STRUCTURES OF COOPERATIVE LEARNING IN L2 INSTRUCTION: 
AN EXPLORATORY STUDY WITH SPANISH PRIMARY SCHOOL 
CHILDREN

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Abstract

The aim of this paper is to analyse the extent to which the MORE methodology is effective to learn an L2. Particularly, in which way Kagan's cooperative learning structures could help students learn grammar content in Catalan. Fifty-five primary school children participated in this exploratory study. A pretest-instruction-posttest design was followed. Students were assessed on grammar content (verbs, vocabulary contractions and punctuation) before and after the instruction. The study was completed with semi-structured interviews. Results showed that this methodology helped students learn an L2 in an effective way. Moreover, the differences between pre- and posttest interacted with students' academic and L2 level. Students' interviews also showed they perceived working with structures in a positive way and they were highly motivated to work in groups.

Keywords: Cooperative learning, Structures, Second language acquisition, Primary Education.

1 INTRODUCTION

Nowadays, many Spanish schools are still using traditional teaching methodologies in L2, which usually promote a competitive and independent way of learning. Direct instruction and the course book as the main tool for learning are paramount. Frequently, students are supposed to work alone and do the activities independently. This fact could come into conflict with the actual demands of the global society, where citizens are expected to be able to work in groups cooperatively.

The MORE methodology, i.e., cooperative learning, may be a tool to fulfil these expectations. It fosters a context where students work together and interact with each other in a structured and organized way. Furthermore, it provides teachers with the necessary cooperative instructional strategies so that students take part in their learning processes, learn problem solving and decision-making strategies, and how to work in group.

In this line, Kagan (2009 [1]) proposed a method based on cooperative structures for learning. Working with these structures has also been proven to be effective for learning an L2 (Kagan, 2013 [2]; Kagan and High, 2002 [3]). Among its advantages, it should be highlighted that students learn the language in a more natural context; it helps interaction and negotiation of meaning; the affective filter is lowered and motivation increases. Therefore, it encourages students to use the L2 in class.

There are several research studies that have obtained interesting results using cooperative structures to learn an L2 or a foreign language. Mahmoud (2014 [4]), and Pan and Wu (2013 [5]) concluded that this methodology helped develop language skills, particularly writing and reading. Turrion and Ovejero (2013 [6]), and Gömleksiz (2007 [7]) obtained that working with cooperative groups improved motivation, integration and participation of students in the language class.

The aim of this paper is to analyse the extent to which the MORE methodology is effective to learn an L2. Particularly, in which way Kagan's cooperative learning structures could help Spanish students from Primary Education learn grammar content in Catalan (L2).

2 METHODOLOGY

2.1 Participants

Fifty-five male and female primary school children (aged 10-12) participated in this exploratory study. They belonged to two intact groups from the fifth year of a public school in a big Spanish city. They studied Catalan as an L2. Students were used to work with the MORE methodology and Kagan’s
cooperative learning structures. They were categorized into four levels of academic achievement: high, medium-high, medium-low and low.

2.2 Design
This is an exploratory study with a pretest-instruction-posttest design. The study was completed with semi-structured interviews.

2.3 Materials and measurements
Before the instruction, students were assessed on the grammar content belonging to three forecoming units from their coursebook. The same materials were used both in the pretest and in the posttest. A written test with ten questions was prepared. Questions were level-graded in difficulty by a group of experts. Four questions were about the use of verbs; one about punctuation; four about vocabulary and the last one was about the use of contractions. Therefore, the following measures were accounted:

