The Impact of the NLP Spelling Strategy in the Early Years of Bilingual Education

La influencia de la estrategia de ortografía de la PNL en los primeros años de la enseñanza bilingüe

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Abstract

In the early years of bilingual education there is a lack of time and commitment to reinforce written skills, especially in Content Language Integrated Learning (CLIL) subjects where the vocabulary is more specific to content. The target of this research is to improve the number of good spellers based on four strategies adapted from Neuro-Linguistic Programming (NLP henceforth). Data suggests that, not only students in the experimental group increased good spelling performance, but also, NLP spelling strategies helped students learn from mistakes. Indeed, students lost fear about making mistakes, which ended up creating more participant, motivated, and reflective students.

Key words: CLIL, NLP, spelling strategies, learning to learn, motivation, bilingual Education.

Resumen

Durante los primeros años de la educación bilingüe hay escasez de tiempo y compromiso para reforzar las destrezas escritas, especialmente en las asignaturas de Aprendizaje Integrado de Contenido y Lengua (AICOLE), donde el vocabulario es más específico. El objetivo de esta investigación es mejorar el número de buenos deletreadores basándolo en cuatro estrategias adaptadas de la Programación Neuro-Lingüística (PNL). Los datos sugieren que no sólo el grupo experimental mejoró su actuación frente a la ortografía, sino que también, las estrategias de PNL ayudaron a los alumnos a aprender de los errores. De hecho, los alumnos perdieron el miedo a cometer errores, lo que resultó en la creación de alumnos más participativos, motivados y reflexivos.

Palabras clave: AICOLE, PNL, estrategias de ortografía, aprender a aprender, motivación, educación bilingüe.

1. INTRODUCTION

Bilingual programmes in the Community of Madrid have significantly changed the way content subjects are taught and learnt. Students in these programmes experience an increased exposure to a second language, which has considerably improved their level of proficiency. Therefore, it seems appropriate to think that Bilingual programmes have also changed the way our students feel about English. This change may be due to the fact that a foreign language is not only used in order to communicate, but also it has become a vehicle to learn contents. Furthermore, students are expected to produce a large and varied amount of language in content subjects, which can be challenging at times due to their limited resources (Halbach, 2014). Therefore, the input students are exposed to tends to be more natural not following a grammatical syllabus. Owing to these new teaching demands, teachers who develop their practice in a foreign language have become language teachers, regardless of the subject they teach. All these factors make explicit the need for a constant review of our practice that will involve risktaking, whilst developing new approaches to language teaching.

After ten years of experience within the Bilingual programme, it is the first time I am teaching 2nd grade. The past eight years, I taught grades 3 and 4. Even though students at this level can usually understand messages in English, it was fairly common to see how many of them could not copy a word correctly in most cases. I believe this is because the first years of Primary are devoted to the development of oral skills, whilst little attention is paid to written skills. On the other hand, written skills become more important and necessary for students to become competent in English from 3rd grade onwards. Given that correct spelling is a real challenge for students in 2nd grade, it is therefore key to placing a greater emphasis on pronunciation and spelling if we want to help students avoid misspelling words or making wrong word choices.

English is a language of great orthography ambiguity. This is due to the «accumulated irregularities of its spelling system» (Crystal, 1997, p. 9). In fact, Crystal (1997) maintains that spelling patterns could be one of the aspects that may appear less desirable for English learners. Similarly for Spanish speakers, decoding English sounds and spelling tends to be more complicated as in their L1, each sound is transcribed in a fixed representation. As Borgwaldt, Hellwig, De Groot, Licht (2006, p. 1) suggest:

In contrast, in opaque orthographies such as English, spelling-sound correspondences are often unpredictable. The degree of spelling-sound ambiguity is one of the variables known to affect visual word recognition performance.

Therefore, it seems advisable to find ways and new perspectives to bridge the gap between the development of oral skills during the early years of Content Language Integrated Language (CLIL, henceforth) and the development of written skills to enable the process of language acquisition. As Harmer (1998) explains, one of the main reasons for teaching writing skills is that it helps reinforce the language being learnt. In the same vein, he points out that «the visual demonstration of language construction is invaluable for both our understanding and how it all fits together and as an aid to committing the new language to memory» (1998, p. 79). Furthermore, Templeton and Morris, (1999, p. 108), indebted to Adams (1990) and Perfetti (1992), argued that «accurate, automatized knowledge of basic spelling patterns is at the heart of skilled reading and writing».

As a consequence, many writers and researchers have studied strategies by which students learn how to spell effectively. Recent research in County Durham (UK, 2006)¹, explored the impact Neuro-linguistic programming (NLP) had on the development of teaching and learning. One of the strategies they put into practice was the NLP Spelling Strategy, with the objective of helping learners retain and learn spellings more easily. This report, carried out with native English speakers, concluded that the use of different sensory channels and eye accessing clues made a great difference to the students' ability to memorise spellings, being both strategies used in NLP. My students tend to fail at this writing attempt. One reason might be that poor spellers tend to use ineffective mental programs by trying to sound out words (Dilts, 1997). Since content-subject vocabulary tends to be very difficult for students learning through a second language, I aim to prove whether the NLP spelling strategy is truly effective for early years of Primary Education within a CLIL context.

My research will address the following questions: Can the use of the NLP Spelling strategy increase the number of good spellers in content-subject

¹ The complete report can be consulted at https://goo.gl/szALKf [Last accessed: 28/07/2017].

classes? More precisely, is the use of the NLP Spelling strategy an effective teaching practice to raise spelling awareness and performance? And if so, will the use of NLP strategies in the classroom increase motivation towards written skills? These questions have made me develop the following hypothesis: The use of the NLP Spelling strategy in the learning of lexical fields within content-subject classes, will not only raise spelling awareness and performance, but also help students to become better spellers in a motivational and meaningful learning environment.

