Enhancing Fourth Graders' Writing Skills
Through Collaborative Writing Tasks: An Experimental Study

Βελτίωση της δεξιότητας του γραπτού λόγου σε μαθητές Δ΄ Δημοτικού με συνεργατικές δραστηριότητες παραγωγής γραπτού λόγου: μια πειραματική μελέτη

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The present article aims to investigate how the writing skill of fourth graders can be enhanced through an extended engagement in collaborative writing activities, involving process writing. It is argued that writing, particularly as a collaborative activity within a process writing context, can improve learners' language knowledge and, therefore, have a positive effect on the quality of writing in a foreign language context. The pooling of ideas and linguistic resources, after systematic engagement, leading to the production of a joint product, we hypothesize, can have positive outcomes and yield better written outputs than outputs produced individually. To test our hypothesis, we conducted a comparative study of the written outputs of two classes of fourth graders in a primary school in the Prefecture of Piraeus. In the control group, process writing tasks were carried out by students on an individual basis whereas in the experimental group the same tasks were carried out in pairs. The writing quality of students' texts in the two groups was evaluated in terms of accuracy, fluency, complexity, content, structure and task – fulfillment and students' attitudes and perceptions with regard to their writing experience were gauged immediately after the final writing session through the administration of a questionnaire.

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Το παρόν άρθρο έχει ως στόχο να ερευνήσει το πώς η δεξιότητα του γραπτού λόγου σε μαθητές της Δ΄τάξεως του Δημοτικού μπορεί να βελτιωθεί μετά από συνεχή ενασχόληση με συνεργατικές δραστηριότητες παραγωγής γραπτού κειμένου που εστιάζουν στη διαδικασία της γραφής. Υποστηρίζουμε ότι η παραγωγή γραπτού λόγου ως συνεργατική δραστηριότητα μπορεί να βελτιώσει τη γνώση της ξένης γλώσσας και, επομένως, να επηρεάσει θετικά την ποιότητα του γραπτού λόγου σε ένα περιβάλλον εκμάθησης της Αγγλικής ως ξένης γλώσσας. Η συνεισφορά ιδεών και γλωσσικών γνώσεων που οδηγεί στην παραγωγή ενός κοινού κειμένου μπορεί να αποφέρει θετικότερα αποτελέσματα απ΄ό,τι στην περίπτωση παραγωγής γραπτού λόγου σε ατομικό επίπεδο. Για να επιβεβαιώσουμε την υπόθεσή μας, διεξαγάγαμε

μια συγκριτική μελέτη των γραπτών εργασιών δύο τάξεων της Δ΄ Δημοτικού σε ένα Δημοτικό Σχολείο στη Νομαρχία Πειραιά. Οι δραστηριότητες της διαδικασίας παραγωγής γραπτού κειμένου στην ομάδα ελέγχου, διεξήχθησαν σε ατομική βάση, ενώ στην πειραματική ομάδα, οι ίδιες δραστηριότητες διεξήχθησαν σε ζευγάρια. Η ποιότητα των γραπτών κειμένων των μαθητών συγκρίθηκαν ως προς την ακρίβεια, το νόημα, την πολυπλοκότητα, το περιεχόμενο, τη δομή και, γενικότερα, την πραγμάτωση δραστηριοτήτων ενώ αξιολογήθηκαν επίσης οι συμπεριφορές και οι αντιλήψεις των μαθητών ως προς την εμπειρία της παραγωγής γραπτού λόγου μετά την τελευταία συνεδρία μέσω της συμπλήρωσης ερωτηματολογίου.

Key words: collaborative writing, individual writing, joint scaffolding, collaborative process writing tasks, comparative study, written outputs, post-writing questionnaire

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1. Introduction

Writing is generally considered an activity that is carried out by learners individually, either in class or as homework, followed by feedback provided by the teacher. Writing activities usually focus on the end-product, to be evaluated by the teacher, and on linguistic accuracy rather than content. Little or no attention is generally paid to the processes learners go through while composing or to how they can be benefited by having a range of planning, writing and revising strategies to draw on (Hedge, 2000; Hyland, 1996). What is more, little attention is paid to the social context of language learning, in which co–construction of knowledge can provide learners with language learning opportunities that can potentially facilitate their language development, according to the social constructivist view of learning (Bruner, 1985; Donato, 1994; Swain, 2000; Vygotsky, 1978, among others). Within such a constructivist framework, learners can draw and build on each other's knowledge, which allows them to interact at higher levels of activity than if they had worked individually. As suggested in the literature (Donato, 1994; Storch, 2002; Swain and Lapkin, 1998), this kind of social interaction can contribute to language learning.

Drawing on this, in the present study we argue that writing need not be a solitary activity in which the individual discovers language on his/her own. Instead, it can be carried out through peer exchange and collaborative work. The pooling of knowledge and collaboration during the writing process towards a common goal may lead to the production of stronger end-products, as relevant research has shown (Dobao, 2012; Ens *et al*, 2011; Shehadeh, 2011). It will thus be argued that negotiating in collaborative writing tasks, providing on–going feedback and sharing responsibility for written products can help students to develop a better understanding of writing and accomplish tasks that they might not have accomplished alone, at least not so successfully. Coursebook activities for fourth graders, as regards writing, incorporate mainly individual work, with the exception of a cross–curricular project at the end of each unit. This is usually done in groups and occasionally in pairs, but students are expected to produce a one–off piece of writing. Within the framework for collaboration briefly outlined above, students should be given more opportunities for collaborative work and collaborative writing in particular within a process writing context.

To this end, this study highlights two important features of writing, that of process and collaboration, which are hugely overlooked not only in coursebook materials but also in current writing instruction practices in foreign language classrooms. Collaborative writing in primary classes, if dealt with in a more systematic way, can "push" learners to a higher level

of achievement, help them to gain new insights, learn to cooperate with other students and, last but definitely not least, improve the quality of their writing.