- **Verb1.** It was a low-demanding question about the use of verbs. Students identified the correct form from the ones provided. It was scored up to 1 point.
- **Verb2.** It was considered by experts as a question of medium difficulty about the use of verbs. From some pictures provided, subjects should identify the verb and build a sentence. It was scored up to 1 point.
- **Verb3.** It was considered by experts as a question about the use of verbs of high difficulty. Without help students were asked to write the correct form of a verb in a sentence. It was scored up to 1 point.
- **Verb4.** Experts evaluated this question as difficult as students should underline without help the verbs in the sentences and judge whether they were regular or irregular. It was scored up to 1 point.
- **Punct5.** It was considered a question of low difficulty. Students should insert semicolons and inverted commas in a sentence. It was scored up to 1 point.
- **Voc6.** The level of difficulty of this question was low. Subjects should choose the correct word provided in a box and complete the sentences. Words were accompanied by pictures. It was scored up to 1 point.
- **Voc7.** It was considered a question of medium difficulty. Without help subjects should read some definitions and write the correct Word. It was scored up to 1 point.
- **Voc8.** Subjects were provided with augmentative suffixes to build words. As the choice of some suffixes could be confusing for them, the difficulty of this question was considered as medium. It was scored up to 1 point.
- **Voc9.** Subjects should choose from a list provided the name of the inhabitants of some cities. It was considered of medium difficulty since they had two options of answer. It was scored up to 1 point.
- **Con10.** Subjects should contract two words or made use of contracted forms. It was considered a question with a medium difficulty level. It was scored up to 1 point.

The content of units was worked by means of the cooperative structures: ‘the wise and the scribe’; ‘the round table’; ‘rally coach’; and ‘round Robin’.

2.4 Procedure
Nineteen class sessions were necessary to collect the data. Two sessions were used for the pre- and posttest. Students were provided with the written test. The researcher gave them the instructions and solved out their doubts. The sessions took less than 60 min. respectively. The rest of the sessions were devoted to the instruction of the content by means of the cooperative structures. Each session one of the structures was worked.

After the posttest students were interviewed. A list of questions about the methodology received was provided and they should write down their answers in a sheet of paper. Their answers were codified to be analyzed later.
3 RESULTS

Students' interviews also showed they perceived working with structures in a positive way and they were highly motivated to work in groups.

3.1 Pretest-posttest comparison

Globally, results showed that there was an improvement after the instruction since the mean value in the pretest was 3.31 (SD 1.21) and in the posttest 6.47 (SD 1.67). Fig. 1 shows the mean values of the pre- and posttest in relation with students' academic level. There were significant differences between the pre- and the posttest (p<.05) and students’ academic level interacted significantly. Therefore, the differences between pre- and posttest depended on students’ academic level (F(1,53)=7.090; p=.010).

Thus, it seemed that this methodology helped students learn the L2 (Catalan) in an effective way. If variables are analysed independently, there were significant differences (p< .05) between the pre- and the posttest in all the variables (Verb1, Verb2, Verb3, Verb4, Voc6, Voc7, Voc8, Voc9 and Con10) except for Punct5. Table 1 shows the mean values and standard deviations (SD) of the scores obtained in each variable both in the pre- and in the posttest. Taking into account students' level of academic achievement, variables Verb3, Punct5 and Voc8 interacted significantly. Therefore, the differences between the pre and posttest depended on students' academic level.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Pretest</th>
<th>Posttest</th>
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<tbody>
<tr>
<td>Verb1 (max= 1)</td>
<td>.76 (.20)</td>
<td>.92 (.13)</td>
</tr>
<tr>
<td>Verb2 (max= 1)</td>
<td>.43 (.33)</td>
<td>.72 (.30)</td>
</tr>
<tr>
<td>Verb3 (max= 1)</td>
<td>.09 (.17)</td>
<td>.36 (.23)</td>
</tr>
<tr>
<td>Verb4 (max= 1)</td>
<td>.18 (.29)</td>
<td>.78 (.30)</td>
</tr>
<tr>
<td>Punct5 (max= 1)</td>
<td>.09 (.29)</td>
<td>.35 (.29)</td>
</tr>
<tr>
<td>Voc6 (max= 1)</td>
<td>.39 (.29)</td>
<td>.75 (.29)</td>
</tr>
<tr>
<td>Voc7 (max= 1)</td>
<td>.38 (.28)</td>
<td>.72 (.26)</td>
</tr>
<tr>
<td>Voc8 (max= 1)</td>
<td>.41 (.28)</td>
<td>.69 (.26)</td>
</tr>
<tr>
<td>Voc9 (max= 1)</td>
<td>.42 (.27)</td>
<td>.74 (.22)</td>
</tr>
<tr>
<td>Con10 (max= 1)</td>
<td>.16 (.19)</td>
<td>.52 (.30)</td>
</tr>
</tbody>
</table>
Question Verb3 was considered by experts as the most difficult one. In the same line, Torralba (2012) found that students had serious difficulties to discriminate the meaning of verbal forms, both isolated and when a linguistic context was provided.