The objectives of this research are:

- To identify the key elements of the NLP Spelling strategy.
- To put into practice the NLP Spelling strategy in 2nd grade while checking and analysing the effectiveness of this action.
- To provide students with resources to bridge the gap between 2nd and 3rd grade with regard to written skills.
- To examine whether the results on this paper and this particular spelling strategy improve my students' performance in content subjects.

2. LITERATURE REVIEW

2.1. Learner diversity: unlocking the role of emotions

For students in the early years of primary education, learning contents through a second language is sometimes a real challenge due to their lack of linguistic resources. This may indeed block learning when these challenges are not addressed on time. In this sense, Meyer (2010, p. 11) points out, «there is still a lack of appropriate teaching materials and a comprehensive and integrative CLIL methodology». As a result, he complies a set of strategies for successful and sustainable CLIL teaching and learning. In particular, he identifies that one of these strategies is the need of rich input in the content subject class. In this light, he also stresses the importance of presenting this input in a meaningful, challenging and authentic manner in order to enhance motivation, which is in fact a way to lower students' affective filter. Finally, he describes how subject learning through a second language gets its best results when new topics are dealt with «in such a way that the affective filters of the students remain wide open and when students can link new input to prior knowledge, experiences and attitudes» (Meyer, 2010, p. 14).

Thus, affective and emotional factors are important when it comes to learning. In this sense, research on brain-based approach to language learning and teaching, maintains that «learning is as natural as breathing, and it is possible to either inhibit or facilitate it... In fact, the actual 'wiring' of the brain is affected by school and life experiences» (Nummela & Cain, 1990, p. 66). As a matter of fact, we all understand and experience the world differently. In order to explain this, Neuro Linguistic Programming founders wrote the following presupposition in the early 1970s: the map is not the territory. Using this metaphor, Revell and Norman (1997, p. 26) explain that «we all have frameworks or metaprograms (why we do what we do), through which we react to different contexts in life».

2.2. What is Neuro Linguistic Programming?

Richard Bandler, a student of mathematics and computer science and John Grinder, a professor of linguistics, first used the name Neuro-linguistic Programming (henceforth NLP) in the 1970s at the University of California at Santa Cruz. In order to illustrate what NLP is, Miller (2008) divides the word to three terms. The term *Neuro* has to do with the brain and the things that go on in our mind along with the five senses, whilst the term *linguistic* comprehends spoken and non-spoken language. Programming, on the other hand, deals with individual behaviour and thinking patterns.

As mentioned earlier, we all experience the world in different ways. This is because the way our senses understand and decipher the world is unique in each of us. In NLP, «the ways we take in, store and code information in our minds –seeing, hearing, feeling, taste and smell– are known as representational systems» (O'Connor and Seymour, 1990, p. 27). Additionally, O'Connor and Seymour (1990, p. 35) maintain that 'it is easy to know if a person is thinking in pictures, sounds or feelings'. As Revell and Norman (1997, p. 39) explain, «there is a correlation between the representational system a person is using and their eye movement». All in all, being aware of these facts can help us teachers learn more about our students' personalities and cognitive styles. As will be explained next, we can use this information to create rapport in order to help students change their frame of mind whilst teaching them strategies for learning.

2.2.1. NLP in CLIL

NLP has 'become a buzzword in EFL circles' (Puchta, 1999, p. 246, as cited in Harris, 2001, p. 30). The Teacher magazine in Poland published an interview with Herbert Puchta², in which he explains NLP from a language learning context point of view. Puchta maintains that when students excel at some skill, as for instance, remembering new words in a foreign language, an NLP approach would be to find out what these students do in terms of behaviour, supportive beliefs and cognitive strategies they use.

Nevertheless, teaching a foreign language is not the same as teaching and learning through a second language. In CLIL contexts, «students have to be able to use the vehicular language to learn content» (Coyle et al., 2010, p. 33). Accordingly, Clegg (2011) suggests that teaching CLIL lessons makes teachers grow into proficient spotters at anticipating language problems. Given that language planning is necessary in CLIL methodology, this becomes a habit and routine, and thus, effortless. In addition to this, Coyle et al. (2010, p. 29) suggest that teachers have to «consider how to actively involve learners' in order to make students aware 'of their own learning through developing metacognitive skills such as 'learning to learn'».

2.2.2. NLP and spelling

2.2.2.1. Reasons for teaching spelling and writing skills

Even though the bilingual programme has increased the level of our students' proficiency, experience has shown me that there is a lack of time and commitment to reinforce writing skills during the early years of Primary Education. Perhaps this is because some may think that spelling instruction is not necessary, since immersing students in reading and writing should be enough (Winch, 2002). That is, that every so often, CLIL teachers tend to praise the effort to convey words in the second language over accuracy,

² To read the full interview go to https://goo.gl/SVjavn [Last accessed: 28/07/2017].

where in many cases, everything is possible and readable as long as the concept is understood.

Contrary to that, Harmer (1998, p. 79) maintains that there are four main reasons for teaching writing to students. He claims that writing helps as *Reinforcement* since the visual demonstration of language supports the memorization of new language. Harmer adds that writing helps students, as it accompanies language *development* while taking into consideration «the mental activity we have to go through in order to construct proper written texts». With regard to *learning style*, Harmer points out that by learning in different ways, some of us may prefer to produce language at our own pace. Finally, he justifies that probably the most important reason for teaching writing is that, «it is a basic *language skill*, just as important as speaking, listening and reading».

2.2.2.2. NLP Spelling Strategy

As Grinder (1991, p. 93) suggests, «students who have less difficulty... are students who can immediately convert information heard (input) into internal (storage) visual form». This happens, for instance, when students are taking notes, which indeed involves the visualisation of words and body movement, an attempt to use the three main representational systems. Nonetheless, spelling is something else, especially in the English language. As Revell and Norman (1997) remark, an auditory approach to a non-phonetic language tends to forge poor spellers. In the same vein, Dilts (1997) maintains that whilst phonics may be of great help when trying to spell out a complete new word, it can also be a misleading strategy since many words in the English language are not written they way they sound. In fact, he suggests that good spellers simply remember how the words look. As a consequence, Dilts (1997) highlights how spelling's objective is learning to learn new words. Hence, we have encountered a learning to learn strategy to teach students in a CLIL environment.

