
| RESEARCH ARTICLE

Investigating the Effect of Slate Boards on Improving Middle School Students' Spelling of Word Lists.

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| ABSTRACT

This study aims at investigating the problem of spelling in the writing of vocabulary of Moroccan middle school students. In particular, this paper is meant to examine the possible effect of using slate boards on improving students' spelling of word lists on topics in the student's book. To investigate this problem, this paper has made use of two student groups. The first is a control group made of 30 students who will receive no instruction or exercises about spelling (treatment); while the second is the experimental group, which is made of the same number of students (30) and who will receive slate board practice as a regular consolidating activity on a word list about three units of the student's book. As instruments for data collection, a pretest in the form of dictation of four sentences was used along with an (MCQ) test of 100 blanks to fill in the correct spelling of words was utilized to check their spelling of this word list. The collected data from the study were quantified in terms of a t-test.

| KEYWORDS

Spelling, slate boards, EFL learners

| ARTICLE INFORMATION

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1. Introduction

Learning to spell effectively is so significant for reading and writing (Ehri, 1997; Westwood, 2018). Though basic as it seems, becoming an efficient speller of English determines the extent to which one can become an efficient reader or writer. Yet, English spelling, in particular for beginners, is known for its irregularities and poses an obstacle to learning how to write and read effectively regardless of the learners' level of proficiency or age (Ellis & Cataldo, 1990; Ehri, 1991; 2000). This failure to spell effectively impedes English language learners' academic performance in a variety of ways (Westwood, 2018). Thus, teachers need to undertake various teaching strategies to develop such a lower-level cognitive skill and implement certain practical teaching practices to improve their spelling in English. One possible way to improve beginning learners' spelling is a regular and structured practice of slate boards. Due to its status as a low-cognitive literacy skill, spelling needs no longer be considered as that minor detail that can develop on its own through time and experience. However, more studies and research, such as this one, are worth exploring into its significant effect on developing reading and writing. Thus, an emergent action from researchers, teachers, and parents is required to reconcile with such a fundamental and amendable skill.

1.1 Statement of the Problem

Though overlooked in the Moroccan curricula, spelling exerts a disturbing effect on students' accuracy, which, by extension, affects the intelligibility of meaning in their reading and writing. Many, if not all, learners of English as a foreign (EFL) fail to hold total mastery of their English spelling, especially with the advent of smart technologies, such as e-dictionaries, smartphones, etc. As a result, EFL students' spelling performance becomes a problematic issue that calls for more focus and investigation. Little work, if not none, has been done about this issue of spelling deficiencies in Moroccan EFL classrooms. Spelling has always been considered a minor detail. But this does not undermine the researcher's ambition to embark on the intricacies of how to improve the students'

spelling performance even at the cost of having the participants going back to very traditional teaching materials such as the use of slate boards.

1.3 Research Questions and Hypothesis.

The present classroom investigation is carried out to answer the following research questions and confirm or disconfirm one sole hypothesis.

RQ1: Do slate boards have any effect on students' spelling performance?

RQ2: What other variables affect learners' spelling performance?

RH: Slate boards have a positive effect on improving students' spelling performance.

RH^o: Slate boards have no positive effect on improving students' spelling performance.

2. Literature Review

2.1. The Nature of the English Spelling

Many researchers in the realm of literacy claim that English orthography is irregular and complex (Templeton & Morris, 2000; Rao, 2018). Therefore, more focus on spelling is needed to make it easier for learners of English as a foreign language to read and write effectively. Some of the irregularities that arise and pose a challenge to beginning readers are, for example, the letter 'a'. It makes many different sounds, such as 'hat, cane, calm, about, mall, and, watch'. To illustrate, letter or letter combinations can represent more than one sound, which confirms the claim that the English spelling system, especially for beginning learners, is irregular, and even more complex (Rollings, 2003). On such a premise, many researchers and practitioners in the realm of literacy have thoroughly revisited spelling with significant emphasis on adopting a variety of teaching approaches (Gentry, 1982; O'Sullivan, 2000; Ott, 2014).

