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The (non)effect of Joint Construction in a genre-based approach to teaching writing

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ABSTRACT

This quasi-experimental intervention study examines the effect of genre-based instructional practices on 90 primary students’ narrative writing achievements and is a result of six teachers’ action to meet the educational goals of the Swedish national curriculum. Specifically, the authors examine the effects of Joint Construction, the phase in the genre pedagogical model of the Sydney School known as the Teaching and Learning Cycle, in which teachers and students work together to co-construct texts. Joint Construction has been put forward as the most powerful part of the Teaching and Learning Cycle. The authors challenge this argument, presenting findings that are inconsistent with this widely held belief. Using a pretest-posttest control group design, the study shows that the Joint Construction stage did not significantly improve the quality of students’ narrative writing or increase the text length of their writings.

To achieve the educational goals of the curriculum, teachers as well as politicians seek to identify effective instructional practices for teaching writing in literacy classrooms. The present school-based intervention study examines the effect of genre-specific instructional practices on students’ narrative writing achievements and is a result of educators’ actions to scaffold students’ writing in six Swedish primary school classrooms. Specifically, we explore the effectiveness of Joint Construction, the third phase in the genre pedagogical model known as the Teaching and Learning Cycle (TLC), in which teachers and students work together to co-construct texts.

Genre-based approaches are concerned with the social purpose of language and the ways in which the linguistic characteristics of specific genres serve this communicative goal (Ivanič, 2004). There are a number of different genre-based approaches (Hyland, 2004; Ivanič, 2004). This study focuses on the genre approach grounded in Systemic Functional Linguistics (SFL; Halliday, 1978), often referred to as the Sydney School, and how this approach has been applied to teaching writing with explicit instructions, using the TLC as a framework (Martin & Rose, 2008; Rothery, 1994). Genre-based pedagogies in relation to writing are recognized by the Swedish National Agency for Education (2018), promoted by book marketing companies, and frequently used in Swedish literacy classrooms (cf. Kuyumcu, 2014). Challenged by students’ low learning outcomes—as well as by the gap in writing competence between boys and girls—in the narrative writing part of the national test of Swedish in Grade 6, the teachers involved in this intervention study hence suggested the use of genre pedagogy, or, more specifically, the TLC, a four-phase teaching and learning cycle, to improve learning outcomes for writing (Callaghan & Rothery, 1988; Rose & Martin, 2012; Rothery, 1994).

In this teaching model, the third phase, Joint Construction—in which students and teachers work collaboratively to produce written text—has been put forward as the most critical part of the TLC. In the words of Martin and Rose (2013): “successful Joint Construction is the most powerful classroom practice currently available as far as learning written genres is concerned” (p. 73). Generally, teacher-led joint construction of texts, as a way to support students’ writing development, is highly valued in writing research (see Caplan & Farling, 2017; Dreyfus, Macnaught, & Humphrey, 2011). In discussions of genre-based approaches to writing in the Swedish context, the Swedish National Agency for Education (2018) emphasizes the importance of ongoing scaffolding through processes of joint construction between students and between students and teacher as a key component in improving students’ writing achievements.

However, despite this consensus on the value and effectiveness of processes of joint construction, there remains a concern about what “successful” joint construction is (Carstens, 2009). Besides, although an established scholarly interest exists in genre-based approaches (cf. Martin & Rose, 2008; Tardy, 2011) and teacher-led joint construction of texts (cf. Ivanič, 2004; Strömqvist, 2014), there is to our
knowledge (Carstens, 2009) no research using well-established control conditions in a school environment addressing the effectiveness of Joint Construction as used in the TLC. The present study seeks to address this lacuna in the research.

The TLC

Genre-based approaches to teaching writing highlight the importance of teacher-led scaffolding of collaborative writing to support students’ understanding of how language functions in different contexts and for different purposes. The TLC was developed for the explicit teaching of writing in classrooms. To give students explicit and gradual support with their writing, the TLC moves through four teaching phases. In the first phase, Setting the Context, the chosen topic and genre are introduced. In the second phase, Modelling and Deconstruction, a model text is deconstructed. In the Joint Construction phase, the teacher leads and supports collaborative text creation, putting together and formulating the text based on the negotiation between the students and between students and teacher. The students then individually construct a text in the fourth phase referred to as Independent Construction (Hamilton, 2010; Kuyumcu, 2013b; White, 2010). The teacher guides the students through these phases to build their understanding of the basic structure, linguistic features, and the social function and purpose of a genre (cf. Johansson & Sandell Ring, 2012; Pettersson, 2017; Södergren, 2016).

Informed by sociocultural theory (Vygotsky, 1978), sociolinguistics of education (Bernstein, 1975, 1990), and systemic-functional linguistics (Halliday, 1994) theories, the TLC aims “to scaffold students towards control of texts valued within particular subject areas” (Humphrey & Macnaught, 2011, p. 98). The concept of “scaffold” (cf. Wood, Bruner, & Ross, 1976), denoting the supportive function of teaching, is of major importance in the TLC, carried out in a way that helps students perform tasks that they would not be able to perform on their own. Teacher-led scaffolding of collaborative classroom activities, both oral and written, is integrated throughout the whole of the TLC, but it is particularly pronounced in the Joint Construction stage. In this article, we use the term Joint Construction when referring to the third phase of the TLC and use other concepts, such as collaboration and interaction, for the joint activities that take place in the other phases of the TLC. Moreover, when we refer to the TLC, we mean the original “writing-oriented pedagogy” (see Dreyfus et al., 2011, p. 136) and not the learning cycle developed by Rose and Martin (2012) within the Reading to Learn program and which scaffolds reading as well as writing. It is also worth pointing out that even though genre-based models are framed by explicit procedures and objectives that are conveyed to and then practiced by the students in an organized manner, we recognize that the TLC is not a static teaching model as it unfolds in a particular time, space, and place (cf. Author).