As Revell and Norman (1997, p. 41) suggest, «good spellers in English are people who visualise the word... and check how it feels kinaesthetically» to write it down. In fact, many of us need to jot the letters of a specific word to find out whether it feels right. Therefore, this strategy deals with the visualisation of words. In fact, Revell and Norman (1997) affirm that spelling backwards is only possible if students are visualizing the word by reading the letters in their minds. Accordingly, Dilts (1997) claims that something visual keeps its shape whether people look it left to right or right to left.

Due to the correspondence that exists in the representational system people use and their eye movements, the idea is to locate the word up so students can create a clear picture. Therefore, the first step that Revell & Norman (1997) propose is to hold a word card up high so students need to look up to see it. Later on, students would need to consciously take a mental photograph of the word given in order to be able to write it down from memory. This will happen after visualizing the word in their minds for some time. Revell and Norman (1997) also describe how the use of colours and sizes to highlight important spelling features can support the process. These steps should be repeated until students are able to learn the word. Then, it is possible to prove the success of this strategy by asking students to spell the word backwards, and thus, recalling the word from their visual memory.

In addition to this, Dilts (1997)³ maintains that there are other factors influencing spelling such as beliefs that «could create a large amount of unconscious resistance if not addressed» and identity issues since «good spellers perceive their success as a statement about their identity and their failures as a specific behaviour». Hence, if students are able to see themselves as successful learners thanks to the NLP Spelling strategy, I will be increasing motivation and positive emotional factors towards the foreign language learning and use.

Before getting involved in this Action Research, I used to give students a list of content subject words to copy every day of the week so they could pass what I called a «spelling test». However, the NLP spelling strategy focuses on the process of learning rather than drilling-practice (Dilts, 1997). By putting into practice the NLP spelling strategy, it is highly probable that this strategy becomes a learning to learn resource that can help most students learn a new strategy for remembering and memorizing new words. Furthermore, if this strategy proves to be successful with regard to vocabulary dealt with in content subjects taught through a second language, there is a strong chance that students may apply this strategy to different learning contexts.

³ The complete article is available at https://goo.gl/w2ge9 [Last accessed: 28/07/2017].

3. METHODOLOGY AND WORK PLAN

3.1. The Study

3.1.1. Context

The school situated is in a low-middle socioeconomic class area of San Sebastián de los Reyes (Madrid), where many families are still struggling due to the impact of the economic crisis in the neighbourhood. The immigrant population of the school is around 15% most of them coming from Latin American countries, China, Romania and Morocco. This school has been bilingual since 2005.

This research is aimed for the 2nd year of Primary Education. There are 25 students in 2B and 2A classes. Their ages range between seven and eight years old. This is our second year together. I teach English, Natural and Social Sciences and Art to both groups. At this level, the LOMCE Act provides four hours a week for English, and one hour and half a week for Natural and Social Sciences respectively. In addition to this, I teach Art to both groups for a period of forty-five minutes a week. I take advantage of this area to reinforce and support content-subjects with Science projects and other artistic projects that deal with the culture of the foreign language. I am 'the class teacher' for 2B group. Hence, 2B will be the experimental group whereas 2A will be the control group.

3.1.2. Design of the intervention

As stated above, the aim of this study is to analyse the impact the use of NLP Spelling strategies may have on the learning of lexical fields within contentsubject areas. This is done by means of reinforcing spelling awareness and performance in order to help students become better spellers in a motivational and meaningful learning environment. In order to do so, on one hand, I aim to provide students with resources to bridge the gap between 2nd and 3rd grade with regard to written skills; on the other hand, the goal is to put into practice NLP Spelling strategies in 2nd grade while checking and analysing the effectiveness of this action. Finally, the intention is to examine whether these particular spelling strategies improve my students' performance in content subjects (see Appendix 0 for the full planning).

3.1.2.1. Design of the NLP spelling strategies

In order to develop NLP spelling strategies, I adapted four strategies taken from Grinder, M. (1991), two strategies for Natural Sciences, matter and materials vocabulary, and two different strategies for Social Sciences and road safety vocabulary. The following two strategies were used for Natural Sciences. The first strategy was to write a word while spelling each letter out loud, seeing the word in their minds and using a non-verbal cue (snap fingers) while spelling out the letters. For instance, in order to spell out the word 'marbles' students would have to say each letter (m, a, r, b, l, e, s), while snapping their fingers. Then, take a mental picture of the word, to finally jot down the letters recalling them from all three representational systems (V-A-K) that were involved in the cognitive process. The second technique implemented was used for words with an odd number of letters (i.e. seven letters: marbles). Students were requested to look at the middle letter in the word (i.e. «b») while seeing the correspondence with the letters on each side looking from left to right (i.e. «rb») and right to left (i.e. «bl») until they get the whole picture of word (arble-marbles) in their minds (see Appendix 1).

3.1.2.2. Developing the work plan

With regard to the length of the study, I decided to do an intervention of five weeks in which I alternated the way I used to teach spelling, by means of drilling practice, and four new strategies based on NLP focused on the visualisation of spelling (see Appendices 1 & 2). The first two weeks were devoted to studying vocabulary from Natural Sciences subject. During the first week, students from both, control and experimental group were given a list of words related to the topic at hand (i.e. matter and materials). Students were asked to copy each word in class and were requested to write each word at least once a day for a whole week in order to take a spelling test at the end of the week.

During week two, the control group continued to do the same although new words were practised. Meanwhile, I presented two NLP spelling strategies to the experimental group for them to learn their new Natural Sciences words (see Appendix 1). They were also requested to practise these new words and strategies at home, but I presented this as training rather than homework. At the end of the week, they also had a spelling test although this included non-verbal clues practised during the learning of the strategies stage. The following two weeks were dedicated to Social Sciences (road safety), following the same structure. The first week would serve as a pre-test for the new vocabulary following the way I used to teach spelling with both groups. During the second week, the control group continued to do the same with new words; whereas the experimental group practiced new Social Sciences words using two new strategies based on NLP (see Appendix 2).

