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The Coordinating Role Of The Teacher In A Peer Tutoring Programme

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Abstract

The aim of the study was to investigate the impact of *Leemos en Pareja* (Reading in Pairs), an educational programme based on peer tutoring, and learn about the teacher's role in the construction of reading comprehension and fluency. Using a quasi-experimental study with the comparison group, along with the follow up of the working sessions, particularly with the analysis of the interactions (students and teacher) we achieved the study goals. Quantitative results show statistically significant differences between the pre-test and post-test measurement. The analysis of the interaction shows that the interventions made by the teacher with the group in general play an important role in the adjustment of the activity and the structure of the session that guarantees pair interactivity.

Keywords:

1. Introduction

The conceptual bases of the study are grounded in peer tutoring and reading competence, which are vital elements for the students to achieve the learning goals in terms of reading comprehension and fluency, together with the support, guidance, monitoring and feedback offered by the teacher responsible for the project.

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1.1. The social construction of knowledge by means of peer learning

Vygotsky's theories emphasise the importance of social interaction, as the social origins of psychological processes are addressed through the *general genetic law of cultural development*, which postulates that all higher psychological functions appear twice, firstly on a social, interpsychological plane, and later on an individual, intrapsychological plane, where internalisation transforms the process itself, changing its structures and functions (Wertsch, 1988). As key for the subject to internalise higher functions, Vygotsky, (1979) identifies the Zone of Proximal Development (ZPD), defined as the distance between the subject's actual developmental level — as determined by independent problem-solving — and their level of potential development — as determined through problem-solving under adult guidance or through peer collaboration, thanks to the support received. The mediator's role then is to provide and adjust any necessary pedagogical supports, so that learners are able to progress from their actual developmental level to the ZPD, thus promoting transformation, negotiation and construction of meaning. In this context we understand peer learning as the acquisition of knowledge and skill through active helping and supporting among status equals or matched companions (Topping, 2005). We believe that for these conditions to be met and for peer learning to succeed, activities should be organised and coordinated by a teacher, who will ensure that high levels of negotiation and construction of meaning are reached thanks to his/her mediation before, during and after the process.

1.2. Peer tutoring

A modality of peer learning, peer tutoring has been endorsed by the UNESCO and the European Agency for the Development of Special Needs Education as one of the key strategies in achieving quality education, and in attaining the goal of inclusive education (Topping, 2000). In terms of the configuration of the major peer interaction, Damon & Phelps (1989) distinguish between three modes of learning: *peer tutoring*, *cooperation* and *collaboration*. Damon & Phelps highlight two elements in these interactions: *equality* regarding the symmetry or asymmetry between the roles adopted by each student, and *mutuality* in the interactive structure, referring to the type of connection, depth and bidirectionality achieved in the communicative transactions. As posited by Duran & Monereo, (2005), the three types of interactions differ in terms of their degree of equality and mutuality. In peer tutoring, there is a low level of equality due to the asymmetric composition of the pair and their roles, whereas mutuality is also low but variable, depending on the tutor's competencies and instructional skills, and also on the tutee's receptivity. Regarding the latter, the teacher regulating the activity can play a key role in fostering the instructional skills and receptivity during the task development and monitoring of the teaching-learning process. In this regard, the most powerful tool to enable peers to reach their goal and allow the teacher to follow up and regulate the students' interactions is undoubtedly language, regarded by Vygotsky as the instrument of thinking and a vital tool in social interaction (Del Caño, Elices & Palazuelos, 2003).

Peer tutoring has been put into practice and researched at all educational levels, in numerous areas (reading, writing, maths, science, among others), in different types of school settings (special needs, ordinary, adult) and with diverse student bodies (minorities, students with learning difficulties, students at risk of exclusion and general students). In all cases, satisfactory results have been reported (Okilwa & Shelby, 2010; Borivov & Reid, 2010; Thurston et al., 2007; Spencer, 2006; among others). In terms of how peer tutoring can be implemented, Topping (1988) distinguishes between *cross-age tutoring*, referring to tutoring between students of different ages or school years (therefore, the roles are fixed) and *same-age tutoring*, with participants of a similar age and school years (therefore, the roles could be fixed or reciprocal). Studies into same-age tutoring have shown positive results in their interventions in fixed tutoring, (Fuchs, Fuchs, Bentz, Phillips & Hamlett, 1994; Fuchs et al., 1996 & 1997), reciprocal tutoring (Mastropieri, Scruggs, Spencer & Fontana, 2003; Topping, Dehkinet, Blanch, Corcelles & Duran (2013) and both types (Duran & Monereo, 2008; Valdebenito & Duran, 2013).