Previous research

As will be seen in this literature review, most studies that have been conducted to evaluate the effects of the TLC and Joint Construction have yielded positive outcomes on students’ achievements across educational contexts, suggesting, perhaps, why genre pedagogical approaches have gained influence in Sweden as well as internationally. However, as the review also reveals, the methodological research designs that have been used to address the effectiveness of genre-based approaches neither include control groups nor target the Joint Construction phase specifically. In this review, which is organized according to the two primary methodological designs used in previous research (small-scale qualitative studies and intervention studies), we first provide a summary of previous studies and then discuss the limitation of this research. We also bring up research related to gender differences in writing proficiency. The research shows that girls often outperform boys in text quality and text length, but, to our knowledge, no studies have attended to those differences in relation to the TLC.

A number of qualitative studies performing detailed analyses of a small set of data have explored the Joint Construction phase in the TLC. In the primary school context, the focus has been on the co-construction of text (Ahn, 2012; de Oliveira & Lan, 2014; Hodgson-Drysdale, 2013; O’Hallaron, 2014; Sellgren, 2011). Case studies have been performed by de Oliveira and Lan and O’Hallaron who both found that the students’ writing improved after the implementation of genre-based teaching. de Oliveira and Lan found that the participant, a fourth-grade student, improved his use of field-specific vocabulary and his skills of listing experiment materials with precision and also increased his use of process words. O’Hallaron found that when given support in the form of explicit instruction on the social purposes, stages, and linguistic traits of a genre, the second- and fourth-grade students in the study were able to produce effective argumentative texts.

Ahn (2012) and Hodgson-Drysdale (2013) performed action research studies in the primary school context. Ahn explored connections between writing instruction, as outlined in the TLC, and improvement in the writing of fourth- and fifth-grade students. He found that the students developed their awareness of the organization of different texts. In line with the aforementioned studies, Hodgson-Drysdale found an increase in the quality of eight bilingual fourth grade students’ writing—for example, in their production of reports that included unique information—when the teaching started out from SFL and the TLC, Joint Construction included. In a qualitative genre-based intervention study, Sellgren (2011) explored the co-construction of explanatory texts in Grade 6. The findings showed that in the student-student interaction, the students mainly devoted themselves to explaining the content of the text to be able to use the proper linguistic resources and to prepare for individual writing.

In tertiary education, the focus has been on teacher-student discourse. Studies providing detailed SFL-based analyses of the meaning making, negotiation, and collaboration in
which university teachers and students engage have been performed by Caplan and Farling (2017), Dreyfus et al. (2011), Emilia and Hamied (2015), Humphrey and Macnought (2011), and Macnought (2015).

Several intervention studies in primary, secondary, and tertiary education have examined genre-based pedagogies using pre- and posttest measures. Research conducted in a primary school context found that genre-based pedagogies improved the students’ writing (Parkin, 2014; Rose & Martin, 2013). In their large-scale quasi-experimental intervention study, Rose and Martin employed the genre-based methodology Reading to Learn. The analysis of students’ texts from 100 randomly picked classes from kindergarten to Grades 7 or 8 showed that the students improved their written text quality from pre- to posttest and that the gap between low- and high-achieving students was reduced. Thus the results indicated a particular effect from the intervention on low-achieving students’ writing. Parkin’s (2014) small-scale intervention study, which used a design inspired by the TLC in which Joint Construction was one part of several, showed that students’ writing in a Grades 2–3 classroom improved in terms of text coherence and that their academic science vocabulary was ten-folded.

The text quality of secondary school students has been researched in an intervention study by Ramos (2012) who applied the Reading to Learn approach, including the Joint Construction stage. The study was small-scale and included pre- and posttest argumentative essays written by twenty English as a second language students. The result indicated that the students could master the linguistic resources characteristic of the genre better after the intervention. Genre-based intervention studies within the university also demonstrate that the quality of students’ writing improved from pre- to posttest (Carstens, 2011; Chen & Su, 2012; Hussein, 2015; Kuiper, Smit, de Wachter, & Elen, 2017).

Regardless of educational context (primary, secondary, or tertiary education), the intervention studies were all designed without a control group (and the few genre-based intervention studies that exist to date and that include control groups [cf. Hoogeveen & van Gelderen, 2015; Wang, 2013] have not specifically addressed questions related to the stage of Joint Construction in the TLC). This makes it difficult to evaluate the effects of the independent variables and thus whether the interventions actually caused the obtained effects. Without control groups, there is thus no way of ascertaining that the Joint Construction stage in these studies was crucial for the success of the students. We are therefore not as certain as Caplan and Farling (2017) who in their recent study claimed that “there are good reasons to accept Rose and Martin’s (2012) bold assertion that joint construction is ‘the most powerful classroom practice currently available as far as learning written genres is concerned’ (p. 73)” (p. 568).