Lastly, the fifth week's function was to get back to a NLP spelling strategy used when teaching and to get students in the experimental group to play games that would help me know whether they were able to spell words backwards. As argued during the literature review, we can prove the effectiveness of the NLP spelling strategies when students are able to spell the word backwards, which means that they are seeing and visualising the word in their minds.

3.1.2.3. Material design

Admittedly, although I had always recognised the importance of being an accurate speller and writer, I had always found it to be a very challenging area to teach. As a consequence, I might have been attached to the practice of spelling through drilling exercises for too long. For that reason, the control group did the same I have always done to teach spelling week after week, although each week they practised new words. With regard to the experimental group, even though they did the same as the control group for two weeks, when introducing the new content-subjects units, the other two weeks they were introduced with new spelling strategies based on an up and coming theoretical review such as NLP. In addition to this, the experimental group also benefited from a teacher that introduced many aspects learnt during her Master's programme: sharing learning goals and expectations, involving students in the learning process so I became more of a facilitator, a class where

activities were planned around the idea of having my students doing most of the talking, and last but not least, taking into account the language that will be needed so students could access to the tasks in content-subject lessons.

3.1.2.4. Implementing the NLP spelling strategies

Week one and week two were planned for Natural Sciences vocabulary. During week one, students practised vocabulary related to matter and materials by means of copying the words at least once a day. During this week the only command was to copy the words in a worksheet that included a rating of the three most difficult/easy words to spell question and a simple «how do you feel about your spelling?» to be completed before the spelling test. During week two, the control group remained to do the same whereas the experimental group was taught two NLP spelling strategies (see Appendix 1) and assessed using the non-verbal clues managed when training. Additionally, students in the experimental group were asked to complete a short peer and self-assessment questionnaire in order to detect problems, get feedback from students, and adapt materials if necessary (see Appendix 3). Furthermore, goals and expectations were shared at the beginning of each activity using WALT and WILF posters with the hope that students would get involved in a meaningful way by explaining and negotiating what was expected from them. Weeks three and four were planned following the same structure, although this time Social Sciences vocabulary was presented.

Finally, week five were two complete sessions that helped with getting back to the NLP spelling strategies and activities learnt, in order to check whether learning was still there. In addition to this, students were involved in a game that would give qualitative data about the ability to spell backwards which would meant the success in the use of the NLP strategy. During this week again expectations were shared and students were also requested to fill a quick peer and self-assessment sheet in which they could reflect about their performance throughout the tasks (see Appendix 3).

3.1.3. Data collection

The main aim when collecting data was to quantify the number of correct spellings and the possible changes the contribution of NLP spelling strategies could make by comparing results from the control and experimental group. As a consequence, the data to be collected is based in these sources:

- Spelling tests and Spelling tests based on NLP.
- Students' beliefs about their spelling skills questionnaire: How do you feel about your spelling this week?
- Spelling homework questionnaires: most difficult/easy words to spell.
- Peer and Self-assessment questionnaires.
- Teacher's observations.
- Research Journal.

3.1.4. Data analysis

All data gathered was analysed in accordance with the test results and the students' responses to the questionnaires provided. On one hand, spelling tests and NLP spelling tests provided quantitative data and thus, objective since they cater the number of correct spellings on each test. On the other hand, the answers to the questionnaires granted the researcher with valuable, although subjective, qualitative data based on students' opinions, comments, attitudes and preferences.

The timeline of this study was spread over five weeks, two for Natural Sciences vocabulary, another two weeks for Social Science vocabulary and a consolidation week. In order to organise data collected from the spelling tests, the scores were divided into five categories as shown on the table below:

Chart	Poor	Borderline	Good	Successful	Exceeding
Score	1 to 4,9	5 to 5,9	6 to 7,5	7,6 to 8,9	9 to 10
Data	Poor performers	Risk Zone	Average	Top per	formers

Table 1. Spelling test scores categorization.Source: Author.

In concordance, I will analyse the groups' results on each spelling test. During the first week, students in both groups were asked to copy a list of fifteen content words. Students' performance made by students was assessed through a spelling dictation test done after a week of drilling practice. During the second week, students in the experimental group were introduced and taught two visual strategies to learn their spellings based on NLP, whilst the control group remained to do the same throughout the whole study.

With regard to the spelling test during the second week, the experimental group's test was based on the NLP spelling strategies learnt, including nonverbal clues, where twelve words were assessed with nine new ones and three from the previous week. Additionally, it is worth saying that the words chosen on each test were selected in concordance to the contents being taught, having the second week a more challenging vocabulary. Furthermore, it is important to take into account the context of the experimental group, as there are not only students with special educational needs, but also some students that are quite disruptive, whilst the control group is quieter and a more homogeneous group. For me, the gist of the matter is to get the experimental group, a more challenging group indeed, to reinforce their spelling and try alternative learning strategies that may improve their performance.

As far as spelling tests are concerned, the graphic below shows how the experimental group increased good performance during the second and fourth week, in which NLP spelling strategy was reinforced in class. This group's results dropped one point during the third week of study. I believe to have identified the reasons behind this worsening in performance. Even though I recorded on the journal how engaged students were counting the finger snaps and how this test helped them to maintain focus, presenting a spelling test first thing on Monday morning was most probably not a good idea. Furthermore, it is fair to say that week 3 was a non-NLP strategies week. Presumably, this may be a reason of a drop in the interest for spelling work.

As seen in the chart, the control group grades decreased from the first to the second week and from the third to the fourth week consistently throughout the whole study. Their lower point reaches on week four. However, it is fair to mention that they took this test on the fourth session of a Friday before a long weekend. In fact, some students left school right after the test as recorded in the journal. Once again, external factors may have influenced results.



Figure 1. Chart 1: experimental and control group average grade in spelling tests throughout the study. *Source*: Author.