2. Literature review

Writing is generally thought of as an individual activity but in real life contexts, such as in higher education or in the workplace, collaborative writing is not that unusual. Learners develop knowledge through 'scaffolding', that is through social interaction with other able members of a society. Such scaffolding can also occur in a foreign language context, in which learners work either in pairs or in groups. Joint scaffolding, a term used by Donato (1994), is seen as taking place among peers when they are performing group-pair work during the various stages of process writing.

One way to promote social interaction among peers in a writing class is to engage them in collaborative writing or in pair/group writing activities. Collaborative writing "entails the production of a shared document where group members engage in substantive interaction, shared decision – making and responsibility for the document" (Allen *et al.*, 1978 in Fung, 2010, p. 18). It can be 'dialogic' and 'hierarchic' collaborative writing, according to Ede and Lunsford (1990). The former refers to writing in which members work together on all aspects of a project while the latter refers to writing in which members assign each other or themselves different parts of the project (Ede and Lunsford, 1990, in Ens *et al.*, 2011, p. 66). Another distinction, as defined by Ritchie and Rigano (2007), is between that of 'cooperative' and 'lead' writing. In 'cooperative' writing, contributors take turns at negotiating different sections to write whereas in 'lead' writing one person is in charge of writing the first draft and the lead is rotated for the other drafts (p. 66). Both components of each of the above distinctions could be included in a collaborative venture.

Collaborative writing affords learners the opportunity to co-construct knowledge by getting involved in a process of joint negotiation of meaning. It requires the integration of specific features, that is, those of "defining" and "facilitating" ones (Fung, 2010, p.18). The "defining" features involve the element of 'mutual interaction', during which students initiate and contribute ideas as well as help students to foster generative and reflective thinking (p. 9). During 'negotiation', students engage in 'interaction' when they encounter problems with the comprehension of messages (p. 21). The feature of 'cognitive conflict' is also present in a collaborative writing scheme before decisions are reached. On the other hand, "facilitating" features are related to 'backtracking', that is moving back and forth between the different process writing stages so that learners can enhance task familiarity (p. 26).

Within a process writing framework, writing is viewed as a "non-linear, exploratory and generative process whereby writers discover and reformulate their ideas as they attempt to approximate meaning" (Zamel, 1983: 165). In other words, writing is seen as a form of 'problem –solving' which allows for an interplay of different processes, such as "generating ideas, discovering a 'voice' with which to write, planning, goal – setting, monitoring and evaluating what is going to be written, and searching for language with which to express exact meanings" (p. 3). With regard to collaborative writing, students are encouraged to contribute to the decision – making on all aspects of writing and during all the writing stages, regarding content, structure and language. Thus, the joint responsibility over the production of the text promotes a sense of "co-ownership" (Storch, 2005: 154).

During collaborative planning the planners not only have to generate and then elaborate their plans for their partners, but also evaluate what they have generated, select ideas and make

decisions in order to reach a consensus about topic, details and organization (Flower, 1994; Saunders, 1989). Next, in collaborative composing, which is a less 'open' task than planning, co – composers undertake the task of actually producing a piece of writing. It starts with a conversation on how to go about writing, or else, with the process of oral composing, as co – writers have to explore options by listening to each other's ideas and to decide among words, phrases and sentences for the joint text (Saunders, 1989, p.106). Co – writers' roles and responsibilities should be clearly defined at every stage of the writing process and in every task they engage in. This may entail either individual or collective efforts to maintain equal status by sharing the work load and by making decisions together (p. 107). For example, one might take on the role of the text generator while the other might make decisions and undertake the role of the 'scribe', or they could share responsibilities simultaneously and then transcribe.

It should be noted here that the stages are not necessarily strictly sequential but might also be done simultaneously. To be more specific, during collaborative reviewing, according to Saunders (1989), writers take turns in reviewing their texts throughout the process of composing and focus on evaluating the decisions they have made. Writers share their drafts with peers, who become readers and respond to their texts either by commenting, criticizing each other's work, providing suggestions, sharing ideas and knowledge and generally contributing their strengths to the pair or group (Fung, 2010: 23). Co – writers may also share the responsibility of producing part or parts of their final product individually. This is a more 'closed' task than planning and composing, which entails learners taking turns as writers and readers in assessing their text or texts together. Collaborators discuss the decisions they have made and work towards reaching an agreement on the parts of the text that work successfully as well as on the parts that need to be improved and try to reach a consensus about new options for a second draft. Thus, co-writers share responsibility for revisions from draft to draft.

At the co-publishing stage, on the other hand, students may not complete all tasks collaboratively. They may work together "to develop a collective document that is comprised of their individual texts" (Saunders, 1989, p. 103). Co-publishers, as suggested in Saunders, "share ownership over their collective document but maintain primary authority over the drafts they have planned together but composed separately", as writers in this research will be responsible not only for producing parts of the drafts separately but will be responsible for the collective document as well (p. 107).

The evaluation that takes place here is considered to be a collective task aiming at improving the parts as well as the overall document. Finally, during co-editing, writers interact with one another, debating the correction of surface level features of each other's texts or of the final written product. The element of 'intervention'[1] that involves fellow students' feedback and peer review can prove to be particularly useful during the writing process (Susser, 1994; White and Arndt, 1991; Wigglesworth and Storch, 2012).

The research reported upon collaborative writing has generally pointed to beneficial effects. Collaborative writing and learning, in general, can result in positive student outcomes in the domain of student learning and achievement as well as in that of social skills. Students learn to work towards the achievement of a common goal and are responsible for their teammates' learning as well as their own (Dotson, 2001). Each person in the group or pair is held accountable for doing their share of the work and for the mastery of the material to be learned, therefore ensuring 'individual accountability' (Johnson and Johnson, 2002). Research has shown that the social interaction that takes place can affect an individual's quality of

learning; learners encourage and support each other, share knowledge, make decisions collectively, learn how to write from peers, deal with disagreements, make use of different strategies, negotiating roles and meaning (Ens *et al.*, 2011; Fung, 2010).