In this review, it becomes clear that there is a lack of research on Joint Construction in the TLC, in particular in regard to the use of control groups. This lacuna in the research is conspicuous because the TLC in general and Joint Construction in particular are given such prominent roles in the research literature as well as in many classrooms. There is thus a research-based as well as a pedagogical argument for further research on the impact of Joint Construction on students’ written achievement. However, it is also worth pointing out the lack of empirical studies on the effectiveness of genre pedagogy in general. In the words of Carstens (2009):

Although the educational impact of genre has been measured in Australian systemic functional contexts, where genre-based pedagogy has influenced entire state educational systems, the arguments for and against this approach have been mostly theoretical, and few, if any, attempts have been made to evaluate its effectiveness empirically. (p. 32)

To empirically evaluate the effects of the TLC using control groups may also be a contribution to discussions that raise criticism against the pedagogy. For example, the genre-based models have been criticized for instrumentality, in the sense that students are led to reproduce genres and texts (cf. Hertzberg, 2006; Ivanić, 2004; Luke, 1996), thus inhibiting “writer’s self expression and straight-jacketing learners’ creativity through conformity and prescriptivism” (Hyland, 2007, p. 152). Empirical evaluation is needed to evaluate if there is such a risk of instrumentality.

Gender differences

In the Swedish National Exams girls outperform boys in both reading and writing (Swedish National Agency for Education, 2017). The gap between boys and girls in writing proficiency in the national curriculum is a concern also internationally (Adams, Simmons, & Willis, 2015; Bourke & Adams, 2011). Previous research shows various results regarding gender differences in writing. In some studies gender differences in written text quality have been found (Adams & Simmons, 2018; Bourke & Adams, 2011). For example, in Adams and Simmons, girls performed significantly better than boys did in written text composition, but not in transcription skills such as spelling and handwriting fluency. In other studies, no gender differences have been found in written text quality (Adams et al., 2015; Williams & Larkin, 2013), but in Adams et al., differences in underpinning working memory skills were found between boys and girls indicating differences in application of memory skills in the writing process. In Williams and Larkin, there were no gender differences in text organization, development of ideas, and coherence. However, in written language measures (lexical diversity, number of verbs and nouns) and text length, girls outperformed boys. The exact nature and causes of possible gender differences in writing development are still unclear from previous research.

Narrative writing

The present study focuses on narrative writing and examines the quality of students’ written work after implementing genre-based writing instruction. Narrative writing was chosen in this study for several reasons. First and foremost, the teachers experienced that narrative writing is a difficult
genre for the students to master. They found the students had trouble using the structural framework that underlies the order and manner in which a narrative is written, for example, to build up suspense to engage readers and sustain their interest. The teachers expressed a concern about the low learning outcomes in narrative writing and saw genre pedagogy as an opportunity to work with the structural framework of narratives and thus come to terms with low achievement levels. Storytelling is a fundamental aspect of human life, used to order our experiences, to tell and make sense of our lives (Bruner, 1987). Narrative is therefore a common text type used in schools, and children in Swedish schools often engage in both reading and writing narrative texts. In addition, since composing a narrative text is a mandatory component in the Swedish national exams in Grade 6 (the students are for example required to use the structure and typical linguistic features of certain school genres in their writing), the teachers saw yet another reason to choose narrative as a particular focus for growth.

Studying children’s narrative production is important for other reasons as well (Glenn-Applegate, Breit-Smith, Justice, & Piasta, 2010). Research has, for example, demonstrated a connection between narrative skills and academic success (see Lance & Beverly, 2012, p. 44–54 for a review). In addition, focusing on narrative also allows insights into the TLC framework of narratives and thus come to terms with low achievement levels. Storytelling is a fundamental aspect of human life, used to order our experiences, to tell and make sense of our lives (Bruner, 1987). Narrative is therefore a common text type used in schools, and children in Swedish schools often engage in both reading and writing narrative texts. In addition, since composing a narrative text is a mandatory component in the Swedish national exams in Grade 6 (the students are for example required to use the structure and typical linguistic features of certain school genres in their writing), the teachers saw yet another reason to choose narrative as a particular focus for growth.

Table 1. Participating teachers and students in experimental and control classes.

<table>
<thead>
<tr>
<th>Participating classes</th>
<th>Participating teachers</th>
<th>Participating students</th>
<th>Students</th>
<th>Age (years)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade</td>
<td>Teacher experience (years)</td>
<td>Formal teacher education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Experimental</td>
<td>16</td>
<td>Swedish and social sciences for Grades 1–7</td>
<td>14</td>
</tr>
<tr>
<td>4</td>
<td>Control</td>
<td>17</td>
<td>Mathematics and science for Grades 1–7</td>
<td>11</td>
</tr>
<tr>
<td>5</td>
<td>Experimental</td>
<td>15</td>
<td>Swedish and social sciences for Grades 1–7</td>
<td>15</td>
</tr>
<tr>
<td>5</td>
<td>Control</td>
<td>19</td>
<td>Swedish, mathematics and science for Grades 1–7</td>
<td>14</td>
</tr>
<tr>
<td>6</td>
<td>Experimental</td>
<td>4</td>
<td>All subjects Grades 1–6</td>
<td>17</td>
</tr>
<tr>
<td>6</td>
<td>Control</td>
<td>12</td>
<td>Mathematics and science for Grades 1–7</td>
<td>19</td>
</tr>
</tbody>
</table>

Purpose

In this study, we explored the effect of Joint Construction in the TLC by using a quasi-experimental design in a writing intervention where the experimental group implemented all four stages in the TLC: (1) Setting the Context, (2) Modelling and Deconstruction, (3c) Joint Construction, and (4) Independent Construction, and the control group implemented only Stages 1, 2 and 4. Pre- and posttests were conducted to evaluate possible effects of Joint Construction in relation to written text quality. Following Rose and Martin (2012), it was expected that the Joint Construction stage would improve the quality of students’ narrative writing in terms of story grammar and linguistic complexity. It was further expected that girls would outperform boys in text length and written narrative text quality, as some of the previous research shows evidence that girls write longer texts with better text quality compared with boys (cf. Adams & Simmons, 2018; Williams & Larkin, 2013). In addition, low-proficiency students were expected to gain more from participating in the experimental group using Joint Construction compared with students of high proficiency level (cf. Rose & Martin, 2013).