In order to organise data collected from the beliefs test («How do you feel about your spelling this week?»; see Appendix 1b), the scores were divided into three categories (brilliant, good, need to improve), where students had to assess their performance during the week right before the spelling test. These three categories were related to the scores reached in the spelling tests so that students' beliefs could be compared to their actual performance in the spelling tests.

Table 2. How do you feel about your spelling this week? Beliefs Questionnaire.

 Source: Author.

Chart	Poor	Borderline	Good	Successful	Exceeding
Score	1 to 4,9	5 to 5,9	6 to 7,5	7,6 to 8,9	9 to 10
Data	NEED TO IMPROVE	GO	OD	BRIL	LANT

With regard to students' beliefs, in the graph below, it can be observed how the experimental group started with confidence with a serious improvement after the practice of the first two NLP spelling strategies. The following weeks, students were able to be more consequent with their personal efforts being able to assess themselves closer to their actual performance.

On the other hand, students in the control group always maintained to feel brilliant or good towards their spelling work, but was unable to reflect according to their actual performance not only in tests, but also spelling homework.



Figure 2. Chart 2: experimental and control group beliefs throughout the study. *Source*: Author.



As for peer and self-assessment questionnaires, this time, only data from the second and fourth week was collected since these were the weeks in which NLP strategies were taught and practiced. In the light of the results, there are reasons to believe that most students were able to use the strategies presented to process spelling, helped and collaborated with each other staying on task while trying to use English at least for the most part of the activity.



Figure 3. Chart 3: Week 2 and week 4, peer assessment questionnaires comparison. *Source*: Author.

Figure 4. Chart 3: Week 2 and week 4, self-assessment questionnaires comparison. *Source*: Author.



SELF ASSESSMENT	WEEK 2	WEEK 4	WEEK 2	WEEK 4
	YES	YES	NO	NO
1) I practised 3-4 words using this strategy	92%	100%	8%	0%
2) I helped and collaborated with my partner	92%	100%	8%	8%
3) We stayed on task	92%	100%	8%	0%
4) I did MY BEST to practise the spellings using English	100%	96%	0%	4%
5) Can you spell new words from Social Sciences using this strategy?	92%	100%	8%	0%

With regards to the results taken from the consolidation week, As far as quantitative results are concerned, they show that the majority of students in the experimental group were able to spell backwards content-vocabulary from Natural and Social Sciences. However, it is important to bear in mind that these results are based on students' peer-assessment notes. According to all notes taken during observation, during the first session, some peers assessed positively words that were doubtful from the observers' perspective, but overall most peers and small teams were quite critical with their partners, especially during the second session.

The three most chosen words in both subjects were: *seatbelt, pollution, street light, homogeneous, marbles and heat.* From what I gathered during observation, it seemed that there was motivation towards peer challenge, choosing words that they considered to be the most difficult, to assess each other.



Figure 5. Chart 4: week 5 consolidation tasks results. *Source*: Author.

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SOCIAL SCIENCE CONSOLIDATION	CAN spell backwards	CANNOT spell backwards
Street light	9	3
Pollution	10	3
Plane	10	0
Driver	5	4
Seatbelt	12	2
Right	11	0

Figure 6. Chart 4: week 5 consolidation tasks results. *Source*: Author.



With regard to Social Sciences vocabulary, the least chosen word was the least successful one (*driver*). Due to the fact that they considered *driver* to be an easy or less appealing word they did not practice it enough, which translates in having better results in more challenging words. To my surprise, homophones such as *plane* and *right* that had been misspelled by a large

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number of students at earlier stages, they were now a complete success, probably as a consequence of a thorough practice in class.

In the case of Natural Sciences two out of the three words students considered more effortful, were actually the most successful during the second session. This leads me to think that this exercise was a great success as they have learnt to correctly spell the most challenging words. The least chosen word (*screw*) was again the least successful one. In fact, when monitoring the class I could notice how some pairs did not remember the meaning of this word, which probably made it to be the least popular. In addition to this, I noticed how most students were very motivated to check each other's work and how they were more focused on being more honest than in the previous session. Having students take part in their learning and assessment made students be more reflective about their efforts and performance.

Additionally, concerning qualitative data, the most remarkable comment could be when a small group of students asked in the morning line: Are we going to continue playing or work, today? (Note taken on Monday 9th May 2016). This verifies they actually perceived these tasks as enjoyable, fun and appealing.

As for the questionnaire made to the control group about practising spelling by copying words, instead, we had a small debate on Friday 13th of May 2016, in which I displayed these questions on the whiteboard: What did you think about spelling homework? Does it help you become a better writer/speller? First, we had a small debate in which students could comment with their peers one or two ideas to share them in a group of four afterwards. I gave them a mini whiteboard for each team so they could write one idea to share with the whole group. In order to facilitate debate and engage students in this activity, L1 was accepted. Most students said that copying a list of words for homework was boring, easy 'because you know what you have to do' (Alba, 13th May 2016), fast, or effortless. However, most of them stated that it helped them to be better spellers since 'you copy, and copy the word everyday and then you memorise it and you don't know why' (Alfonso, 13th May 2016) comment to what many students agreed on. Despite their comments, the results obtained in the tests are quite different to their perspective in some cases. The control group that was initially stronger showed a progressive decline in performance very much in concordance to the link between drilling exercises and routine work. Additionally, they showed difficulties to assess their efforts towards their spelling work. This is probably a consequence of having a single individual

questionnaire to be completed before the tests. In contrast, the experimental group was required to assess their peers and themselves regularly.

5. CONCLUSIONS

This research aimed at studying the use of NLP visualisation of spelling strategies in the learning of lexical fields within content-subject classes in early years of primary education. In order to test this hypothesis, I assumed that the use of NLP spelling strategies would not only raise spelling awareness and performance, but also would help students becoming better spellers in a motivational and meaningful learning environment.