A number of studies have investigated the benefits of collaborative writing by comparing group, pair and individual work. In 1999, Storch investigated the impact of collaboration on grammatical accuracy through the use of three different tasks, that is, of a cloze exercise, a composition task and a text reconstruction task. The findings showed that students who worked in pairs produced more accurate but shorter and less syntactically complex written texts than students working alone. In subsequent studies, Storch (2005) and Storch & Wigglesworth (2007) investigated the benefits of collaborative work further in order to analyse not only the written texts produced but also the nature of the writing process and to determine the effects of collaboration (Dobao, 2012, p.42). These studies involved intermediate to advanced learners of English as a second language. Storch (2005) compared dyadic and individual performance on a short text based on a graphic prompt. The participants were adult students completing degree courses. The study found that pairs produced shorter but better texts in terms of grammatical accuracy, complexity and task fulfillment than those writing individually. The analysis of the oral interactions in the pairs confirmed that collaboration afforded learners the opportunity to pool their ideas and provide each other with immediate feedback. However, the differences observed were not statistically significant because only five individual learners and seven pairs participated in the study. Interviews with the students who participated in this study yielded positive reactions to collaborative writing and interesting insights. Similarly, in 2007, Storch and Wigglesworth compared the performance of 24 pairs and 24 individual learners on an argumentative essay and on a report whereas in 2009 they compared 24 pairs and 48 individual learners on an argumentative essay. The findings from both studies were similar. The texts written in pairs were significantly more accurate, linguistically, than those written individually, although there were no differences in terms of fluency and complexity.

In 2011, Shehadeh's study involved two classes of first year university students in the United Arab Emirates. One class, which was considered the experimental group, consisted of 18 students whereas the other one, which was considered the control group, consisted of 20 students. In the control group, writing tasks were carried out by students individually whereas in the experimental group the same tasks were carried out in pairs. The quality of the writing texts was determined by a holistic rating procedure that included content, organization, grammar, vocabulary and mechanics (p.286). Results of the study showed that the effect of collaborative writing was significant for content, organization, and vocabulary, but not for grammar or mechanics. Student responses, after a survey regarding the collaborative writing experience, were positive and felt it contributed to their second language learning.

In a similar study, Dobao (2012) compared the performance of the same writing task by groups of four learners, pairs and individual learners. It also examined the effect of the number of participants on the fluency, accuracy and complexity of the written outputs (p. 40). The findings showed that the texts written by the groups were more accurate than those written in pairs and individually. Wigglesworth and Storch (in press) accordingly, examined the effect of learners working in pairs or small groups on writing tasks and their responses to feedback and the extent to which this can enhance language learning. The study yielded results in favour of the learners working in pairs because they could receive immediate feedback on their deliberations and could scaffold each other's performance.

Most of these studies, however, involve participants who are mainly university students studying English or other foreign languages and adult ESL students completing their degree courses (Dobao, 2012; Shehadeh, 2011; Storch 2005; Wigglesworth and Storch, in press). Finally, studies that have taken place in order to investigate collaborative writing and its effects on students' writings do not involve systematic engagement of young learners in collaborative process writing activities, which will be the aim of this study.

To test for the advantages of collaborative writing over individual writing in a Greek primary school context, we designed the experiment described in the next section.

3. Methodology

3.1. The hypothesis and research questions

Drawing on the research presented above, the hypothesis underlying the present study is that systematic collaborative writing within process writing could enhance primary school fourth grade students' writing skills.

More specifically, the questions posed are as follows:

1. Is collaborative process writing more effective than individual process writing? More specifically, can collaborative process writing affect students' task performance by enhancing their achievement?
2. How do fourth grade students perceive collaborative writing after systematic engagement with process writing tasks and how do their perceptions compare with those of their peers, engaged in individual writing?

3.2. Participants, teaching context and procedure

The participants in the present research were fourth grade students in two classes of a primary school in the Prefecture of Piraeus. There were 22 10–11 year old students in each class, of mixed gender, nationality and learning abilities. Their level of proficiency was that of A1 ("Breakthrough"). Most learners had been studying English as a foreign language for an average of 3 years, including instruction at private institutes**.**

Both classes were taught by the same teacher, so the instructional curriculum was the same before the research. The main collaborative unit in the experimental group was the pair but there was some group work included in this group, as well. Students in both groups (the control and the experimental one) were assigned the production of four written outputs in two different genres, descriptive and emails. The format of the writing activities was the same in both conditions, as both groups were involved in the same process writing activities. However, the students in the experimental condition were given more activity time. Each session or writing cycle consisted of 4–5 one-hour lessons and all writing tasks, drafting, revising and editing were completed during classroom time.

In the experimental group, 7 pairs were formed by self–selection whereas the other 4, being indecisive about who to collaborate with, were appointed by the teacher on the basis of having more able students to scaffold others, who were less able. The change of partners in 8 out of the 11 pairs is indicative of collaboration conflict[2]. Throughout the sessions, the teacher held individual conferences with students to help them resolve problems and tension and to ensure the fair division of work to the greatest possible extent.

3.3. The method

In order to explore the above questions, we arranged for two groups of students to engage in process writing activities over a period of five weeks. Further research was done with the same group of students again for a period of about five weeks the following year to see if the initial results persisted. In order to determine the relative advantages of students' achievement and task performance in the collaborative mode, we compared one group's written outputs after the implementation of collaborative process writing tasks with a second group's individually written outputs. Individually and jointly produced texts were compared both quantitatively and qualitatively with a view to gaining further insight into the quality of students' writing and investigating the progress made by each group. The mean scores were considered and compared regarding quantitative measures, that is fluency, complexity and accuracy as well as qualitative measures regarding content, structure and organization of the texts. Students' attitudes and reflections on collaborative writing and its usefulness were also gauged immediately after the final collaborative and individual writing session through the administration of a post–writing questionnaire. The two groups' answers were analysed and discussed.