Method

In this study, we evaluate the effect of Joint Construction on students’ written narrative text quality in six Swedish primary school classrooms during two semesters by using a quasi-experimental design with two groups, referred to as the experimental and the control groups.

Participants

Six teachers (five women and one man), all educated teachers of Swedish, with long experience of primary school teaching, participated in the intervention along with 90 students, 9–12 years old in Grades 4–6 (see Table 1). The experimental group consisted of 18 girls and 28 boys from one Grade 4, one Grade 5, and one Grade 6 class. The
control group consisted of 16 girls and 28 boys, also from one Grade 4, one Grade 5, and one Grade 6 class. The choice of school was based on two criteria: (a) representing similar averages of school merits and (b) practical availability and willingness to participate (i.e., self-selection).

The majority of the students (94%) had Swedish as their first language. Seven students reported a first language other than Swedish, of which five took Swedish as a Second Language instead of Swedish. All teachers and students were informed of the purpose of the study. Verbal consent was gathered from the students, and since they were under 15 years of age, written consent was also collected from all students’ parents, as well as from the teachers. All participants were informed that they had the right to withdraw their consent at any point and that the data collected would be treated confidentially and used for research purpose only.

Measuring written narrative text quality and text length in pre- and posttest

In this study, we use MISL (Gillam et al., 2017) for the analysis of the students’ written texts in pre- and posttests, mainly because MISL captures the two main components in focus in the intervention (i.e., story grammar [macrostructure elements] and linguistic complexity [microstructure elements]). MISL also matches several aspects of what is prescribed concerning narrative skills in the national curriculum for the school subject Swedish in Grades 4–6 (Swedish National Agency for Education, 2011). In the knowledge requirements for Grade 6, it is stated that the students should be able to write different text types and in the narrative genre be able to produce vivid descriptions and a logical sequence of events in a narrative text.

Building on the correlation between elements of MISL and the knowledge requirements in the national curriculum, the following aspects are included from MISL in the assessment of macrostructure elements: description of character and setting (time and place), initiating events that “start the story” and motivate or elicit characters’ actions, characters’ internal responses (use of adjectives such as surprised, actions or attempts related to initiating events, and consequences (actions that end the episode or bring it to a logical conclusion). Each aspect is examined on a scale from 0 to 3 points. To receive higher points, the descriptions of characters and settings need to be specific, using determiners or names. Internal response, plans, actions or attempts, and consequences all need to be related to the initiating event to gain points. Temporal and causal connections among initiating events, characters’ actions, and consequences of actions are central for story coherence (Gillam et al., 2017). In an examination of macrostructural elements, it is therefore essential to focus on to what extent the described story elements are integrated with each other.

The microstructure subscale used in the present study consists of five elements that relate to linguistic complexity (Gillam et al., 2017; Petersen, Gillam, Spencer, & Gillam, 2010; Westby, 2015): coordinating conjunctions (that coordinate clauses [e.g., and, but, or]), subordinating conjunctions (that join a subordinate clause to a main clause [e.g., because, before, when]), mental and linguistic verbs (that refer to passive states of cognition, thinking, knowing, and perception of the world [e.g., wonder, understand, believe] or acts of speaking [e.g., ask, tell, whisper]), adverbs (that modify verbs or adjectives [e.g., slowly, then, never]), and elaborated noun phrases (modifiers and nouns, including articles, possessives, determiners, wh-words and adjectives [e.g., “the little brown dog”]). Grammaticality and tense were excluded due to low internal consistency reliability (Gillam et al., 2017). In each of these microstructure categories, the texts were given scores from 0 to 3 points (Gillam et al., 2017; Westby, 2015). The text received a score of 0 if there were no examples of the linguistic category, 1 point if there was one exemplar, 2 points if there were two exemplars and 3 points if there were three or more exemplars. Gillam et al. recommend that a composite score for both macro- and microelements (Cronbach’s α = .79) is used in an analysis of narrative skills due to low internal consistency reliability for each subscale (macrostructure subscale α = .71 and microstructure subscale α = .67). The summarized scores of the two subscales (macro- and microstructure) constitute a composite score, denoted in the present study as “written text narrative quality.” In this study, Cronbach’s alpha’s for the composite score of written text narrative quality was found to be .73 and .65 for pre- and posttest measures respectively. Two research assistants were trained to do the transcription and scoring. A total of 10% of the data were randomly selected for a test of interrater reliability. The intraclass correlations for each dependent variable were excellent with scores between .90 and .99.

Except for micro- and macrostructure elements, the total number of words in the students’ texts was used as a measure of text length in pre- and posttest. Our rationale for including total number of words is that text length has in previous research proved to differentiate children with high and low language ability in primary school (Jones & Myhill, 2007; Williams & Larkin, 2013).

Design and procedure

This study uses a quasi-experimental mixed model design with group and teacher judgment as between-subject factors and pre and post measures as within-subject factors to determine the effect of the Joint Construction in the TLC on fourth- to sixth-grade students’ narrative writing. In each grade, one class was randomly assigned to the experimental group and the other to the control group. Hence, there was one experimental class and one control class per grade level, reflecting the quasi-experimental mixed model design. These classes are henceforth collectively referred to as the experimental group and the control group.