1.3. Leemos en Pareja (Reading in Pairs) – a programme for improving reading comprehension and fluency

Reading comprehension is widely acknowledged as a crucial skill for citizens to integrate well into their social

environment and as a key element for their intellectual enrichment, knowledge acquisition and access to culture (Gil, 2011). In this regard, Holloway, (1999) asserts that the reading skills associated with this competence make up an essential intermediary tool for students to access and benefit from the school curriculum. Furthermore, reading comprehension is understood as the construction of a coherent mental representation of the written text and the reader's own knowledge (Oakhill & Cain, 2007). Reading fluency is in turn regarded as a multidimensional construct, involving reading with speed, accuracy, adequate prosody and comprehension and interpretation of the text (Garzón, Jiménez & Seda, 2008). Therefore, reading fluency is much more than simply decoding a text quickly and accurately, as prosody and proper expression are also essential for ultimate comprehension. Observing the above, the *Leemos en Pareja* programme is based on three components: peer tutoring, family involvement and the reading competence. These three elements allow for the construction of knowledge to be contextualised, meaningful and adjusted to the students' needs on a high structured interaction, under the teacher's organisation and constant supervision. After three 1-hour sessions of initial training for both students and families on the work methodology (pairing, methodology training, performing the roles of tutor-tutee, consensus on norms between the pairs), the actual programme develops over 24 tutoring sessions (at school and home in each case), lasting 30 minutes each, twice a week for a whole school term. The activity schedule and pair interaction is regulated through a task sheet, a material prepared initially by the teachers and in the later stages by the tutors themselves, which offers an authentic text and pre- and post-reading activities, and assists in enhancing comprehension and fluency. The session is structured as per the task sheet: firstly, a *before reading* stage — designed for formulating hypotheses and activating previous knowledge—, immediately followed by an *authentic text* (meaningful by itself), with three reading-aloud instances: tutor's model reading, joint reading (by both pair members) and tutee's reading with the procedures *pause*, *prompt* and *praise* (PPP, Wheldall & Colmar, 1990). This is followed by an after reading stage, where questions are asked and several structured activities, of various formats, are carried out in order to strengthen inferential comprehension and deep reflection, and lastly a final expressive reading is carried out by the tutee.

2.   Aims of the present study

- To learn about the effects of the peer tutoring programme on the participants in terms of their reading comprehension levels, contrasting them with those from a comparison group as a reference.
- To analyse any gains in reading fluency among the peer tutoring programme participants against the comparison group.
- To learn about the teacher's management of the learning process during the work sessions, that may explain the improvements in reading comprehension and speed.

3.   Methodology

The research combines two methodologies: on the one hand, a quasi-experimental pre-test/pot-test study with a non-equivalent comparison group in order to learn about the students' possible progress in reading comprehension and fluency; and on the other, a qualitative study of the process, where the teacher's role and management of the class learning is examined via an audiovisual register of the work sessions, which could provide some explanatory variables for understanding the students' possible quantitative progress.

3.1. Sample

Students: The intervention group was made up of 127 students (64 boys and 63 girls), enrolled in years 2 to year 5 in 4 primary schools in Spain. The comparison group was made up of 75 students, also enrolled in years 2 to year 5, none of which participated in the programme, and neither did their teachers.
Teachers: 8 in total, they were responsible for developing the sessions, and in class they took up the teaching.

3.2. Measures

3.2.1. Evaluation of reading comprehension

A standardised reading test in Spanish, *Evaluación de la Comprensión Lectora —ACL—* (Evaluation of Reading Comprehension) was administered in pre-test and post-test bases (Català, Comes & Remon, 2001). This test was reported to have KR-20 values of: .83 ACL 2; .80 ACL 3; .83 ACL 4; and .82 ACL 5.

