



ICT AND VOCABULARY ACQUISITION IN TWO DIFFERENT GROUPS OF SPANISH AND PORTUGUESE LEARNERS

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Abstract

Recent research on Second Language Acquisition (SLA) shows that computer-assisted language learning (CALL) leads to an improvement of cognitive and social skills which are involved in the natural process of communication [1] and which especially enable the acquisition of new lexicon [2]. Bearing this in mind, we have started using blended learning in Spanish and Portuguese classes, with the help of an internet platform, MONDO, provided by Stockholm University.

This study focuses on the learning of new vocabulary in two different groups of students at Stockholm University: a group of intermediate learners of Spanish (n=16) and a group of learners of Portuguese at beginners' level (n=8).

Two sets of experiments have been conducted with each group: one using blended learning and one based on traditional learning activities. The one using blended learning includes three different cognitive skills: listening and reading, on the internet, and speaking about a specific topic, in class, by means of a debate. The acquisition of new vocabulary through these activities has been evaluated and compared to the acquisition of new vocabulary when no ICT was used and students worked with a glossary and a text where they had to use the words they were supposed to learn. The evaluation of the two learning methods consisted on a task where the students were asked to fill-in the blanks with the right word in its correct grammatical form.

The results of the experiments with the Spanish group have shown that there is a significant difference between the two methods ($p=0,012$), indicating that the inclusion of ICT reinforces the acquisition of specific vocabulary. A similar set of experiments will be conducted with the Portuguese group and similar results are expected.

The outcome of the experiments ran with both groups will be presented and discussed at the conference.

1. Introduction

The main aim of the present study is to discuss the impact of ICT in the acquisition of new vocabulary in SLA, with two different groups of learners: a group of Spanish intermediate students and a group of Portuguese beginner students, from Stockholm University, most of which have Swedish as a first language (SL1).

A comparison has been made between a more traditional teaching method which focused on form (on the first stage vocabulary was taught explicitly and only on the second stage were the students asked to use it in a meaningful context) and another one that involved ICT meaningful activities where their first approach to vocabulary was made through a text on the internet and they were afterwards asked to produce their own texts at home and present them in blogs and orally.

Having the findings of previous research which have shown that "combinations of focus-on-form techniques are likely to be more effective than the use of individual techniques" [3] as a starting point, we posit the hypothesis that the second set of tasks (the ones including ICT) will show to be more effective than the ones that do not imply the use of ICT.

2. ICT and the acquisition of new vocabulary in foreign language classrooms

One central approach to the role of grammar instruction in SLA, the so called *focus on form* has been highlighted during the last two decades. According to researches as Cadierno (2006), "this approach, originally proposed by Long (1991), involves drawing L2 learners' attention to linguistic elements in the context of communication, i.e., in lessons whose overriding focus is on meaning and communication" [4]. A central idea for this kind of approach is given by the concept in cognitive approaches to SLA which posits that learners have the opportunity to acquire features of the linguistic input that they are exposed to during the course of reading or listening for meaning [5]. Nevertheless, in order to help the student to pay attention to the features which are at play, research has shown that different techniques for highlighting the key features to be learned from the input might be of help. Input salience, marked input, repetition, input modification and input elaboration are just some of the methods teachers can make use of to guide students' attention in the process of learning new vocabulary. Most of these techniques can be implemented with the help of ICT, which have shown to benefit students' outcomes [6] and help them have a better control over their own learning process [7]. In the present study, repetition and input modification have been the key techniques applied in class and in the ICT activities developed by the learners. On the other hand, the interactive ICT activities have provided the students the opportunity to actively work with the vocabulary at play by producing written texts (which later on were produced orally in class). This way, both repetition and input modification have taken place in the processes of reading on the internet followed by the production tasks. According to Skehan (1998), input frequency is among the factors that figures prominently in theories of the factors that affect noticing of target language input [8]. Input modification, on the other hand, implies all what the students do while interacting with their mates in order to clarify, repeat, or translate, in order to be able to continue a conversation [9].

3. The present study

3.1. Participants

3.1.1. The Spanish group (SG)

The Spanish group consists of sixteen students, all of them with SL1 but for one who has Italian as first language. All the participants in this group had some previous knowledge of Spanish acquired through high school during at least three years, which is the prerequisite to enter the Spanish program at Stockholm University.

3.1.2. The Portuguese group (PG)

The Portuguese group consists of eight SL1 students who have had no formal education in Portuguese before. Nevertheless five of them are false beginners who have been to Portugal frequently or are Portuguese-related, i.e., only three of the students had no prior knowledge of Portuguese; one of these had good knowledge of Spanish.