To obtain an estimate of individual variation with regard to students’ proficiency levels in the subject of Swedish, the teachers evaluated the students’ proficiency in relation to the national learning outcomes using three categories; high,
mid, and low proficiency. However, only nine students were assessed to have low proficiency, and they were therefore merged into the mid proficiency category (n = 46) summarizing the new category, low-mid proficiency, to 55 students. The high-proficiency group consisted of 35 students. These were further subdivided for the two sets of analyses: (a) first set of analyses in Grades 4 and 6 and (b) second set of analyses in Grade 5 (Table 3 and 4). Initially, a pilot study was carried out to evaluate the feasibility of the study design. The primary focus was on ensuring that the phases of the TLC that were not subject to manipulation were implemented as identically as possible in both experimental and control groups. Before the main intervention started, professional training was provided for the intervention teachers. Two 2-hr seminars were held, which included theoretical perspectives and classroom procedures for genre pedagogy, as well as a presentation of the different stages of the TLC in relation to the narrative genre.

Teacher-initiated goals and content were the starting point for a collaborative design of the intervention. The collaborative work of the teacher-researcher team included the development of classroom procedures of the four phases of the TLC with detailed written instructions that served as scripts for lesson plans. The material, content, and instructions were identical for the control and experimental group in the first (Setting the Context), second (Modelling and Deconstruction) and fourth (Independent Construction) phase, whereas the third phase was manipulated in the control group. The Intervention ran for ten weeks altogether, from February until April, with 1–3 lessons (45–90 min each; see Table 2) per week.

All the students took the pretest in mid-February. They were instructed to create their own narrative from a picture in black and white, representing a young child sitting on a bench under a tree, looking at a big, old-fashioned key lying on the ground. A brief initial brainstorming about what may be happening in the picture and what might have happened was carried out before the students were asked to write an individual narrative about “what will happen when the child uses the key?” After the intervention, all students took the posttest, which also was part of the fourth phase of the TLC (Independent Construction), in April. The posttest picture represented a child (about the same age as the child in the pretest picture), facing a large wooden door framed by herbage while looking at a key in his or her hand. They were instructed to write a narrative about “what will happen when the child uses the key?” Both pretest and posttest were administered by the students’ teachers (as was the whole intervention).

The teachers were interviewed before and after the intervention. In addition, the teachers wrote logbooks to establish the fidelity of implementation of the intervention in each classroom.

### Intervention

During the intervention, the classroom work with the different phases of the TLC was conducted using the classical fairy tales by the Danish author H. C. Andersen. Andersen’s fairy tales speak to children of all ages as well as adults by addressing a number of universal themes; but they were chosen for this study principally because they are organized according to a particular pattern with a clear orientation, events, some type of conflict, and a solution. The fairy tale
often follows a series of events that builds up toward a complication and a subsequent resolution in a way that facilitates the identification of a structure and thus the way in which the story creates tension and suspense. To notice the way a genre organizes its content is a vital part of the TLC in that the students are invited to use this structure in their own writing in the fourth phase of the cycle.

The four phases of the TLC were implemented in the following way. In the first phase of Setting the Context, the teachers and students in both experimental and control groups worked with the definition, purpose, and structure of narratives. After an initial discussion of the characteristics of narratives, the students were asked to tell a story for a classmate using given visual prompts as a frame. Thereafter, the teachers read “Prinsessan på ärtén [The princess and the pea]” by H. C. Andersen (Friberger & Harris, 2007) and toward the end of the lesson, teachers and students jointly summarized their knowledge of narratives visualized in a mind map on the whiteboard. The second lesson, which also formed part of the first phase, started with a teacher-student discussion about the definition, purpose, and structure of narratives using an image of an ugly duckling, the well-known figure from Andersen’s story with the same name. Following this discussion, the students watched a screen version of “Den fula ankungen [The ugly duckling]” (Walt Disney Company, 2004) and each class drew a mind map of its structure.

In the second phase, Modelling and Deconstructing, the students in both the experimental group and the control group, identified linguistic features. The teachers read aloud “The ugly duckling,” and together the teachers and students analyzed its structure after which the students retold the story in pairs. The purpose, structure, and linguistic traits of a narrative were then consolidated via a slide show. The students also performed a cloze text with missing temporal adverbials. Finally, the teachers read aloud Andersen’s “Granen [The fir tree]” (Andersen & Otto, 1993) before the students retold the narrative in pairs with support of “The story face strategy.” Phase 2 covered 1–2 lessons, depending on the time spent on discussions in each class.

The Joint Construction phase was only carried out in the experimental groups. The teachers and students began the lesson by co-creating a version of “The fir tree” in which they replaced the main character, the fir tree, with a human. With particular focus on narrative structure, they negotiated the content of orientation, complication, and resolution. The teachers acted as secretaries, writing the narrative on the whiteboard. Thereafter, a number of pictures were used to inspire the creation of a new narrative. Together, teachers and students created the beginning of a narrative. The students then continued writing the story in pairs, with the help of a story structure aid sheet showing the narrative structure. The phase of Joint Construction was brought to an end as the students individually wrote a narrative with the help of the teacher and the story structure aid sheet. The time spent on these three narratives varied from three to eight lessons (see Table 2). The variation in time spent on the Joint Construction phase is the outcome of one teacher’s eagerness to meet the needs of the students and thus adding additional time (eight lessons instead of three) for the co-construction of text. This raised the question whether an increased amount of lessons devoted to the joint construction phase would boost the effect for the experimental group relative to the control group. Having a highly motivated teacher and an increased amount of Joint Construction lessons without a corresponding increase for the control group does, of course, increase the risk of a type I error, thus, wrongly interpreting an obtained difference favoring the experimental group relative to the control group as a true effect. It was therefore decided to analyze the data separately. The first set of analyses focused on the fourth- and sixth-grade students. The second set of analyses included the fifth-grade students who had been given more time for Joint Construction.