2.2. The Perceptual Process

O'Sullivan (2000) underpins Schonell's claim which dealt with spelling as visual and auditory processing (1957). Such a claim was confirmed by van Staden and Purcell (2016) who argued that learners of English as an L2 draw upon multi-sensory learning strategies to support spelling development. That is, learners of English as a foreign language (EFL) depend on their visual processing by using their eyes to recognize the orthographic form of letters and words on one hand; on the other, they depend on their auditory processing (their hearing ability) to identify the spelling of these words to recognize their sounds.

2.3. The Developmental Process

Regarded as an ongoing and dynamic process, spelling has been given a high degree of focus to the extent that it turned out to be perceived as a developmental phenomenon (Gentry, 1987; Henderson, 1990). O'Sullivan (2007) introduced one particular model of inventions of children's spelling considering that spelling falls into five developmental stages:

- Pre-communicative – scribble writing in which children may tell a story as they scribble and draw.
- Pre-phonetic – the creative or invented spelling stage where a single letter may represent a word or a group of letters e.g. H or h for 'high'.
- Phonetic – letter-by-letter transcriptions of sounds e.g. 'hi'.
- Transitional – the spellings look more like standard spelling influenced by origin and rules e.g. 'hye'.
- Correct – standard spelling e.g. 'high'.

All considered, spelling is conceived of as the basic threshold towards learning how to read and write that is viewed as "an operation that goes through a maturational process"(Westwood, 2018, p. 7). That is, spelling is developmental skill that could be improved through structured teaching strategies, one of which is the regular and structured use of slate boards.

2.4. Slate boards as an instructional tool

Slates were used as an instructional tool to foster pupils' ability to make letters and get them acquainted with new words (Walcott, 1857). This process goes through a developmental process starting from the easiest category whose form looks like mathematical shapes. Learners were trained to form letters into mathematical clusters. First, they begin using their slates to write the letter "I" which looks like the number 1. Subsequently, they move to more complicated clusters which look like the number 0 to write the letters O, Q, C, D, B, R, and G. Kidwell, Ackerberg-Hasting, and Roberts (2008) state that "small wax slates were used for drawings from at least the times of the ancient Greeks" (p. 22) to develop into a pedagogical tool to teach Mathematics and grammar including vocabulary.

3. Methodology

3.1 Sample

The sample selected for this study comprises two intact classes of 30 students each. Both of them belong to the same public middle school. Besides, both groups maintain a high degree of homogeneity at the level of English proficiency because they had

never had any English classes before ninth grade. At this level, students get their first classes of English. Another featuring aspect of homogeneity is the fact that all of them are of the same age and social background (belonging to a poor district in the suburbs of Kenitra city) (Creswell, 2012). One more featuring aspect that characterizes this study is the participants' selection. As it lends itself to a quasi-experimental study, the participants were not, therefore, randomly selected, and were assigned to two different conditions: the control the experimental one.

3.2 Instrument

Along with a spelling multiple-choice test, a dictation test was used to test students' retention of a list of words from the three first units (Hello, School and Family) from the students' textbook, **Focus**. A structured and regular practice of slates on a word list about the aforementioned was introduced to the experimental group in the first-term classes as a treatment that makes an integral component of the English class over three months.

3.3 Research Design

The current study adopts a quasi-experimental design that complies with the criterion that there is no random selection of subjects. A fact that preserves dissimilarity and non-equivalence between the two groups. Moreover, this study attempts to investigate the cause-and-effect relationship between the two variables. That is, it attempts to examine the possible effect of the independent variable (slate board practice) on the dependent one (spelling development).

4. Data Collection Procedure

The data collection process started at the beginning of the school year 2012-2013, particularly during the first semester. Complying with the ethical and legal requirements of conducting research (Marczyk, DeMatteo & Festinger, 2005), the researcher requested consent from the headmaster of the school as well as from the participants' parents by signing and agreeing on their children's participation in this research. All parents responded positively to the form. The RoR was 100%.