3.4. Instruments and measures for data collection

The students' written outputs were analyzed with the use of both quantitative and qualitative measures. This combination of methods targeted some kind of holistic assessment (Bacha, 2001, p. 374). Quantitative measures included measures of fluency, complexity[3], and accuracy. Fluency was measured in terms of the total number of words (Dobao, 2012), whereas complexity in terms of the total number of clauses produced and the number of simple and compound sentences[4] present in the students' texts. Accuracy, on the other hand, was measured by the proportion of clauses free of grammar, syntax, lexis or spelling errors as against the total number of clauses. Punctuation and capitalization errors were not considered. Errors were defined as syntactic, that is, having to do with order or missing elements or as morphological[5]. On the other hand, the qualitative evaluation of students' written outputs considered the content, structure and organization of the texts with some little reference to mechanics. To this end, a 5–scale global evaluation scheme was adopted that was made up of a commentary type of text (see Appendix). Students' writings were quantitatively assessed on a score out of 5 and half scores were also awarded.

To measure the mean, which is the average of the scores obtained, we computed students' progress in all variables of the four written outputs (i.e. total number of words, total number of sentences, number of error free clauses, number of simple sentences, number of compound sentences, number of grammar, lexical and spelling errors). The 'mean' of the overall scores was also used to describe the general tendencies in the data obtained and the overall spread of the scores (Dörnyei, 2007, p.213) of the students' texts. The median was used to indicate the number which is 'the fiftieth percentile' that separates the best fifty percent of the scores, from the worst fifty percent of the scores of the written outputs. Variance and its square root, the standard deviation, indicators of the average distance of the scores from the mean (Bachman, 1990, p. 73) were also computed. These statistics were used to measure students' progress in both groups related to the overall grade assigned to their outputs.

Lastly, the two distinct questionnaires used to explore students' perceptions of the process, were administered in Greek[6]. The 'Likert scale' was used to express either a relatively positive/favorable or negative/unfavorable attitude towards the writing experience and

open-ended questions were used to obtain 'rich data' about the participants' experience and to widen the scope of the researcher's understanding (Dörnyei, 2007, p. 40). Response options, however, were reduced to three since the researcher had to deal with young children (Dörnyei, 2007, p. 38). Questionnaires were designed to collect both quantitative and qualitative data; the former resulting in numerical data, which could be replicable and generalizable, to a certain extent, to other contexts, and the latter resulting in open–ended, non– numerical data that was exploratory in nature (Dörnyei, 2003, 2007).

4. Results and Discussion

The results tend to reveal that extended collaboration can generally have a positive effect on students' written output in terms of fluency, complexity, accuracy, content and organization.

Comparative analysis of students' individually and jointly written texts showed that, first, with regard to fluency, pairs tended to compose longer texts than students who composed individually, contrary to past research, which has shown that learners writing alone produce longer texts than learners writing either in groups or in pairs (cf. Dobao, 2012; Storch, 2005). Still, it is worth noting that, after prolonged engagement, both groups tended to increase the length of the texts they produced, evidently due to the effects of process writing, as we can see in Chart 1. As regards complexity, that is, the total number of clauses and the number of simple and compound sentences present in the students' texts, students in the collaborative group again produced more clauses than the individual group. So, we have an advantage for the collaborative group here, too. The collaborative group produced more simple sentences than the individual group as well (Chart 2)[7]. In this case, too, the collaborative group performed better than the individual one. The collaborative group also tended to produce slightly more compound sentences than the individual group, though with a certain amount of fluctuation, as we can see in Chart 3.
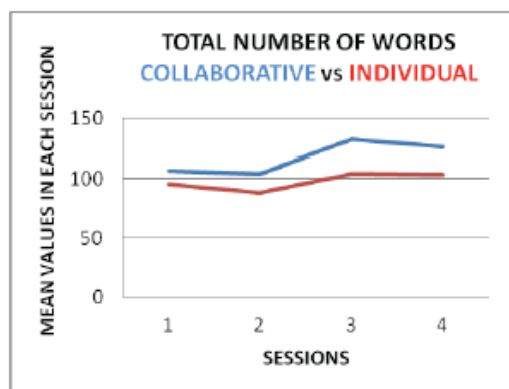

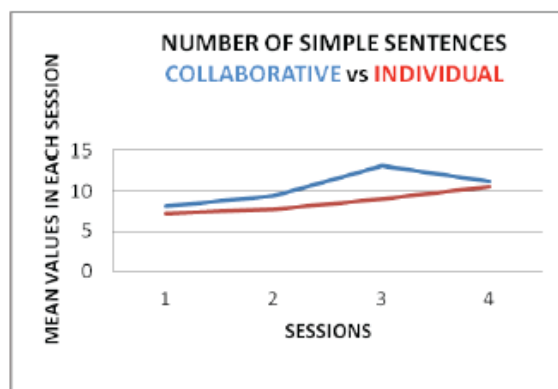Chart 1. Total number of words   Chart 2. Total number of simple sentences
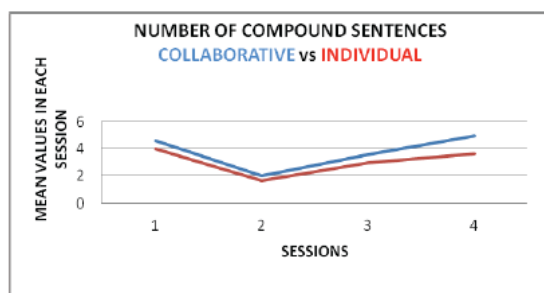
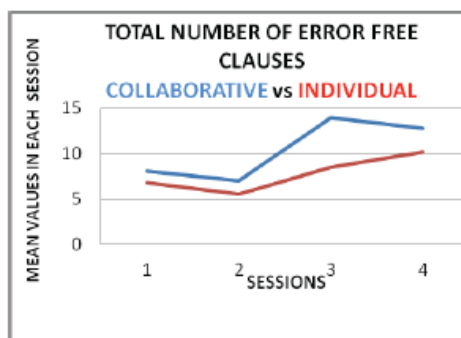Chart 3. Number of compound sentences   Chart 4. Total number of error free clauses