The students in the control groups did not receive any joint construction in phase three, instead they watched a screen version of “The fir tree” during the first lesson of the phase. During the second lesson they dramatized either “The fir tree” or “The ugly duckling” and, finally, each of the students made a cartoon of “The ugly duckling.”

Both experimental and control groups participated in the fourth phase, Independent Construction, which also served as the posttest. As described previously, in the Design and Procedure section, the students independently wrote a narrative, starting out from a visual prompt where a child faces a large wooden door framed by herbage while looking at a key in his or her hand. After a teacher-led collective brainstorming about what is happening in the picture, the students individually wrote a narrative focusing on the question “what will happen when the child uses the key?”

**Statistical analyses**

**First set of analyses, Grades 4 and 6**

A 2 Group (experimental, control) × 2 Time (pre, post measures) × 2 Teacher Judgment (low-mid performer, high performer) × 2 Gender (girls, boys) quasi-experimental mixed design analysis of variance, with group, teacher judgment, and gender as between-subject factors and time as a within-subject factor evaluated the intervention. Written narrative text quality and text length were entered as the dependent variables. These analyses were indexed by partial eta squared ($\eta_p^2$) as a measure of effect sizes. Analyses of skewness and kurtosis revealed that all dependent measures were less than ±0.73, with mean values within three standard errors. All dependent variables were therefore judged to be normally distributed (Finney & DiStefano, 2006). Running two separate analyses do inflate the risk for type I error, therefore a Bonferroni correction (0.05/2 = p < .025) was applied. To increase power in the analysis, we excluded gender and teacher judgement and conducted an additional mixed design analysis of variance with only group (experiment, control) as the between subject factor. Narrative text quality and text length were again entered as dependent variables, respectively.
Second set of analyses, Grade 5
As this sample only encompassed the Grade 5 students \((n = 29)\), we restricted the analysis and thus excluded gender and teacher judgment as factors. Initial independent \(t\) tests found that the experimental and control groups differed in the pretest measures of written narrative text quality and text length, \(t(27) = 4.86, p < .001; t(27) = 4.27, p < .001\), respectively. These pretest differences were controlled for by entering the pretest measures as covariates in the analyses. Therefore, we conducted a univariate analysis of covariance with group as a between-subject factor and pretest score as covariates. Written narrative text quality and text length at posttest were entered as the dependent variables, respectively. The analyses were indexed by partial eta squared \((\eta_p^2)\) as a measure of effect sizes. Analyses of skewness and kurtosis revealed that the measures were less than \(\pm 0.79\), with mean values within three standard errors. Both dependent variables were therefore judged to be normally distributed (Finney & DiStefano, 2006). To control for potential type I error, a Bonferroni correction \((0.05/2 = p < .025)\) was applied.

Results
First set of analyses, in Grades 4 and 6
Table 3 shows mean values and standard deviations for narrative ability and total number of words across experimental and control groups, gender and teacher judgements for the first set of analyses in Grades 4 and 6. As can be seen in Table 3 there was a numerical progress from pre to post measures with regard to written narrative text quality and text length in the control and experimental groups in Grades 4 and 6. The table also shows that girls outperformed boys at both pre- and posttest and that students judged to have high proficiency level by the teachers outperformed their low-mid counterparts with regard to written narrative text quality and text length at both pre- and posttests.

The analysis of written narrative text quality revealed no within-subject effect of time, \(F(1, 53) = 1.22, p = .26, \eta_p^2 = .02\), and no between-subject effect of group, \(F(1, 53) = 0.48, p = .50, \eta_p^2 = .001\), or teacher judgment, \(F(1, 53) = 2.79, p = .106, \eta_p^2 = .009\), but a significant between-subject effect of gender, \(F(1, 53) = 7.65, p = .008, \eta_p^2 = .13\). However, no significant interaction effects were obtained \((ps > .16)\).

The analysis of text length revealed no within-subject effect of time, \(F(1, 53) = 0.73, p = .40, \eta_p^2 = .01\), and no between-subject effect of group, \(F(1, 53) = 0.07, p = .93, \eta_p^2 = .00\). However, a significant effect of teacher judgment, \(F(1, 53) = 10.53, p = .002, \eta_p^2 = .17\), and gender, \(F(1, 53) = 7.11, p = .01, \eta_p^2 = .12\), was found. No significant interaction effects were obtained \((ps > .03)\).

These analyses show that the numerical difference from pre-to posttest with regard to both written narrative text quality and text length was nonsignificant for the experimental and the control groups. Critically, the experimental group did not improve more than the control group, as indicated by the nonsignificant group by time interaction. The significant between-subject effects of gender and teacher judgment showed that girls outperformed boys with regard to both written narrative text quality and text length and that high-proficiency students outperformed their low-mid counterparts concerning text length but not narrative ability. However, these effects were also unrelated to the intervention, as shown by the nonsignificant interactions. The additional analysis with gender and teacher judgment excluded, revealed no significant effects of time, group, or group by time interaction \((ps > .06)\). Even when excluding teacher judgment and gender, thus increasing power in the analysis, no significant difference between the experiment and the control group was found.