Empirical research is so significant that it allows the researcher the opportunity to either support or reject the null hypothesis stated in the theoretical part (Kothari, 2004; Driscoll & Lecky, 2001). For the present study, the null hypothesis states that slate boards do not affect improving young learners' spelling performance. In such a case, the researcher felt compelled to shift the assumption into a more controversial argument that needs to be operationalized and, thereby, consolidated through measurable research questions, which, in their turn, need to be dealt with through statistical procedures, namely the pretest and the post-test.

Data was conducted quantitatively. Data were analyzed and described using a multiple-choice spelling test which comprises ten sound categories that were succinctly categorized and coded. I deliberately opted for ten categories of words to tap into the most common difficulties beginning students might find regarding English vocabulary spelling. These vocabulary items were, thus, selected. For the pretest, students proved very poor performance due to the first exposure to English as a second foreign language. Each item includes four options, involving three distracters and one correct answer. For error identification, one point was given for each correct choice. In a word, all ten categories total 100 points. To examine differences between the control and the experimental group, a statistical t-test procedure was conducted. Additionally, the strength of association procedure was also used to measure the degree of relationship or correlation between the dependent variable featured in the spelling performance, on one hand; and the independent variable shaped in the regular use and practice of the slate board, on the other. In brief, it is continuous wherein the measurement is carried out through scores (interval). The measurement of the subjects' performance, that is, the data, is dealt with as nominal, which is (class vs. population). Another feature that characterizes this research paper is that it derives its subjects from an intact group.

5. Findings and Data Analysis

5.1 Descriptive Statistics Analysis of the Data

Based on the test findings, the students' (participants') scores have noticeably revealed significant differences at all levels. A meticulous look at the means, we notice that the expert group outperforms the control one with a mean of (70.23); whereas, the control group has reached a mean of (46.46), which explains the divergent spelling performance between the two groups.

Table 1

Means, standards of deviation and standard error means of the spelling post-test

	Mean	N	Std. Deviation	Std. Error Mean
Pair 1 Control	46,4667	30	9,19420	1,67862
Experimental	70,2333	30	15,99069	2,91949

Additionally, for reliability purposes, both groups' standard errors are small and range between 1, 67862 and 2,91949. This, therefore, indicates that the accuracy of the mean as an estimate of the true mean of the population is maintained. In other words, the sample is a more accurate reflection of the actual population mean.

5.2 Inferential statistics analysis of the data

After three months of regular and focused practice on slate boards, the researcher administered a test to measure students' ability to respond to the spelling of several words about the public school ninth-grade syllabus. These words were carefully extracted from the index of the student textbook, (**Focus**), the book which by the agreement of both teachers and the inspector is agreed on to middle school learners belonging to the area of the Essakina district.

Table 2
Paired Samples Test

		Paired Differences			95% Confidence Interval of Difference		t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper			
Pair 1	Cont. Exp.	-23,76667	7,36573	1,34479	-26,51708	-21,01626	-17,673	29	,000

Besides, the t-test reveals that the t-value ($t = -17.00$) is greater; therefore, we can confidently conclude that the greater our t value, the more confidence we have in the coefficient produced. We can also state that the coefficient is a good predictor of higher variation between the two means of the two conditions.

A measure of the probability that the observed difference between the means of the two groups could have occurred by chance. A p-value of less than 0.05 is generally considered to be statistically significant, which means that it is unlikely that the observed difference between the means of the two groups could have occurred by chance alone. In this case, the p-value is lower than the threshold alpha ($p = 0.000$), indicating that the difference between the means of the two groups is highly statistically significant. This leads us to reject the H_0 and strongly affirm the strong effect of the slate board on improving the students spelling performance.