The third feature examined was accuracy, that is, the number of error-free clauses as against the total number of clauses produced as well as the number of grammar, lexical and spelling errors. Overall, the texts produced by the collaborative group appeared to contain more error-free clauses than their individual group counterparts, as we can see in Chart 4. Moreover, texts produced in the collaborative condition appeared to be more accurate in relation to grammar errors and, particularly in session 3, the difference between the two groups seemed to increase substantially (Chart 5). The collaborative group seemed to outperform the individual one, here as well. As for lexical errors, it can be said that the collaborative group yielded texts that were more accurate in word choice (Chart 6).
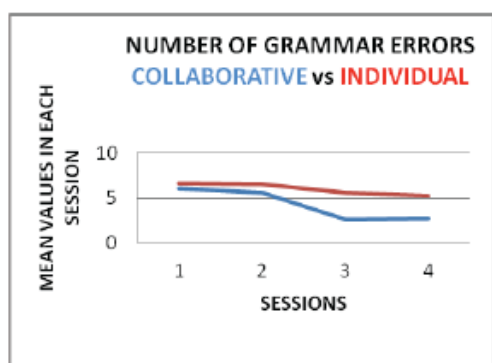

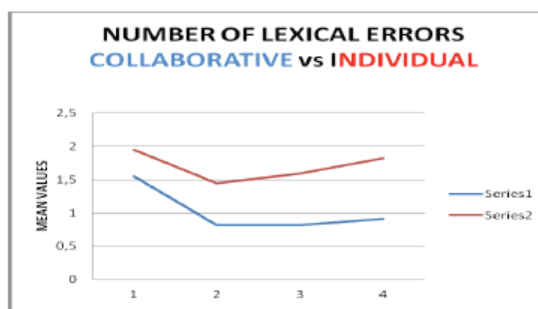Chart 5. Number of grammar errors   Chart 6. Number of lexical errors

Finally, in the case of spelling errors, the means revealed that the individual group produced fewer errors in session 1 than the collaborative group. Yet, the individual group demonstrated a gradual decrease in the number of spelling errors they made in the subsequent sessions 2 and 3, as shown in Chart 7. Overall, then, that is in terms of fluency, complexity and accuracy, we can see that the collaborative group obtained better scores in all sessions compared to the individual group.
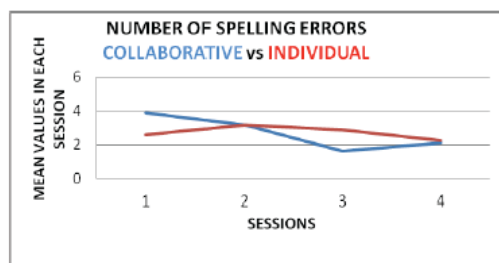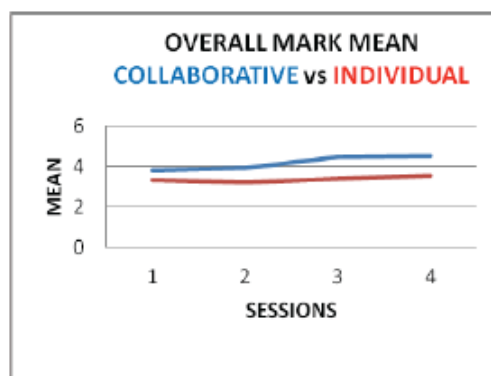
| Chart 7. Number of spelling errors | Chart 8. Overall mark mean |

On the other hand, it is interesting to note that there was a tendency for both groups to yield progressively better scores in terms of overall mark mean (Chart 8). And, as for the overall mark median, it can be said that for every written text the median for the collaborative group was better than the median for the individual group, which means that the middle point (when arranged in rank order) of the scores achieved in pairs was better compared to the middle point of the scores in the individual group. In other words, the upper 'fiftieth percentile' of the pairs was better than that of the individuals, as we can see in Chart 9 below:
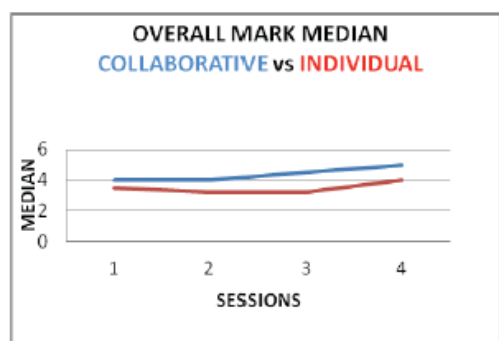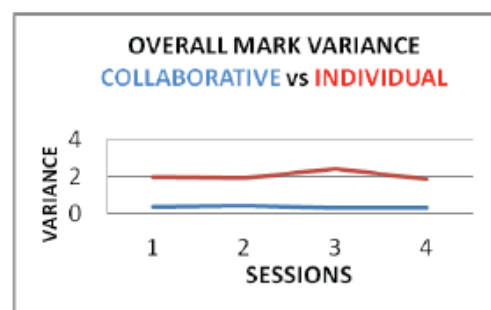

| Chart 9. Overall mark median | Chart 10. Overall mark variance |

Finally, as regards the overall mark variance, it should be noted that the lowest values of variance in the collaborative group in comparison to those in the individual group indicate that the former was more homogeneous than the latter. Thus, the results for overall mark variance and standard deviation are positive for the collaborative group, too (Charts 10 and 11).
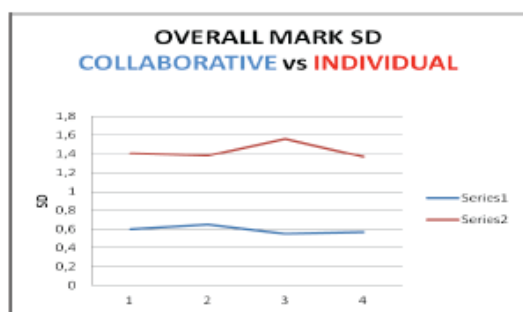
Chart 11. Overall mark SD