3.2.2. Evaluation of reading fluency

The reading speed component, as an indicator of fluency, was measured by means of two sets of tests, depending on the level of the respondents:
a) Psycho-pedagogical set EVALUA 4 (García & González, 1999) and EVALUA 5 (García , Manjón & Ortiz, 2006) for students in primary years 4 and 5. The standardised test has a reliability of .96 for year 4 and 0.845 for year 5.
b) For years 2 and 4, the Fundar Tests were used (Marchant, Recart, Cuadrado & Sanhueza, 2007), given that the EVALUA set does not cater for levels lower than year 4.

3.2.3. Videotaped at school sessions

24 work sessions were recorded, each lasting approximately 30 minutes.

3.2.3. Data Analysis

The quantitative date from the pre- and post-tests were analysed with the SPSS 18 software by means of the t-test procedure for related samples. The qualitative date from the audiovisual records, related to the teachers' performance, were analysed with the Atlas.ti 6.1 software.

4. Results

4.1 Student results in terms of the reading comprehension variable (RC)

In the comparison group (CG) the progress reported between the means are not statistically significant, t (119) = - 1.81, $p > .05$. In the intervention group (IG), the measurements between the pre- and post-test do show statistically significant differences, t (126) = - 11.60, $p < .01$, after participating in the *Leemos en Pareja* programme, as shown in Table 1.

Table 1. Pre-test and post-test results in the CG and IG in terms of reading comprehension

Variable	Group	*N*	*M* Pre-test	*SD*	*M* Post-test	*SD*	*t*	*p*	*d*
Reading	CG	75	51.42	18.29	55.94	18.54	-1.81	.07	.25
Comprehension	IG	127	56.14	18.54	67.09	18.41	-11.60	.00	.59

In addition to the results obtained from the t-test, the effect size for both groups was also calculated. For the comparison group, the effect size was small ($d = .25$), whereas for the intervention group the effect size was medium ($d = .59$). This last measurement is attributed to the group's participation in the peer tutoring programme.

4.2. Students results in terms of Reading Fluency (RF)

In reading fluency speed component, there is evidence of statistically significant progress, both for the comparison group, t (119) = -7.90, $p < .0$, and for the intervention group, t (126) = -12.35, $p < .01$ (See Table 2).

Table 2. Pre-test and post-test results for the CG and IG in terms of reading speed

Variable	Group	N	M Pre-test	SD	M Post-test	SD	t	p	d
RF	**CG**	75	46.53	19.51	58.14	19.00	-7.90	**.00**	.60
	IG	127	57.64	19.35	73.87	20.41	-12.35	**.00**	.82

To look deeper into the magnitude of the differences shown, the size effect was calculated. The comparison group had a medium size effect (*d* = .60), whereas the intervention group had a large size effect (d = .82). Again, this greater impact in the intervention group is attributed to the group's participation in the peer tutoring programme.

4.3. The teacher's management of the learning process during the sessions

Regarding the interventions made by the teacher during the work sessions, we believe they played an important role in the achievements made by the students in terms of their reading comprehension and fluency. That is why the teachers' interventions (percentage %) during the different segments of the programme —*before reading, during reading and after reading*— were analysed. The dimensions for the analysis are explained below together with the findings, which can also be seen in Table 3.

Table 3.Results of the teacher's interventions during the *Leemos en Pareja* sessions

Dimension	Categories	Sub-categories: recipient and anticipated support	%
1.Teacher's Intervention (T) *During Reading*	1.1 The Teacher provides help regarding the development of the session	1.1.1. Tutor and tutee receive help from the Teacher spontaneously.	28
		1.1.2. Tutor and tutee receive help from the Teacher, after requesting it.	16
		1.1.3. Tutor receives help from the Teacher spontaneously.	28
		1.1.4. Tutor receives help from the Teacher, after requesting it.	28
		Total	100
2. Teacher's Intervention *After Reading*	2.1. The Teacher provides help regarding the development of the session	2.1.1. Tutor and tutee receive help from the Teacher spontaneously.	40
		2.1.2. Tutor and tutee receive help from the Teacher, after requesting it.	27
		2.1.3. Tutor receives help from the Teacher spontaneously.	13
		2.1.4. Tutor receives help from the Teacher, after requesting it.	13
		2.1.5. Tutee receives help from the Teacher spontaneously.	7
		Total	100
	2.2. The Teacher provides help regarding the content of the text and activity.	2.2.1. Tutor and tutee receive help from the Teacher spontaneously.	40
		2.2.2. Tutor and tutee receive help from the Teacher, after requesting it.	30
		2.2.3. Tutor receives help from the Teacher spontaneously.	9
		2.2.4. Tutor receives help from the Teacher, after requesting it.	4
		2.2.5. Tutee receives help from the Teacher, after requesting it.	13
		2.2.6. Tutee receives help from the Teacher spontaneously.	4
		Total	100