3.2. Procedure

As for the Spanish group, the activity that included blended learning took place a few weeks prior to the final testing. On the first stage the students had to listen to an oral presentation made by the teacher about the Indian group of the Mapuches in the South of Chile, South America. After that, the students were asked to look for related information about the topic on the internet and discuss it informally in a forum. This last described activity was introduced to them as a way to prepare themselves for a debate, which would take place a week later in classroom. The students' attention was only partially drawn to the vocabulary learning process at the end of the debate, when some words were briefly presented in their correct grammatical form.

The second activity, the one that did not include using ICT, took place the lesson before taking the final test (i.e. a week before). In this activity the students had to fill-in the blanks with the right word

using a dictionary in class. The topic in this case was the Midsummer Day. After that, the words were corrected on the whiteboard and the students were provided with the correct grammatical form and the correct meaning.

As for the Portuguese group, the activity which included ICT was also done some weeks before the testing took place. The students were first introduced to the vocabulary area “My favorite city” through a blog the teacher had posted on the platform. Next to that blog they also had a list of useful expressions to give their opinion. At this stage they were asked to perform two tasks:

- produce a similar text and post it on the platform;
- read and comment at least one of their colleagues’ texts.

The teacher then discussed the most common mistakes with the students, in class, drawing their attention to the specific vocabulary they were supposed to use when describing a city. After that each of the students had to make an oral presentation on their favorite city and ask their colleagues some questions about their own presentations.

Once again, at the end of all presentations some errors were analyzed in class.

The second area of vocabulary was “My family”. Here they were first presented with a list of relationship words which were translated in class when their meaning was unknown. The students were then asked to perform several tasks:

- fill-in the blanks about a family;
- read and discuss a text about another family;
- orally present their families in class.

After the presentations some errors were analyzed in class as it had happened with the previous topic area.

3.3. The testing

The testing procedure describes as follows:

For the SG, the students had two different texts in which some key words were missing (9 words in each text, one text about the Mapuches and another one about Midsummer Day). The students were asked to fill-in with the right word in its correct grammatical form. At the beginning of each text the students were provided with a set of words among which they had to choose the correct one (a number of 12 words were provided for each text and therefore some words were supposed to be avoided). All these words were presented in the inappropriate form, i.e., in this task they had to convert nouns into adjectives according to the given context.

What the PG is concerned, they were given a test with two exercises, one for each vocabulary area. In each exercise they had to fill-in a text, choosing the correct words according to context, from a group of 22 words, and making the necessary changes into the plural, when necessary.

3.4. Analysis

The results of the comparison between the two types of teaching methods will be presented in the following tables.

On the left column of each table we present the words the students had to choose for each text. The number 0 to 2 represent the scores obtained:

0 = no answer or wrong answer

1 = correct word but incorrect grammatical form

2 = correct word in the correct grammatical form

Table 1 – SG results

| WORD | S1 | S2 | S3 | S4 | S5 | S6 | S7 | S8 | S9 | S10 | S11 | S12 | S13 | S14 | S15 | S16 |
|----------|----|----|----|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|
| debate | 2 | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 2 |
| represa | 2 | 2 | 0 | 0 | 2 | 2 | 0 | 0 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 0 |
| pueblo | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 2 | 2 | 1 | 1 | 1 | 2 | 2 | 1 |
| empresa | 2 | 2 | 2 | 0 | 2 | 2 | 0 | 0 | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 0 |
| ambiente | 2 | 2 | 2 | 2 | 2 | 2 | 0 | 2 | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 2 |



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|--------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|------------|------------|------------|------------|------------|------------|
| ecologistas | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| contaminar | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| terremotos | 2 | 2 | 2 | 2 | 2 | 2 | 0 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Energía | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| TOTAL | 16 | 17 | 14 | 13 | 17 | 18 | 9 | 12 | 18 | 18 | 17 | 14 | 17 | 18 | 18 | 13 |
| WORD | S1 | S2 | S3 | S4 | S5 | S6 | S7 | S8 | S9 | S10 | S11 | S12 | S13 | S14 | S15 | S16 |
| Mundo | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 2 |
| Distante | 1 | 2 | 2 | 2 | 2 | 2 | 1 | 2 | 1 | 2 | 2 | 2 | 2 | 0 | 2 | 1 |
| fecunda | 1 | 2 | 2 | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 0 | 2 | 2 | 0 | 2 | 2 |
| milenaria | 0 | 1 | 0 | 2 | 2 | 2 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 0 |
| equivale | 1 | 2 | 0 | 1 | 2 | 2 | 1 | 1 | 2 | 2 | 1 | 1 | 0 | 1 | 2 | 1 |
| Fogatas | 0 | 2 | 2 | 2 | 2 | 2 | 0 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 2 | 2 |
| solsticio | 1 | 2 | 1 | 2 | 1 | 2 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 2 | 1 |
| Sur | 1 | 2 | 0 | 1 | 2 | 2 | 0 | 1 | 0 | 2 | 1 | 0 | 2 | 0 | 2 | 0 |
| Incierto | 1 | 1 | 1 | 1 | 2 | 1 | 0 | 1 | 2 | 2 | 1 | 1 | 2 | 1 | 2 | 1 |
| TOTAL | 8 | 16 | 10 | 15 | 17 | 17 | 5 | 13 | 12 | 17 | 10 | 10 | 14 | 6 | 17 | 10 |