Second set of analyses, in Grade 5
Table 4 shows mean values and standard deviations for narrative ability and total number of words across experimental and control groups, gender and teacher judgements for the second set of analyses in Grade 5. As can be seen in Table 4, there was a numerical progress from pre to post measures in Grade 5 with regard to written narrative text quality and text length in the control and experimental groups. The analysis of written narrative text quality with pretest as covariate and posttest as the dependent variable, revealed no main effect of group, \(F(1, 26) = 1.57, p = .22, \eta_p^2 = .06\), at posttest.

The analysis of text length, with pretest as covariates and posttest as the dependent variable, revealed no main effect of group, \(F(1, 26) = 0.89, p = .35, \eta_p^2 = .03\), at posttest.

The analyses of posttests revealed that participants in the experimental group did not outperform participants in the control group despite the prolonged phase of Joint Construction with respect to both written narrative text quality and text length.

Discussion
In the present study, we evaluated the effectiveness of the Joint Construction stage in the TLC in relation to 10- to 12-year-olds’ written narratives. The rationale for selecting the Joint Construction stage for the evaluation was its prominent role in research and teaching in addition to Rose and Martin’s (2012) claim that “successful Joint Construction is the most powerful classroom practice currently available as far as learning written genres is concerned” (p. 73). It was expected that Joint Construction would influence writing performances and that the experimental group therefore would outperform the control group with regard to written text quality and text length. In line with earlier studies, we expected low-mid proficiency students to gain more from the experiment condition using Joint Construction in writing compared with students with high proficiency (Rose & Martin, 2013). As previous studies indicate that girls write longer texts with better quality (Adams & Simmons, 2018; Bourke & Adams, 2011), we expected that girls would outperform boys with regard to written text quality and text.
length. With the use of a quasi-experimental setup, the experimental and control groups were assigned the TLC. However, for the control group, the Joint Construction stage was manipulated. Instead of co-constructing a text, they were play-acting stories and watching screen versions of narratives to process the narrative genre. Below we discuss the main findings in relation to the TLC (especially in relation to the influence of Joint Construction), teacher judgments of students’ achievement level, and gender. Finally, we comment on the strengths and limitations of this study.

**Effect of joint construction on written text quality and text length**

Both sets of analyses showed that the experimental and control group both made numerical progress in written narrative text quality (story grammar and linguistic complexity) and text length. However, no significant group by time interaction effects and no main effect of group were obtained in the first and second sets of analyses, respectively. Hence, no effects of the intervention in any of the analyses were detected. It should be noted that the participants in the experimental group in the second set of analyses were subject to eight joint construction lessons while the control group only received three lessons in the Joint Construction phase. This increased the risk for a type I error. Despite the larger number of lessons conducted with the experimental group, no main effect of group was detected.

**Students’ educational achievement level in relation to outcome of the writing intervention**

In the first set of analyses, in which we target fourth- and sixth-grade students, we expected that the group by teacher judgment interactions would show that students with low-mid proficiency would gain more from the experiment condition using Joint Construction than the high-achieving students. This was not confirmed in our analyses. The analyses did not reveal any effects at all: no main effects of group, time, gender, or teacher judgment and no interaction effects. In relation to previous findings that the TLC is particularly beneficial for students of low socioeconomic background and students who have less experience of literate texts from situations outside the classroom (Martin & Rose, 2013; Rose & Martin, 2013), the present results question this argument.

**Why these unexpected findings?**

As previously pointed out, this study is to our knowledge the first that has evaluated the TLC, focusing explicitly on the Joint Construction stage with an active control group. The findings presented here do not provide support for the claim that the co- construction of texts performed in the Joint Construction stage of the TLC develops students’ written text quality (Rose & Martin, 2012). The results of this study seem rather to support the well-known claim in writing research that there is not one singular best practice of writing instruction, thus questioning Rose and Martin’s confident claim that “joint construction is the most powerful classroom practice currently available as far as learning written genres is concerned” (p. 73).

A possible explanation for these unexpected findings is that the first two phases in the TLC, Setting the Context and Modelling and Deconstruction, are sufficient on their own in improving students’ writing and that, consequently, Joint Construction does not bring any additional value to the students’ writing process.

Although the present results need to be replicated, it is important to point out that many of the previous studies have been conducted without control groups. Studies demonstrating an improvement in writing abilities and a reduced gap between low and high-achieving students (cf. Rose & Martin, 2013) have been cited as evidence for the potential of genre-based pedagogies to improve students’ writing. However, without a proper control group or control conditions, the basis for knowing if the results were caused by the independent variable (the intervention) or some other factor such as subject-expectancy, observer-expectancy effects, and test-retest effects is questionable.

Another unexpected result was that the Joint Construction stage did not improve the text quality of low-mid performer. This may be related to the processes of peer reviewing. Collective writing, as employed in the Joint Construction phase, can be described as a process involving the giving and receiving of associative ideas, ways of structuring the text or suggestions of formulations and words to use. In the process of collective writing, high achieving students’ are often more frequently givers of, for example, formulations and word decisions than students with low-mid proficiency. Thus, the result, which indicated that low-mid performers did not improve their text quality from participating in Joint Construction, may be understood in line with the results of Lundstrom and Baker (2009), which showed that students write better texts from giving peer feedback than writers learn from the feedback they receive.