Having analysed all data gathered from spelling tests and students questionnaires, I can affirm that this research helped students in the experimental group to learn the spelling of content words in a more effective way. With regard to the initial research questions, I can verify that the use of NLP spelling strategies not only increased the number of good spellers, but also the quality of their spelling as most students were situated as good and top performers. As a consequence, I maintain that the use of NLP visualisation of spelling strategies in the early years of bilingual education, triggers students' desire to learn the spelling of content words since they find these enjoyable and fun to learn. Furthermore, I state that including peer and self-assessment techniques is a powerful tool to increase students' awareness towards their real efforts and their actual performance.

Nevertheless, there are some limitations in the study. The first and most important limitation was time constraints. Even though this research was carried out for five weeks, longer time would have given me the opportunity to analyse results in a more exhaustive way. Moreover, avoiding times of the week that were less favourable for students (first session Monday morning/fourth session Friday afternoon) would have possibly given me different results. More time would have also facilitated the application and practice of these and further strategies, so I could have analysed which strategies work best and why in a thorough manner.

Additionally, the teaching and practice of the strategies was time consuming. As a consequence, I had to constantly rearrange my weekly planning in order to be able to actually teach the contents required in each subject. As a matter of fact, students had to face new words a few days before starting the unit in Social Sciences. Even though some students felt the desire to learn the meaning of these words beforehand, as noted in the research journal, some other students felt anxious about dealing with words out of the context of the unit. For the future, I would probably change the practice of spelling by giving one strategy and the words related to the content taught in a day, in order to shorten the list to practice.

The second limitation was related to pairing students. Although most students stated to like working in pairs, there were some pairs that needed to be reorganised in many occasions. I would suggest paying special attention to the assigned pairs from session to session, to be able to adjust students so they feel comfortable working with each other. Also, I would propose to work on social skills while making students aware of the benefits that pair and group work have for their learning.

Excluding these limitations, there are grounds for believing that NLP spelling strategies were beneficial to students, so as to make them improve the spelling of content words in an effective and motivational way. Nonetheless, some suggestions could be taken into account for future lines of research. I would like to involve other teachers of English and Spanish in order to further investigate different professionals' views and groups performances in different subjects. By doing this, this research would turn into a valuable experience for the whole school's community and would enhance an interdisciplinary approach to learning. In addition to this, I would like to further investigate how beliefs influence students learning through a second language. From my perspective, students who see themselves as good learners tend to be more motivated towards learning. By influencing students positively about learning a second language, it is an open door to a more relaxed atmosphere and possibly better results.

In conclusion, supporting the idea that NLP spelling strategies would not only raise spelling awareness and performance, but also would help students become competent spellers in a motivational and meaningful environment, this research shows that NLP visualisation of spelling, provided students with new challenges to practice content-words spellings, rather than copying words until they get it right. Therefore, NLP spelling strategies aided students to learn effectively while sharing experiences in a relaxed and pleasant environment. These positive results give me a boost of energy to continue working with NLP spelling strategies with students in the control group, and to bring into play new ways of including these strategies on a regular basis. I would like to finish this paper by saying that this research has helped me to improve my teaching practice, not only by being a more reflective teacher, but also by willing to take risks motivated towards a better practice. NLP offers unlimited opportunities to research in education, which can be translated into infinite chances to find new ways and approaches for second language teaching and learning.

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APPENDIX 0 Action Research activities planning

The impact of the NLP spelling strategy in the early years bilingual education: lesson plan

JUSTIFICATION:

Content-subject vocabulary tends to be very difficult for students learning through a second language due to the great orthography ambiguity in the English language. In order to provide with support for spelling strategies, it is necessary to design tasks that help students use effective mental programs rather than trying to sound out words. This way, trying becomes the target of the task. Praising effort will make students more willing to persevere and try new language. For doing so, the classroom environment must become a place fearless of mistakes where making them is part of the process and seen as an opportunity to learn. The ARP will take 5 weeks of research. However, this plan will be carried out during the second and fourth week of April. It will be developed during content subjects, 4 periods a week. Therefore, the aim of this plan is to revise and reinforce new lexical fields related to content subject areas. All sessions will have the same structure, but each day will include different elements. On the other hand, teacher's role and students' expectations will remain the same across the plan.

GENERAL QUESTIONS:	 Can the use of the NLP Spelling strategy increase the number of good spellers in content-subject classes? Is the use of the NLP Spelling strategy an effective teaching practice to raise spelling awareness and performance? Will the use of NLP strategies in the classroom increase motivation towards written skills?
HYPOTHESIS:	The use of the NLP Spelling strategy in the learning of lexical fields within content-subject classes will not only raise spelling awareness and performance, but also help students to become better spellers in a motivational and meaningful learning environment.
GENERAL OBJECTIVES:	 To identify the key elements of the NLP Spelling strategy. To put into practice the NLP Spelling strategy in 2nd grade while checking and analysing the effectiveness of this action. To provide students with resources to bridge the gap between 2nd and 3rd grade with regard to written skills. To examine whether or not the results on this paper and this particular spelling strategy improve my students' performance in content subjects.
SPECIFIC OBJECTIVES:	 By the end of the lesson plan: ✓ All students will learn simple spelling strategies that will practice in class and a home. ✓ Most students will be able to use at least one spelling strategy effectively. ✓ Most students will be more effective with regard to spelling new lexical fields from content subjects.