All things considered, the collaborative group seemed to outperform the individual group in all the above-mentioned measures. Though the statistical significance of the differences was not computed, due to the relatively small learner sample employed, considerable differences were noted between the two groups with regard to fluency and in terms of the means of text length and the means of the number of clauses. Also, substantial differences were observed between the collaborative and individual group concerning complexity and as to the mean number of simple sentences. The differences between the two groups with reference to the mean number of compound sentences were clear, too. Substantial differences, were also to be noted between the texts written by pairs and those written by individual learners with regard to accuracy and in terms of the mean number of error- free clauses and the mean number of grammar errors. The variations between the two groups concerning the mean number of lexical errors were clear, as were the ones in the mean number of spelling errors. Finally, the results regarding the overall mark mean, the variance and standard deviation were also in favor of the collaborative group. It is worth commenting here that the individual group's results revealed a general tendency for improvement throughout the sessions, with some fluctuations, as well. This might be attributed to the fact that their performance might have been positively affected by process writing activities. Still, the collaborative group's performance, in relation to all variables, also tended to improve gradually and retained its lead throughout.

Interestingly, in the collaborative condition pairs produced longer texts, as we can see in Chart 1 above, but it took them longer to complete the writing tasks than the students in the control condition. These findings are in line with previous research, in which pairs spend more time deliberating over language use and the content of their outputs (Storch, 2005; Storch and Wigglesworth 2007). When it comes to accuracy, the findings of this research are also in line with those which have found that learners writing in pairs produce linguistically more accurate texts than students writing alone (Shehadeh, 2011; Storch, 2005; Storch and Wigglesworth 2007). The present research actually supports the social constructivist view of learning that students, at least low – proficiency ones, can benefit from scaffolding each other. Furthermore, the repeated collaborative writing activities seemed to have provided learners with repeated practice in generating ideas, giving and receiving feedback, rewriting, and all this can be said to lead to learning (Wigglesworth and Storch, in press).

The additional samples that were collected the following year, after engaging the same group of students in individual and pair work, reinforced the hypothesis of this study regarding the results of collaborative writing. In the additional samples, students working in pairs produced shorter texts than those working individually, in line with research conducted the previous year regarding the same measures. In terms of complexity, pairs tended to write less complex sentences, although the mean values seemed to increase progressively in favour of the

collaborative group. Similarly, in terms of accuracy, texts produced by pairs were grammatically and linguistically more accurate than those produced individually. The differences regarding grammar, spelling and errors between the two groups were clear and generally persisted but there were some fluctuations concerning the mean values. The advantage for the collaborative group persisted in the case of error free clauses, as well.

The results from the additional samples regarding the overall mark mean (Chart 12), median, variance and standard deviation (Chart 13) were clearly positive for the collaborative group. The above results provide further evidence for the effects of the extended use of collaborative writing tasks in the second language classroom. Generally, the rate of improvement was higher in the collaborative group than in the individual group, which means that students became familiar with collaborative writing tasks, so their performance improved gradually.
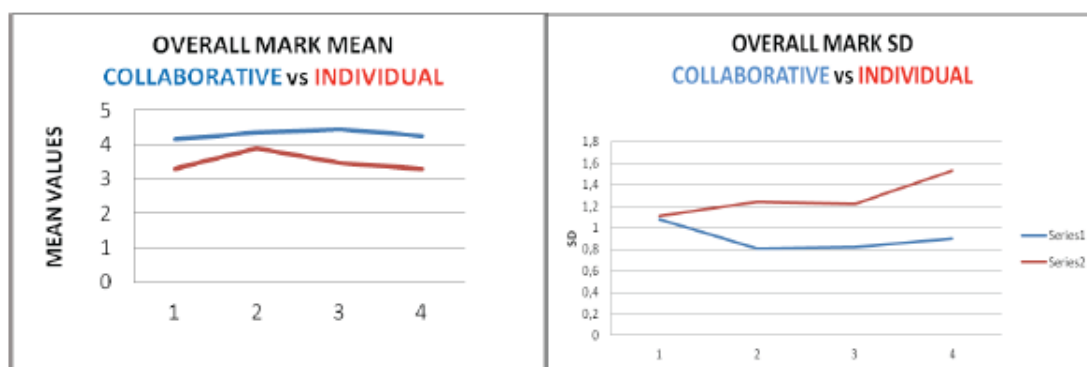
Chart 12. Overall mark mean   *Chart 13. Overall mark SD*

