted towards struggling readers, it seems that the intervention was successful in this regard. The students with higher initial scores in expressive reading presumably already had some of the skills practiced during the program, and therefore the intervention did not have as big an effect on their learning. On a mean level the improvement in expressive reading was positive in all participants, indicating that all of the students benefited from the program.

In this study, reading-related boredom negatively affected improvement in expressive reading. In previous research, students' emotions and situational interests have been linked with engagement, leading to either enhancing or hindering their performance (e.g. Pekrun & Linnenbrink-Garcia, 2012), as well as cognitive processes which affect learning and school achievement in a more direct manner (Pekrun, 1992). Previous studies also show that reading boredom is associated with poorer reading comprehension (Zaccoletti et al., 2020). Based on present study it can be stated that it also impairs the improvement of reading fluency. Although RT was generally engaging, these results suggest that it may be very challenging to develop interventions that would engage even those with very negative attitudes towards

reading. Based on this knowledge, it is important for schools and educators to focus on how to make reading fun and get unmotivated students to enjoy reading.

The results of the study show that student engagement with the group influenced the teacher's experience of group management. There is little previous research on the topic, but the result is consistent with studies by Skinner & Belmont (1993) and Pelletier et al. (2002), in which student engagement was found to have an effect on the teacher. Low student engagement can affect a teacher's attitudes toward a student and may make the teacher feel incompetent (Skinner & Belmont, 1993).

Based on previous research, it is known that engagement influences student behavior. Highly engaged students behave well (Estévez et al., 2021), while low-engaged students distract teaching, for example, by speaking (Davis et al., 2012). It may be due to when poorly engaged students misbehave and interfere with teaching, the teacher finds it more difficult to manage the group. Previous research also shows that student misbehavior causes stress to the teacher (Clunies-Ross et al., 2008) as well as influencing the learning of other students (Emmer & Stough, 2001). In small groups, student behavior is more emphasized when there are fewer students. In a small group, students are expected to collaborate and even a single misbehaving student complicates the instruction situation and the active participation of other students. As with the learning outcomes, it is important for group management and dynamics to get students engaged in the group. When students are highly engaged, the teacher's workload is reduced and no time is spent correcting misbehaving students. As a result, the teacher can focus on their work, the group environment remains optimal, and students learn better.

According to previous research, the gender distribution of a group influences the emotional climate and the dynamics of the group (Curşeu et al., 2015). In this study, gender had a statistically significant effect directly on teacher-experienced group management. In groups with equal numbers of girls and boys, or more girls than boys, the teacher reported better group management. The more boys there were in the group, the more difficult the teacher felt managing the group. The result may be explained by the fact that gender can predict certain types of behavioral tendencies, which can affect group functioning (Curşeu et al., 2017). When forming the group, it would be desirable to take into account the gender distribution of the group. Of course, students cannot be selected for a group only on the basis of gender, and instead the choices should be holistic.

The group's performance goal affected group management in such a way that in goal-oriented groups, the teacher rated group management higher than in non-goal-oriented groups. However, the result was not significant, which may be due to the small number of groups in the analysis ( $N = 20$ ).

Overall, the small number of groups in the group management analysis affects how strong conclusions can be drawn from this portion of the data. Although our results show that student engagement has a statistically significant effect on group management (but group management did not have significant effect on engagement), previous studies have also shown that the competence and experience the teacher affects their ability to get students to participate and engage with school work (Hochweber et al., 2014). The results of this study provide indicative information that the student–teacher relationship is reciprocal, and more research with a bigger number of participants is needed to make more reliable conclusions.

We also examined factors behind student engagement. At the group level, the results of our analysis show that the goal of the group affects student engagement. In the groups with a goal to perform, student engagement was higher compared to the students in groups with no goal. This is in line with previous research, where the goal to perform positively affects engagement in RT (Clementi, 2010; Hautala et al., 2022). When a group is given a common goal, it might increase collaboration between students, as students strive to achieve said goal. In our study, when the goal is to perform the play for an audience, the will to succeed and perform well can also motivate students to participate more intently.

Previous studies have found that boys are often less engaged than girls (Lietaert et al., 2015), and our results further confirm this: girls were more engaged than boys. When it comes to reading, Senn (2002) states that boys take longer to learn to read, and are less enthusiastic towards reading in general. It seems that even in a RT setting, where reading practice is designed to be fun and enjoyable, boys show less interest than girls.

While the correlation between engagement and goal as well as  $R^2$  of the model were high, the  $R^2$  was not statistically significant. This might be explained by the small sample size ( $N = 20$ ) and the fact that there were only two different types of groups (goal or no goal). The standardized mean error of the  $R^2$  was also high, which must be taken into consideration. It seems that while the goal to perform has an impact on student engagement, our results are only preliminary and therefore more research with a larger sample size is needed to verify this connection.

Based on previous research, it is known that emotions and interests can either enhance or impair engagement, and thereby also affect learning (Pekrun et al., 2010; Chen & Darst, 2001). Our study further establishes this connection, showing that reading enjoyment increases student engagement. The first analysis of this study also found that reading-related boredom had a negative effect on learning. When the student likes or dislikes reading, they tend to be more disengaged when doing reading-related tasks. As stated earlier, it is a particular challenge for teachers to come up with ways to motivate these students.