In Variable Puct5 there were not significant differences between the pre- and the posttest (p>.05) but the level of academic achievement was globally significant (F(1,52)=18,758; p=.000). Students with a medium-high level performed better than the rest in this question.

Regarding the questions about vocabulary, although there were significant differences between the pre- and the posttest in all the variables, only in Voc8 the level of academic achievement was globally significant (F(1,52)=6,757; p=.012).

In order to prove the extent to which this methodology helped students learn their L2, the relative improvement coefficient was calculated. In that way, we could know the relative improvement of each group of students in relation with their academic level. The following formula was used: Final score (posttest)-Initial score (pre-test)/10-Initial score (pre-test). The resulting number (between 0 and 1) indicates the highest level of improvement which would be possible within each academic level.

\[ \text{Relative Improvement Coefficient} = \frac{\text{Final score (posttest)} - \text{Initial score (pre-test)}}{10 - \text{Initial score (pre-test)}} \]

The academic level was significant (F(3,51)=, 9,018; p=.000). The higher the level of academic achievement, the higher students' level of improvement. Therefore, students with a high level of command of the L2 (Catalan) got the highest benefit in proportion.

### Table 2. Improvement coefficient for each level of academic achievement

<table>
<thead>
<tr>
<th>Academic level</th>
<th>Subjects</th>
<th>Mean values (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>6</td>
<td>.59 (.16)</td>
</tr>
<tr>
<td>Medium-high</td>
<td>22</td>
<td>.57 (.13)</td>
</tr>
<tr>
<td>Medium-low</td>
<td>15</td>
<td>.46 (.19)</td>
</tr>
<tr>
<td>Low</td>
<td>12</td>
<td>.29 (.14)</td>
</tr>
<tr>
<td>Total</td>
<td>55</td>
<td>.48 (.19)</td>
</tr>
</tbody>
</table>

3.2 Students' interviews

88% of the subjects expressed a positive opinion about the methodology and the use of structures. For instance, subject #3 declared: 'I love structures because I learn a lot with them'; or subject #10 declared: 'I love this way of learning because we play and we learn at the same time'.

Moreover, 98.7% of the subjects reported that they liked working in groups, cooperatively, very much. For instance, subject #22 reported: 'I like working with my partners because it is funnier and I can make new friends'; or subject #18 declared: 'I love working in groups. It help me concentrate on the task' Therefore, working in groups is funny and motivating for them and they perceived that it helped them learn from their partners. It also encouraged a positive attitude towards the L2.

4 CONCLUSIONS

The aim of this paper was to analyse the extent to which the MORE methodology and Kagan's cooperative learning structures could help learn grammar content in an L2.

Results showed that this methodology is an effective tool to improve the learning of grammar content in Catalan, particularly verbs, vocabulary and contracted forms. Punctuation did not experiment any difference in the posttest.

Moreover, although all the students benefited from this methodology, the subjects who obtained greater benefits from the instruction were those with a high level of academic achievement.

Regarding the use of structures, students showed a positive attitude towards this methodology and perceived that it helped them in their learning process. In line with other research studies (Mahmoud, 2014 [4]; Turrión and Ovejero, 2013 [6]; Gömleksiz, 2007 [7]), it also promoted students’ motivation and interaction with each other. Although it is an exploratory study and further research is required, Kagan’s cooperative structures seem a promising and effective tool to learn Catalan as an L2.
REFERENCES