These findings could also be discussed from a cognitive perspective. It is well known that educationally less proficient students often have lower working memory capacity (WMC; Alloway, Gathercole, Kirkwood, & Elliott, 2009) and less efficient executive functions (Gathercole, Alloway, Kirkwood, Elliott, Holmes, & Hilton, 2008). The consequences of low WMC, as well as less efficient executive functions, are associated with inattentive behaviors such as failing to monitor the quality of their work and with lesser attention span. Also, a crucial part of the executive functions is the ability to switch between mental sets, inhibit irrelevant information, and update information (Miyake et al., 2000). Participating in classroom scaffolding situations requires the students to process and continuously update information delivered in the classroom as the teacher and students participate in metacognitive talk about text at the same time as they engage in producing written text. This may require the students to maintain their attention by inhibiting the inclination to direct their attention toward a distracting stimulus, hence while working in pairs ignoring the ongoing student-students interactive activities in other pairs. Although the
cognitive load reasoning is supported by developmental studies of working memory (e.g., Gathercole, 1999), we did not in this specific study measure students working memory which make this reasoning speculative.

It should also be noted that the experimental group but not the control group used a mind map in the Joint Construction phase, which could potentially reduce the cognitive load and thus facilitate learning for the low performing students. In addition, while the teachers in the experimental group were formally trained to teach the subject of Swedish and the Social Sciences, the teachers in the control group had their formal training in Mathematics and Science. Despite this additional advantage no effects were detected regarding the Joint Construction intervention.

The scarcity of intervention studies focusing on genre pedagogy in general and Joint Construction in the TLC specifically is possibly partly caused by the difficulties of performing a controlled study of a pedagogy which has as one of its main principles the flexibility of the teaching practices in relation to the needs of the individual students and the classroom context. Consequently, genre pedagogy and the TLC do not resonate well with intervention studies performed using a quantitative design. However, this lack of resonance does not explicitly answer the question why the intervention studies, which have been performed, have not included an active control group because the inclusion of an active control group does not add to the fixedness of the study.

**Gender aspects in relation to writing and the outcome of the intervention**

In earlier research, there are some mixed results regarding gender differences in writing. However, we expected girls to outperform boys in both written narrative text quality and text length in the pretest condition considering both the yearly outcome in the Swedish national assessment where girls constantly outperform boys in writing (Swedish National Agency for Education, 2017) and in relation to previous research in which girls in several studies outperform boys on most of the written text measures (Adams & Simmons, 2018; Williams & Larkin, 2013). The outcome in this study confirms this pattern, as can be seen in Table 3 where the between-subject analyses showed that girls outperformed boys. However, no significant gender by group interactions on any of the dependent variables were detected in the first set of analyses, indicating no gain of gender with respect to the intervention. No analyses including gender were conducted in the second set of analyses due to the small sample size.

**Strengths and limitations**

The sample size in the first set of analyses, the tight comparison between the experimental and control groups, the ecological validity (part of the regular class), the fairly controlled context together with the strict (Bonferroni-corrected) analyses have to be regarded as strengths. There are, however, some limitations. The sample size in the second set of analyses in Grade 5 was quite small, and gender and teacher judgement were therefore excluded from the analyses. There was no control over the participants’ activities during the time between pre and post measures. Though unlikely, it is not impossible that participants in the control group practiced at home in ways that targeted the manipulation in Stage 3. Further, the researchers did not perform classroom observations during the intervention. Consequently, the information about the co-construction of text that took place in the classrooms in the Joint Construction phase is obtained from teachers’ reports in logbooks and interviews.

We did not consider what in some contexts is referred to as “artfulness” (Glenn-Applegate et al., 2010) as an indicator of narrative quality. A qualitative study, focusing on narratorial aspects other than the quantifiable might have yielded another outcome. It is also possible that a prolonged intervention would have generated somewhat different results. With respect to the intervention, it is also worth discussing potential observer-expectancy effects for the experimental group. As this study was based on a request from the teachers, and as they took part in the workshop, it is clear that they became aware of the hypotheses. A reasonable assumption is therefore that they were biased and thus believed that the performed intervention with Joint Construction as subject to manipulation (experimental group) would improve performances in general and the less proficient pupils’ achievement in particular. Had the teachers been unaware of the hypotheses, it is likely that the effects had been less pronounced for the experimental group, and that it had become more advantageous for the low-mid proficiency students to belong to the control group.

Viewed in relation to the whole model, these findings are not conclusive. However, it does point to the need for conducting better-controlled and quantitative studies that evaluate the TLC in its entirety and during a more extended period. It is somewhat surprising that such a widespread and accepted model within the teacher community is not more thoroughly evaluated using quantitative inferential approaches. The present finding will hopefully spark additional studies aimed at evaluating the TLC using adequate control conditions, which include measures of both educational and cognitive proficiency.

The study as a whole inspires an approach to writing instruction as a situated and variable phenomenon emergent in social-discursive-material writing practices (cf. Author). As this intervention study does not specifically embrace factors related to the social-discursive-material writing practices, such as classroom interactions, the next step may therefore be to explore how the TLC evolves in the interaction between students and between teacher and student as they negotiate conceptions of writing in relation to different educational circumstances. Also, knowing what we now know about narrative writing in the TLC, that is that Joint Construction may not benefit the students to the extent that has been previously assumed, future research could focus on other school genres to help determine whether Joint Construction in the TLC really is the most powerful classroom practice for learning written genres.
Notes

1. Another obvious example is modernist literature, which consciously broke with inherited literary norms, such as a traditional plot and instead followed a character’s inner train of thoughts and subjective impressions, using what came to be called the stream-of-consciousness technique.

2. “The story face strategy” (Staal, 2000) is a strategy for students’ retelling of a narrative where a face is used. The eyes represent the structure of the narrative (with one eye standing for time and place and the other for main characters), the nose represents the problem, and the mouth represents the number of events. The students are also instructed to reflect on whether the mouth should be happy or sad and to motivate their choice.

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References