Table 2 – PG results

| WORDS | P1 | P2 | P3 | P4 | P5 | P6 | P7 | P8 |
|--------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| cidade | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| norte | 2 | 0 | 2 | 2 | 2 | 2 | 2 | 0 |
| litoral | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 |
| habitantes | 1 | 2 | 2 | 2 | 1 | 2 | 2 | 2 |
| casas | 0 | 2 | 2 | 2 | 0 | 2 | 2 | 0 |
| bairros | 0 | 0 | 2 | 2 | 0 | 2 | 0 | 0 |
| centro | 2 | 0 | 2 | 2 | 2 | 2 | 2 | 0 |
| zona | 2 | 0 | 2 | 2 | 0 | 2 | 2 | 0 |
| café | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| jardim | 0 | 0 | 2 | 2 | 2 | 2 | 0 | 2 |
| TOTAL | 10 | 8 | 20 | 20 | 11 | 18 | 14 | 8 |
| pais | 0 | 2 | 2 | 2 | 0 | 2 | 2 | 2 |
| prima | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| avós | 1 | 1 | 2 | 0 | 0 | 2 | 0 | 2 |
| marido | 0 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| genro | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| mãe | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| irmãos | 0 | 0 | 2 | 2 | 0 | 2 | 2 | 0 |
| mulher | 0 | 2 | 1 | 2 | 2 | 2 | 2 | 2 |
| sogros | 0 | 0 | 0 | 2 | 2 | 0 | 2 | 0 |
| tio | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| TOTAL | 7 | 15 | 15 | 16 | 12 | 16 | 16 | 14 |

The results of the SG group were analyzed statistically to verify if the differences in the obtained scores were significant. After the application of a *t* test, the results for this group showed a significant difference with a *p* value of 0,012 ($t = -2,66$, *sdev* = 3,45, 30df), indicating that the high scores obtained in the text when blended learning was at play (including the meaningful ICT activities) could actually be more effective than the traditional method with no use of ICT.

As for the PG, the reduced number of participants did not allow us to perform a *t* test. Despite no definite conclusions can be drawn on the basis of these results, they can still be analyzed at an

individual level. If we first look at the number of correct answers for the first vocabulary area (with ICT), we realize that only two words were chosen incorrectly by most of the students (5 of 8 students in one case and 6 of 8 students in another). The two mentioned words are *litoral* and *bairros*, and the corresponding scores are in bold. As for the second text, four different words seem to have caused problems: *avós*, *genro*, *irmãos* and *sogros*, although students used them right before they took the test.

If we look at the individual results in the PG, we can see that half of the students managed to have higher scores in the text with ICT. The difference for two of the other four participants was very small, showing that the use of blended learning in general might be more effective than the traditional one. An increased number of participants in the PG could possibly have meant a similar outcome to the SG.

3.5. Discussion

In the SG we have found a significant difference between the two methods, in favour of the ICT tasks. The results of the PG also indicate that there seems to be a positive tendency towards the effectiveness of the blended method.

Even though the use of ICT did not imply the explicit teaching of vocabulary in our case, the question as to how the students have managed to acquire the specific vocabulary still remains. One explanation for that might be that the participants have been engaged in some sort of explicit learning at home while working on the internet.

The students' interaction through the platform may imply that they are consciously working with the vocabulary, i.e., by having more time to produce and correct their texts, they might be working at a more conscious level when trying to produce the correct grammatical form. Some previous research has shown that working with ICT benefits more independent attitudes towards the learning process (Figura & Jarvis, 2007)

We feel that the use of ICT in lessons led to an increase participation of students in their studies since they started using the tools available in the platform for other purposes than just those suggested by the teacher. Besides using the chat among themselves to discuss matters relevant to the course, they started posting all the texts as blogs and commenting on their colleagues work, even when they did not have to.

Conclusions

The aim of this study was to compare two learning methods when acquiring new vocabulary. Our results show that a blended learning method is more effective than a traditional one. The use of ICT benefits a more independent behaviour, giving the students the opportunity to interact with one another and have a higher control over their own learning process.

A study concerning a more fully detailed description of how the students work while engaged in ICT activities could give us a better understanding of the results obtained in this study. This could be beneficial for developing both teaching and researching methods concerning ICT and language learning.

It would also be interesting to see how the same groups of students would score if similar tests were applied in some months time.

References

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- [2] Chapelle, Carol A., 2003
- [3] Cadierno, Teresa, 2008
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[8] Chapelle, Carol A., 2003

[9] Larsen-Freeman & Long, 1998