				:	STAGES	OF WOF	ĸ			
		Timing: 5		Timing: 5		Timing: 10		Timing: 5		Timing; 5
	Lead in	Skills integration: L, S	Setting up the activity	Skills integration: L, S	Runnin g the activity	Skills integration: L, S, R, W	After the activity	Skills integration: L, S	Feedback	Skills integration: L, S, R, W
OBJETIVE		e motivation erest towards rity.	cess by	te the pro- guiding stu- ugh the next work.	the steps	nts to follow of the stra- hey practice ings.	assess t	tudents to neir own work is of an ans- et.	to be refle	age students ective about in class per-
GROUPING	Whole c	lass	Pair work		Think - Pa	ir - Share	Pairs/Wh	ole group	Pairs/Indivi	dually
MATERIALS	ters to s	nd WILF pos- hare expecta- students.	(IWB) d word doo language	White Board isplaying a sument with support ns for the	Rubric fo	or observa-	the previ work.	aking during ous stages of s handouts	previous sta Strategies Self (25)	ng during the ages of work. handouts and peer nt photoco-
PROCEDURE	WILF pc WALT: from Science visual Practice words u tegy. WILF: I Help e follow a. the str. English cing. ST Explain Iling str Model Teacher assistar	Spell words Natural/Social susing a strategy. 3-4 new sing this stra- Work in pairs. ach other to nd understand ategy. Speak while practi- AY ON TASK! the NLP spe-	 by writing board: 1. Work is the period to you the teacy ou a period to you and the teacy ou a period to you and providually hando description of the teach of teach of the teach of teach	turns; a stu- their peers as a word lips the part- o spell this using the strategy. each other you have ms. r help if you solve your ms. del. one to repe- ions. one to repe-	 languag become The ma keep s task a possible that ari activity. Follow t procedu arch cla table. Praise participi CLOSING VITY: Signal wh of rehears to finish. How? 1 stopwatch Why? Stu what to 	a THE ACTI - nen the end sing is about -2 minutes	teach te how to u strategie Present a game:	the activity as are the tea-	both, teach about the a viour and atmospherre task. Give positi related to tt criteria of tt stars and Resource http://reso kleplus.co.1 Explain th self - asses Give 2-3	e during the ve feedback he evaluation e activity - 2 i a wish!! taken from: urces.spar- uk/sb165.pdf e peer and ssment chart. minutes to self-assess-

EXPECTATIONS FROM STUDENTS	 Listen to the goal and teachers' expectations. Understand that we will be wor- king with lexical fields from con- tent subjects. React according to plan giving positive feed- back, as they understand the activity. Ask questions for clarification. 	 Show understanding by means of gathe- ring in pairs and paying attention to the model of the activity provided by teachers. Ask questions for clarification or need additional help. Repeat instructions as requested by the teacher. Show on-going liste- ner response, as they understand the basics of the activity. 	 Work in pairs using one of the strategies they have learnt. Notice the spelling features. Use some of the lan- guage previously agreed to carry out the task (this one is first, second, next / it's my turn-your turn) Some of them will ask questions for clarification or will need instant feed- back to know whe- ther they are on the right path. 	 Present as volunteers. Show the class how they used this strategy. Follow the steps of one of the strategies. Might need or require some help during the process. 	 Listen to the comments from other pupils and teacher. Complete the self and peer assessment cards. Ask for help. Make comments about each other performances
TEACHER'S ROLE	 Pedagogical mediators (Vygotsky) by creating a mea- ningful purpose for the task. Encouraging stu- dents to predict in form a tion about the activity. Model the activity by means of a short role-play among teachers. 	 Organize students in the arrangement needed for the acti- vity. Mixed ability pairs. Give clear instruc- tions and display useful language and key instruc- tions words on the digital board. Provide a time limit. Answer questions for clarification. 	 Walk around the classroom taking notes about students' participation and the use of English as means of communication. Monitor the task. Make themselves available for questions or clarifications pupils may have. Observe if everyone is on task and know what to do. Take notes for giving specific feedback. Indicate 1-minute left to close activity. 	 Help students to be the ones to ans- wer the questions the volunteers may have during their presentation. Point out those aspects noted to give specific feed- back on language used during the a c t i v i t y . (Comments will depend on obser- vation). 	 Making students aware of their own learning: «Now, let's check our WALT & WILF posters» What have we learnt? Helping students know what to assess. «If we look at our WALT and WILF poster, what does it mean to do good?» Listening to stu- dents' feedback and take notes.

						ATION TAS				
						OF WORK	- J			
		Timing: 5		Timing: 5		Timing: 10		Timing: 5		Timing; 5
	Lead in	Skills integration: L, S	Setting up the activity	Skills integration: L, S	Running the activity	Skills integration: L, S, R, W	After the activity	Skills integration: L, S	Feedback	Skills integration: L, S, R, W
OBJETIVE		ise motivation nterest towards tivity.	by guidir	e the process ng students e next stages	the steps	nts to follow of the stra- hey practice ngs.	assess	udents to their own means of an sheet.	to be refle	ge students ective about n class per-
GROUPING	Whole	class	Pair work		Pair work		Pairs/Wh	ole group	Pairs/Indivi	dually
MATERIALS	ters to	and WILF pos- o share expec- with students.	(IWB) disp document ge suppor	with strate-	Rubric for	observation.	the prev of work.	aking during ious stages es handouts.	previous work. Strategies I Self (25)	g during the stages of nandouts and peer tt photoco-
PROCEDURE	WILF WAL1 from Scien WARI Spelli Practi using stratey WILF. Help follow tand Speak practi TASK. Expla 'Here Spelli Teach ge ass the s class.	S!! Become ng Detectives. ce 3-4 words one or more gies. Work in pairs. each other to and unders- the game. K English while cing. STAY ON	 by writing board: In pa your fa tegy to your sp S1: se and us selecte gers, s ber of hes) S2: dra dashes the word S2: dra dashes the word S2: jo down fi left. They H score of correct are all backwa Help when y blems. 	licitates the nce. tit the letter from right to both keep a of number of words they ble to spell ards. each other you have pro- one to repeat	guage become - The ma keep s task al possible that aria activity. - Follow t procedu arch cla table. - Praise e ticipation CLOSING ACTIVITY Signal who rehearsing finish.	THE	dents te whole cl use one tegies. F all strat been pre Introduce as a gan	e the activity ne: are the tea-	both, teach about th behaviour atmosphere task. Give positi related to tion criteria vity – 2 s wish!! Res from: http: sparkleplus 5.pdf Explain the self-assess Give 2-3	nents from er and pupils e activity, and general e during the ve feedback the evalua- of the acti- tars and a ource taken //resources. .co.uk/sb16 e peer and ment chart. minutes to self-assess-