1. Dimension: Teacher's intervention *During Reading*: All teacher interventions increase in terms of their *help in the development of the session* (structure, procedure), with no recorded interventions in relation to the teacher's *support regarding the content of the text and reading or comprehension activities*, which can be attributed to the fact that the tutor had already prepared for the activity.

With regards to the categories that obtained a greater percentage of interventions, these are made up of spontaneous support by the teacher, provided to both members of the pair together and to the Tutor alone, to a greater extent that the support given when requested by the students. An example of the categories described above is given below:

Example (category 2.1.4.):
    Tutee: "Miss Pilar, how should we do this? Should she read alone now (pointing at the tutee with her hand)?
    Teacher: "Have you done the joint reading already?"
    Tutee: "Yes".
    Teacher: "Then yes, she can now read alone".

The above shows that the teacher intervenes supporting the Tutor, so that the corresponding reading is carried out.

2. Teacher's intervention *After Reading*: The teacher offers task guidance regarding the content of the text and activity, as well as the development of the session. In terms of the latter, there is also greater tendency towards the teacher's spontaneous help to tutor, tutee or both (to a higher percentage) than the support given when requested by the students.

With regards to the teacher's intervention in terms of the programme development, we observed a greater recurrence of the teacher intervening to guide the activity development, supporting both members of the pair spontaneously, followed by guidance to the tutor and finally to the tutee, to a greater extent than the support given when requested by the students jointly or individually. The teacher's interventions with both students are thus considered to be a positive element, since they enable both pair members to get involved and solve a given problem, thus promoting knowledge construction. The teacher's interventions with just the tutor are equally important, as they enable the student to build a shared framework of meanings jointly; the teacher grants power over learning to a student who is not an expert but who certainly has greater competence than the other pair member.

5. Conclusions

The programme based on peer tutoring, *Leemos en Pareja*, has proved effective in enhancing reading comprehension and fluency among the participants, as has previously been the case with similar experiences such as *Reading Together* (Hattie, 2006) and *Buddy Reading* (Shegar, 2009). The success can be attributed to the procedures involved in the activity, as well as to the planning and monitoring work carried out by the teacher responsible for the work sessions. In this regard, the teachers' interventions took place mostly spontaneously, and to a lesser degree at the students' request, for the purpose of clarifying, evaluating answers, modelling behaviour as a mediator (for the tutor's sake) and enabling consensus of answers. As described by Coll & Onrubia (1999), the dialogue between the dyads and the teachers during the task development is a key element to reach such consensus, as the teacher is able to monitor and observe students' comprehension, any difficulties arising and the construction of knowledge.

In terms of the development of reading fluency, the teachers' constant support was evidenced throughout the whole duration of the reading tasks, in relation to the structure and development, but not to the content. The support offered mainly consisted in clarifying the reading order and guiding its correct implementation (joint reading). In this regard, the interventions took place mainly spontaneously during the development of the reading tasks. We hope that the present study is welcome as a helpful addition to the many other studies contributing experience-based information seeking to enhance one the most essential skills in the knowledge society: reading comprehension (Elbaum, Vaughn, Hughes & Moody, 1999; Mortweet et al., 1999; Ryan, Reid & Epstein, 2004), but also that it helps acknowledge the importance of the teacher's articulating role throughout, which ensures that the conditions, objectives and procedures are reached through his or her guidance and feedback, acting as a mediator in the construction of meanings in a community of learners.

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