In so doing, we can conclude that such a neglected tool does have a massively strong impact on developing middle school students' spelling. A more perceptible look at the participants' responses shows the extent to which a very simple slate board can affect student's performance when coping with new and different vocabulary items.

In brief, the t-test has revealed an immense difference between the experimental and the control groups, which ascertains the significant effect of the slate board as a regular practice and broaches up a variety of issues, such as French as a second language interference with the target language, English, as one that is worth discussing.

6. Discussion

In a retrospective view of the findings drawn from the post-test, subjects' limited input has emerged as another question that requires some emphasis. Because of their limited linguistic competence, involving phonological, morphological, and vocabulary awareness (Wasowicz, 2010) the control group proves unable to accurately recognize the correct spelling of most of the word categories. Whereas, the experimental group successfully demonstrated their ability to spell such words, for they had received a systematic and regular practice of the slate board.

Noticeably, one key strategy to decode sounds is the use of memory as a learning strategy. As far as consonants are concerned, the control has captured a very low average of (4.46), which shows a complete failure at decoding the mute sounds, such as *listen*, *write*, *Wednesday* and *muscle*; whereas, the experimental group obtained (7.36), which indicates that they outperform their peers in the control group in perceiving the correct written form of consonants of these words. Such a difference in the average reveals the direct and strong effect of the slate board use. Along with the use of slate boards and memory as a direct learning strategy, students' spelling of word lists has significantly improved. In this case, memory is claimed to be "the most common way to "enter information into long-term memory and retrieve it when needed for communication", (Oxford, 1990, p. 18-21). Therefore, memory remains an inevitable scheme that appeals to young learners to develop their spelling achievement in the post-test.

Another issue identifies itself in this study is the positive phonological transfer from French into English as a strategy to develop EFL spelling. In practice, the empirical findings, at hand, show that the experimental group proved successful in encoding and decoding the orthographic spelling of words like *information*, *table*, and *restaurant*. In other words, this group relies on their French phonological knowledge of these words, and, therefore, surmounted their English phonological peculiarity and could sort out their

correct spelling in English. In this context, Cook (2005) argues that "learners use their phonological clues to reach the spelling of the word" (p. 178). Thus, we can conclude that bilingual learners will certainly find it easier to develop their spelling in the target language when activating their phonological representations when naming words (Jared & Kroll, 2001).

The /tʃ/ sound cluster where ch is pronounced as /tch/ as in words like a *teacher, chair, cheese, chips, chicken, chocolate, children, cheap* and *chief* show an increase in the scores of the experimental over the control group. The /s/ sound category involving words like *nice, twice, space, notice, chance, advice, face, balance, niece, and place* proves that the experts outperform their control peers. Similarly, the /k/ sound in words like *cake, picnic, car, come, cook, cousin, carrots, fantastic, cap, and calm* is another instance in which the experimental group proves more effective than the control group. In the same line of analysis, the experimental group members prove more efficient in writing the correct orthography of some of the Greek *ch* that sounds like /k/ as in *school, mechanic, architect, chronic, monarch, technical, character, ache, stomach, and chronometer*.

Concerning the /ʃ/ and /z/ before the letter u cluster, this category of words has shown a noticeable challenge to the control groups; whereas, the experimental group excels in decoding the correct transcription of words as *sure, sugar, assure, insure, insurance, treasure, measure, pleasure, leisure, and closure*. Because of the control group's lack of phonological awareness of the English language sounds and their limited contact with and direct exposure to English, adding up to this their beginning level, the control group performance has been below par. Therefore, they resort to the French sound system to decode these words as sounds, rather than orthographic images. In so doing, they perceive mistakenly these words as follows: *chugar* for *sugar, pleajure* for *pleasure, and clojure* for *closure*.