EXPECTATIONS FROM STUDENTS	 Listen to the goal and teachers' expectations. Understand that we will be wor- king with lexical fields from con- tent subjects. React according to plan giving positive feed- back, as they understand the activity. Ask questions for clarification. 	 Show understan- ding by means of gathering in pairs and paying atten- tion to the model of the activity provided by tea- chers. Ask questions for clarification or need additional help. Repeat instruc- tions as reques- ted by the tea- cher. Show on-going listener respon- se, as they understand the basics of the activity. 	 Work in pairs with the lexical items they are given. Notice the spe- lling features. Use some of the language pre- viously agreed to carry out the task (this one is first, second, next / it's my turn-your turn) Some of them will ask ques- tions for clarifica- tion or will need instant feedback to know whether they are on the right path. 	 Present as volunteers. Show the class how they used this strategy. Follow the steps of one of the strategies. Might need or require some help during the process. 	 Listen to the comments from other pupils and teacher. Complete the self and peer a s s e s s m e n t cards. Ask for help. Make comments about each other performances
TEACHER'S ROLE	 Pedagogical mediators (Vygotsky) by creating a mea- ningful purpose for the task. Encouraging stu- dents to predict in for mation about the activity. Model the activity by means of a short role-play among teachers. 	 Organize students in the arrangement needed for the activity. Mixed ability pairs. Give clear instructions and display useful language and key in structions swords on the digital board. Provide a time limit. Answer questions for clarification. 	 Walk around the classroom taking notes about students' participation and the use of English as means of communication. Monitor the task. Make themselves available for questions or clarifications pupils may have. Observe if everyone is on task and know what to do. Take notes for giving specific feedback. Indicate when there is a minute left to close the activity. 	 Help students to be the ones to answer the ques- tions the volunte- ers may have during their pre- sentation. Point out those aspects noted to give specific feedback on lan- guage used during the acti- vity. (Comments will depend on observation). 	 Making students aware of their own learning: «Now, let's check our WALT & WILF posters» What have we learnt? Helping students know what to assess. «If we look at our WALT and WILF poster, what does it mean to do good?» Listening to stu- dents' feedback and take notes.

APPENDIX 1 NLP Spelling Strategies and Homework training -Natural Sciencies

				NAME: DATE:	
TRAT	E6Y 1: 1	STRATEGY 1: PLAY THIS GAME: PRETEND YOU ARE A TEACHER		STRATEGY 2: PLAY THIS GAME: PRETEND YOU ARE A TEACHER!	
	¥ ð	Write the word on a paper.		1.	
	*	Snap your fingers at each letter you say.	A.	\checkmark Select a word with an odd number of letters (3, 5 or 7	SPOON
		Repeat.	2	letters) from the list given this week. (i.e., spoon).	123 231
~		Look somewhere else in the room.	P.C.S.S.D	,	Environe
		SEE THE LETTERS IN YOUR FAVOURITE COLOUR.	HELLO	ć.	2 6 7 K
	ð	SEE them and SAY them out loud.	Å	to Wiggle your fingers in front of your eyes.	3
	ĸ	Snap your fingers at each letter you ay.	Å.	the Move off to look at the word little by little.	3
		Repeat.			
3		Look back at the paper.			NOON
	ě	SEE and SAY all the letters BACKWARDS.	OLLEH	, m	
	*	Snap your fingers at each letter you say.	A.	●Look at the middle letter' (i.e., "O" of spOon).	SPOON
		Repeat.	9	4.	L Contraction
			N.	${f C} As$ you look at the middle letter, (0), at the same time,	Refer
4	0	Look somewhere else in the room (you can close your	1 CON	look at the letters to the right (you see OON).	NDO
		eyes to concentrate).	52	5.	o noticity
	0	SEE THE LETTERS IN YOUR FAVOURITE COLOUR.	OLLEH	• As vou look at the middle letter (0).	Renard
	ĕ	SAY THEM BACKWARDS.	Å	©See the letter to the right (O)	
	*	Snap your fingers at each letter you say.	6	• At the same time, see the letter to the left (P).	81
		Repeat.	z		80 July
2	×	Close your eyes.	5)		BUL RUNA
	ě	Say the word.	Ă	6. Continue the process, going from right to left until the word is completed.	d is completed.
	¥	Spell it forward.	HELLO	Î	

APPENDIX 1B Homework handouts

	STRATES 4: PLAN THIS GAME DEFTEND YOU ARE A TRACHED	
STRATEEY 3: PLAY THIS GAME: PRETEND YOU ARE A TEACHER	היואורופל לי נואי משוור ארובומ לס שארא וראפורא	
1. Æ Write a word on your whiteboard. Æ Underline each letter.	SIGN 2. SUCITE TWO words on your whiteboard.	TRAFFIC
2. ©Look at the board. ✓ Memorize each letter and the letter on each side. Try to memorize it	COOK 2. SI Cook at the board and memorize each letter and the letter on each side.	LOOK TRAF FIC SI IG
3. ★ Erase the letters leaving the dashes.	Try to memorize itl	Z 9
4. • Ask a friend/someone in your family to point to each	× Erase the letters leaving the dashes.	3
• Say the letters out loud.	Ask someone in your family to point to each dash (IN ORDER FROM LEFT TO RIGHT). • Say the letters out loud.	St.
 When you know the word, memorize the number of letters (dashes). 6. 	5. Vhen you know the word, memorize the number of letters (dashes).	Ŭ.
 Point at each dash randomly. Say the letters out loud until you complete the word. Repeat the process going from the last to the first letter. 	 6. P point at each dash randomly. * Say the letters out loud until you have the whole word. 	3

APPENDIX 2 NLP Spelling Strategies and Homework training -**SOCIAL SCIENCIES**

Educación y Futuro, 37 (2017), 93-125

GROUP B - WEEK 4

GROUP B - WEEK 4

Appendix 3 Peer and self-evaluation: Week 2 Natural Sciences -Wekk 4 Social Sciences



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