#### **4.1 Practical implications**

Small-grouping enables diverse methods of teaching. In general, students in small groups may be more able to demonstrate agentic engagement, i.e. influence the instruction and learning environment to better suit themselves (Reeve, 2013). Student collaboration and the ability to participate actively and cooperatively is also central in small groups, which increases engagement and learning (Johnson & Johnson, 1989, 2019). Present results suggest that small-group reader's theater is a favorable learning environment for low-level readers to practice reading skills.

The results of this study show that engagement has a central role in small group work. As previous studies indicate, the role of student engagement is particularly emphasized in low-level readers (Bryant et al., 2015), and thus interventions should also focus on improving engagement (Guo et al., 2015). This is also supported by our results, with both student engagement and student's low initial level of expressive reading leading to greater improvement during the program. It is known that reading interventions have a positive effect on student engagement (Kim et al., 2018; Bryant et al., 2015), and specifically in RT interventions students are well engaged (Hautala et al., 2022). This is supported by our study where the mean score of engagement in all participants was 4.3 out of 5.

Our results suggest that student engagement is influenced by whether or not the group had a common goal or not. The goal of the group can make students work better together, which is central in small group work. Setting a goal is therefore profitable for the effectiveness of an intervention, because in addition to engagement, working together to achieve a common goal also improves learning outcomes (Johnson & Johnson, 1989). When planning and designing

future reading interventions, it would therefore be beneficial to include a meaningful goal for the participants.

The influence of gender was significant at both the individual level and group level, with boys being less engaged and the groups with more boys than girls being more challenging to manage. The low engagement of boys might contribute to the teacher's difficulty of managing the group. In any case, the result highlights the importance of taking the gender distribution of the group into account when forming groups. Both gender-balanced groups and single-gender groups have been proposed as solutions (Wilkinson & Fung, 2002). However, the question remains of what steps could be taken to improve boys' engagement in the first place.

The results of this study show that reading-related emotions have an effect on both learning and engagement. The goal of reader's theater is to be fun, and thus make students more motivated in reading exercises. In the future, it could be examined whether or not RT affects the attitudes towards reading for students who dislike reading or find it boring. Previous research seems to hint at this possibility, with reader's theater known to have a positive effect on students' attitudes towards reading (Corcoran & Davis, 2005) as well as enthusiasm and motivation (Hollingsworth et al., 2007). In this study, the overall engagement level of participants was very high, meaning that even the students who thought that reading is boring did not seem to be overly disengaged. Thus, it seems that struggling readers experience RT as an engaging way to practice oral reading skills.

The teacher's group management experience is personal and can be influenced by the teacher's skill set. Previous research states that teacher group management skills have a major impact on creating a learning environment (Hochweber et al., 2014). Thus, when forming a group, teacher group management skills can also be taken into account, and a suitable group can be selected on the basis of it. In the future, research is then needed on whether a teacher's skills and experience has an effect on group management, and whether, in the context of RT, group management and teacher skills have direct influence on learning outcomes.

## **4.2 Limitations**

The relatively small sample size of the study ( $N = 99$ ) can be considered a limitation, especially in the analyses using only the small groups ( $N = 20$ ). This may have affected some



of the results, and therefore it might not be appropriate to generalize the results to a large population. More research with a bigger sample size is needed to make definite conclusions.

Self-assessment was used to collect data of student engagement and reading-related emotions. While self-assessment is generally reliable, there is always a possibility that some students might have given socially desirable answers, or that they were not motivated to answer thoroughly and truthfully. This also applies to teachers' assessments of group management, which was also self-assessed.

The  $R^2$  for our analyses were 28.4% for improvement in expressive reading and 59.1% for teacher group management, and for student engagement the within-level rate was 25.7% and the between-level rate was 88.8% (not significant). While all of these except for the last one were statistically significant, there are clearly still other explanatory factors that we have not been able to control. Potential mediator effects were not tested in our study.

The experience or inexperience of teachers may have influenced the way they have been able to instruct and manage the groups, since teachers' skill level was not controlled. However, the mean score of group management assessed by teachers was high, 4.9 out of 6, indicating that the teachers felt the groups were manageable.

### **4.3 Conclusions**

The findings of this study suggest that student engagement plays a key role in both learning and group dynamics in small groups. Supporting student engagement in addition to learning increases the effectiveness of the RT intervention and facilitates the workload of the teacher. The teacher's group management experience can also be supported by considering the gender distribution of the intervention group. The student engagement, in turn, can be improved by setting a clear goal for the activity and by making activity inspiring for the students.

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## Appendix A. Correlations between the variables

	Initial level of expr. read.	Improvement in expr. read.	Student engagement	Group management	Gender	Goal to perform	Reading enjoyment	Reading boredom	Reading anxiety	Oral reading anxiety
Initial level of expressive reading	1									
Improvement in expressive reading	-.248**	1								
Student engagement	.005	.429**	1							
Group management	.168	.111	.374**	1						
Gender (0=girl, 1=boy)	-.116*	-.180**	-.395**	-.350**	1					
Goal to perform (0=goal, 1=no goal)	.047	-.124	-.243*	-.355**	-.074	1				
Reading enjoyment	.428**	.108	.388*	.147	-.325**	.017	1			
Reading boredom	-.297**	-.133*	-.216*	.002	.276**	-.129	-.733**	1		
Reading anxiety	-.311**	-.003	-.068	.134	.015	-.062	-.301**	.381**	1	
Oral reading anxiety	-.263**	.021	.036	.164	-.135*	-.113	-.163**	.251**	.678**	1

\*\* p < .01, \* p < .0