In brief, the control group could not cope up with the peculiarities of English language. That is. Effective spelling is not always about the direct connection between oral and written language, a notion that Nunes et al. (2006) refer to as "writing a language that you can't hear". It is the very challenge that the control group faced, for they did not receive any slate board practice as a treatment, which accounts for the fact they handwrite the words as they hear them. This confirms Wasowicz' stand (2010) and , later, Westwood's (2018) conclusions holding that learners draw upon their phonological and morphological awareness of the first language when coping with new words of the target language.

On the other hand, the second part of the test examines learners' ability to spell some vowels. For example, the first cluster presents the long /u:/ in which case experimental group prove more successful than their control peers in perceiving vocabulary having the /u:/ sound as in *ruler, true, flute, June, whose, too, who, cool, fruit, and two*. The second category is that of /eɪ/ sound as *eight, crayon, play, stay, say, day, make, same, April, and date* in which case the expert group again outperforms the peer one. Last, but not least, is the O / əʊ / sound words in words like *close, alone, those, hope, phone, tone, stone, note home, and post*. In such a category, the experimental group shows far more better performance than the control test takers. The failure to correctly handwrite the correct spelling of words as *ruler, true, June, whose* and *fruit* is attributed to students' poor knowledge of the English irregular sound system. They also find difficulties in decoding words carrying the sound /a/ as in *eight, say, April* ..etc., opting for false alternatives such as *ayt, pley, mayk, and saym*..etc. Such a response explains the students' very limited orthographic repertoire of certain English vocabulary, which could be enhanced through the regular practice of the slate board. Further, the /o/ category poses a huge challenge for the control group, too. It shows that the slate board's impact on the spelling of such words is unquestionably omnipresent.

In short, test takers most often resorted to their knowledge of French language to decode and support their spelling of words like *biology*, which they put it as *biologie*, (in French). Such an L1 interference in L2 acquisition was identified on the basis of contrastive analysis, in which case Lado (1957, p.2) demonstrated that

individuals tend to transfer the forms and meanings, and the distribution of forms and meanings of [their native] first language (in our case French) and culture to the foreign language and culture—both productively when attempting to speak the language and to act in the culture, and receptively when attempting to grasp and understand the language and the culture as practiced by natives.

To confirm Lado's claim, Cook and Bassetti (2005), too, put it in Ulrich's terms that L1 interference into L2 occurs when "those instances of deviation from the norms of their language which occur in the target language" (p. 178). Not only does such linguistic digression restrict itself to the realm of meaning, but it also affects form. Now that spelling is one of the essential features of form, learners do deviate from the target language spelling code into their first language script because the subjects are new to the English code of spelling. For instance, learners do not demonstrate the ability to correctly recognize and use the 'y' as a consonant as in words like *you and year*. Instead, they mistakenly perceive as the French 'i', as a vowel as the adverb *y* that indicates a place (ex. *il y a deux,; nous y sommes*).

7. Conclusion and Recommendations

Investigating the effect of slate boards on spelling has been undertaken as an attempt to revise and revisit the importance of slate boards as neglected teaching tools in middle language classrooms. The present study has proved the slate boards' regular and structured use is significantly effective and highly efficient in improving students' spelling of new encountered word lists. More importantly, the empirical findings of this study have proved that such a neglected learning tool needs to be reconsidered and updated with newer technological breakthroughs, such as tablets or I-pads, which, of course, need to be controlled and monitored by the teacher. Thus, the researcher recommends that further reconciliation between old-new teaching methods need to be established taking into account that the main concern is to accomplish the teaching objectives set for the language classes regardless of the current voguish teaching trends, which tend to deny the feasibility of certain old teaching tools and consider them outdated. Thus, the researcher recommends more research be conducted in this area of language literacy. In particular, more focus need to be laid on some old teaching practices and their possible effect on improving micro-language skills as it is the case with the present study which has proved that slate boards have significant effect on improving the English spelling. However, one of the limitations of the present study is that the researcher could not cover all spelling areas of the English language related to the textbook used in the ninth grade middle school (**Focus**), which accounts for the need to extend and expand on this research gap area as a worthwhile longitudinal doctorate research issue.

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