The data collected by administering the post–writing questionnaires to the two student groups revealed a generally highly positive attitude towards the specific learning experience as a whole. More specifically, as regards the collaborative group, the data revealed that, despite the clashes/conflict observed, a great percentage of respondents enjoyed the extended pair work and felt their writing improved because of the collaboration and made them work harder, as shown in Graph 1 below (items 2 and 4). Respondents also highly favored the idea of producing a joint piece of writing (item 3) and found it easy to collaborate throughout the stages of process writing (item 5a, 5b and 5c) with the editing stage being the highest on their preference list (item 5d). Students also felt that collaboration helped them a great deal to make changes in their work (item 6), that collaboration gave them the opportunity to contribute to the production of the common document by providing suggestions (item 7) and the majority quite enjoyed the idea of being assessed together with a partner (item 8). Despite their positive attitudes towards the collaborative working mode, however, more than half (item 9) of the respondents felt they worked more on the writing tasks than their partners and half of the students claimed that there were points of disagreement (item 10). Still, the majority highly favored the idea of engaging in collaborative writing activities in the future (item 13).
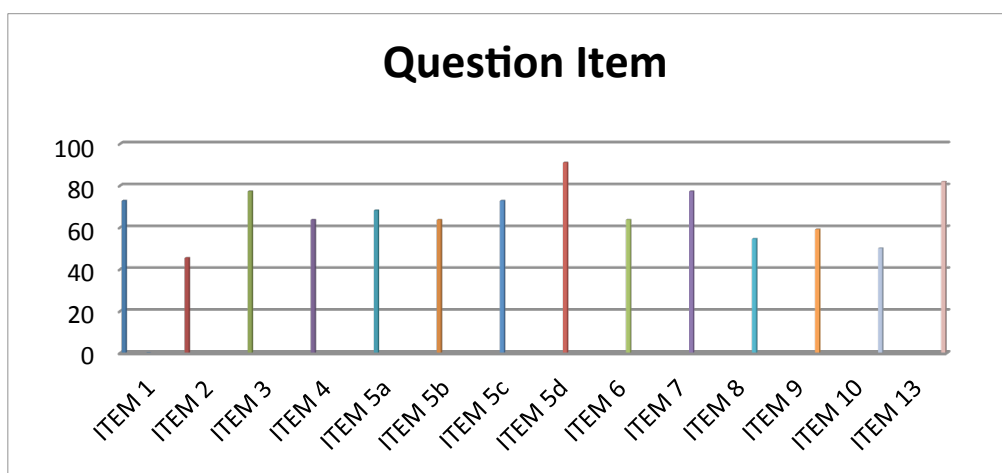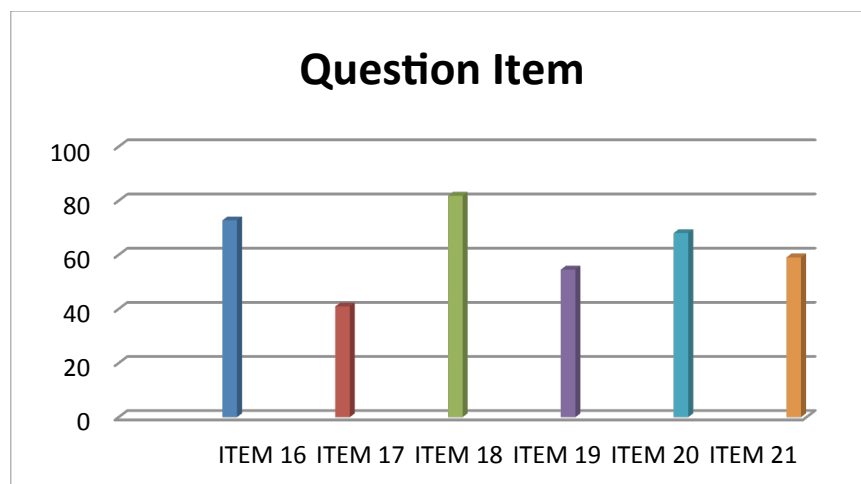
Graph 1. Collaborative writing attitudes

Moreover, respondents expressed positive feelings towards peer feedback and found it useful in improving their work (items 14 – 15), as we can see in Graph 2 below:
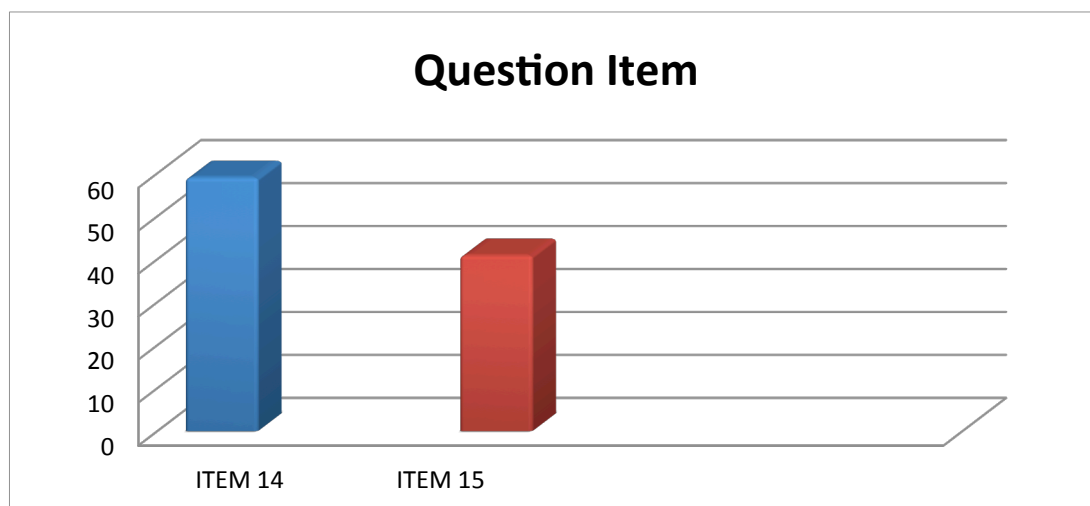
Graph 2.   Peer feedback perceptions

Similarly, as we can see in Graph 3 below, a great percentage of the students (item 16) claimed that they learnt more and improved their knowledge of English by collaborating. Respondents, however, were less positive about the reduction of the bulk of the work by collaborating with others (item 17). A high percentage (item 18) believed that they learnt to cooperate with others and also more than half of them (item 19) claimed that they got mutual support and that they built their friendship (item 20). More than half claimed that collaboration helped them to share ideas and get a better understanding of the work (item 21).

Question Item

A bar chart titled "Question Item" with a vertical axis ranging from 0 to 100 in increments of 20. The horizontal axis shows six items: ITEM 16 (approximately 73), ITEM 17 (approximately 41), ITEM 18 (approximately 82), ITEM 19 (approximately 54), ITEM 20 (approximately 67), ITEM 21 (approximately 59).

Graph 3. Collaborative writing perceived benefits

Finally, with respect to the open–ended questions referring to feelings and attitudes towards the collaborative experience as a whole and to the benefits of doing pair– work, students' responses yielded some very interesting insights. Most students expressed very positive feelings towards collaboration, joint writing, interacting, providing mutual support, getting to know each other better, building their friendship, and all this seemed to have filled them with joy. One student actually said that it was the best thing that he had ever done. Few of them, however, commented that they could not cooperate well with their partners. Concerning the benefits of pair work, on the other hand, students commented again on building their friendship, helping each other and having fun, teaching one another new things and getting the same grade. Last but not least, a great percentage of respondents expressed their strong agreement with the perceived benefits of extended pair – work and collaborative writing in particular.

All things considered, it can be said that students' responses to the questionnaires provided further evidence about the usefulness of collaborative writing activities in the second language classroom. The findings clearly showed that collaborative writing created an overall positive atmosphere in the classroom and encouraged student collaboration as well as promoted good interpersonal relations.

5. Conclusions and implications for teaching

This study is not without its limitations. To start with, it was carried out within one particular primary school and with two specific groups of students and, therefore, results may not be generalizable within other contexts (Dörnyei, 2003, 2007). It would be nice to see what happens when the research encompasses secondary students. Second, we were not able to compare the pair-work learning arrangement with a similar one, "where students were assigned to work in pairs but not assessed together", as suggested in Roskams (1999, p. 103). Allotting group grades is something that needs to be considered further, especially after the questionnaire results, which revealed students' frustration over doing most of the work. Moreover, we do not know if results could have been affected if students had been provided with explicit training in collaborative skills and strategies and if more time had been spent on structured classroom activities prior to collaborative writing. It might also have been useful to engage in a discussion of the learning values of collaboration and, generally, in careful class preparation either through individual and pair conferencing prior to any engagement in such activities (Howard, 2000). For this reason, it is suggested that it would be to the benefit of

students if there was some mechanism that would ensure the fair division of work, as suggested in Roskams (1999, p. 10). Further research could also investigate the effects of peer feedback and the concept of "collaborative autonomy" in students' pair or even small group work as well as how 'weaning' students away from teacher dependence can affect their writing performance. For this purpose, it would be interesting to see what happens if students are told to decide how to share the work themselves from the very beginning so as not to complain about the sharing being unfair.

The present study provided evidence that systematic engagement in collaborative writing activities can be a challenging experience for the students. Young learners of English were faced with tasks they had never engaged in before. Generally, the findings of the present study, in line with findings from other research (see, e.g., Shehadeh, 2011, p. 296) showed that collaborative writing can be an "important pedagogical tool in the learning and teaching of writing in foreign language contexts" by encouraging student collaboration and a positive social classroom atmosphere, which enable students to produce better scripts than when they work individually. Further experimental work could investigate the questions posed in this study with larger samples so that results can be more generalizable. In addition, further research could examine the extent to which the number of participants in collaborative writing activities can influence "the opportunities that peer interaction offers for collaboration and collaborative dialogue" (Dobao, 2012: 56). More specifically, it would be quite interesting to see if students while working in small groups, in order to produce a joint text, can interact with task features in the same way pairs do and how learner-related factors can influence their collaboration.

Finally, future research could focus on insights from incorporating collaborative writing activities and creating conditions for more collaborative arrangements in the classroom throughout the school year so as to prepare students for a future which may require them to write collaboratively (Ede and Lunsford, 1990; Murray, 1992 in Storch 2005). As Vygotsky (1978) has rightly pointed out, human development is inherently a socially situated activity in which cognitive and linguistic development arises in social interaction with more able members of society and stretches beyond their current level towards their potential level of development.

Notes

1. "Intervention" and "awareness" are the two essential elements of process writing pedagogy, according to Susser (1994).
2. Opposition and dysfunction were part of this unproductive behavior and that is why the change of partners was deemed necessary. The main goal was to make the students willing to contribute to the tasks actively. Generally, students seemed to become more familiar with the whole procedure after the second session.
3. In analyzing students' texts it was felt important to consider not only grammatical and lexical accuracy but also complexity, because it reflects, as pointed out by Storch, "the writer's willingness to engage and experiment with a range of syntactic structures" (2005, p. 158).
4. A simple sentence "consists of one independent clause" while "a compound sentence contains two or more independent clauses", as suggested in Clampitt, Page-Jacobs and Skinner (2007, p. 66). An independent clause, on the other hand, is a grammatical structure which contains a subject and a verb and which can be used on its own (Richards, Platt and Platt, 1992 in Storch, 2005, p. 157).

5. Like, for example, inappropriate tense, plural forms, subject-verb agreement, incorrect use of prepositions, articles and errors in word formation and wrong word choice (Storch, 2005, p. 158).
6. This was done due to the students' young age.
7. The vertical axis in Charts 1-7 refers to the mean values of the scores in each session.

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Appendix
Overall evaluation scheme

Mark	Criteria
5.= Excellent	This is a very well written text. It is well structured. Ideas are clearly organized and well linked together. The specific task is fully addressed and the response is very good. Very good control of simple grammatical structures. Very effective choice of words with only minor spelling and punctuation errors.
4.= Good	This is a good text. It has a clear overall structure. Ideas are fairly well organized; they are generally linked appropriately and easy to follow. Most of the specific task is addressed and the response is good. Good control of simple grammatical structures with occasional errors. Effective choice of words with few spelling and punctuation errors.
3.= Average	This is a satisfactory text. It has an overall structure. Main ideas are somewhat clear; they are loosely organized, loosely linked and incomplete. The specific task is partially addressed but the response is satisfactory. Fair control of simple grammatical structures with some impeding errors. Adequate choice of words with a fair number of spelling and punctuation errors.
2.= Poor	This is an adequate text. The text is difficult to follow because the main ideas are not clear or well organized. Minor attempt to address the specific task. The response is weak. Limited control of simple grammatical structures with many errors. Limited choice of words with frequent errors in spelling and punctuation.
1.= Very Poor	This is a poorly written text. It is poorly organized and difficult to follow. Main ideas are unclear. Weak attempt to address the specific task. The response is very unclear. Very poor control of simple grammatical structures. Ineffective choice of words with almost no control over spelling and punctuation.

(adapted from Cohen, 1994 in Tsagari and West, Vol. 3, 2004:292-293)

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