

English and Spanish spelling: Are they really different?

Although the Spanish and English orthographies differ, there are marked similarities between them that may be used to facilitate spelling instruction in both languages.

When we think of the contrasts that exist between the English and Spanish languages, perhaps one of the most prominent is that of spelling. What could be more different than the transparent orthography of the Spanish language, traditionally considered—along with Finnish and Serbo-Croatian—to have one of the strongest alphabetic foundations, and the deep, asymmetrical English orthography, which abounds in inconsistent phoneme–grapheme correspondences? The starkly contrasting nature of the spelling systems might well also lead to the belief that they should be taught in different ways: Whereas Spanish orthography allows systematic teaching of pedagogically economical rules, English spelling is perhaps best acquired incidentally, through exposure in extensive free voluntary reading (Krashen, 1993). While acknowledging the substantial differences that exist between the orthographic systems of both languages, this article posits that there are also striking similarities between them—in terms of their violation of the universal phonemic principle, the psychological processes involved in their acquisition and production, the causes that best account for misspellings in both languages, the most frequent didactic errors made in their teaching, and the pedagogical implications for their instruction. These similarities result in the belief that English and Spanish spelling can be taught along the same lines, following

equivalent principles, and even in connection to each other.

Differences between English and Spanish spelling

It is incontrovertible that, although both the English and Spanish orthographic systems have alphabetic foundations, the Spanish one is more shallow or transparent, presenting a much more notable phoneme–grapheme correspondence than English. Indeed, although the latter has a primarily alphabetic foundation, it also possesses morphophonemic properties, as Barnes (1992), Crowder (1985), and A.W. Ellis (1990) pointed out. In fact, according to Fowler and Liberman (1995), English spelling occupies a position midway between truly phonemic systems such as Spanish or Finnish and morphological ones like Chinese or Korean. The English orthographic system is consequently deep, complex, and asymmetrical because, as Barry (1992), Goulandris (1992), and Seymour (1992) have signaled, it lacks orthographic regularity. That is, the spelling of words does not mirror their pronunciation in a reliable fashion and, therefore, additional knowledge of specific lexical items is required, plus some understanding of morphemic structure and conventions governing representation of the orthography.

This divergence was ratified empirically in a contrastive study (Pérez Cañado, 2000), where more differences than similarities were detected between the spelling performance in English and Spanish of 261 fifth-grade subjects. The only two coincidences found were the strong correlation between the nonrule-governed parts of the English

and Spanish spelling tests and the highly problematic nature of silent letters and capitalization in both languages. Among the much more numerous differences were the better performance of the subjects on the Spanish spelling test; the higher attainment of the girls on the Spanish spelling test versus the boys on the English orthography exam; the higher achievement of all students on the Spanish rule-governed dimensions while in English they obtained better results on the nonrule-governed ones; the great difference in the difficulty caused by homophones, exclamation points, and question marks in the two languages (they were highly problematic in English but not a problem in Spanish); and the weak correlations between rule-governed aspects in both spelling tests.

Similarities between English and Spanish spelling

My extensive work with English and Spanish spelling has allowed me to ascertain that, when one delves deeper into these orthographic systems, distinct similarities between them can be discerned.

Deviation from the universal phonemic principle

First of these similarities is the fact that the English and Spanish spelling systems deviate from the universal phonemic principle or alphabetic principle (one letter/grapheme for each phoneme and one phoneme for each letter/grapheme) in much the same way (Emerson, 1997).

Thus, English spelling lacks the three properties by which, according to Coltheart (1984, as cited in Koda, 1997), alphabetic orthographies can be classified. To begin with, English does not evince *regularity of one-to-one correspondence*, as there is no systematic relationship between a single graphemic unit and a single phoneme (in English, one phoneme is assigned to two graphemic units, called a digraph, such as *gh* corresponding to the phoneme /f/, and *ck* corresponding to /k/). Second, English orthography violates the *regularity of phonemic assignment*, because a particular letter fulfills more than one phonemic assignment (e.g., one graphemic unit, for instance, *b*, often serves several phonemic purposes—it is

pronounced in *boy* but is silent in *debt*). Last, it lacks *regularity of graphemic assignment*, as it is not systematic in symbolizing a single phoneme by a single graphemic representation. (Note, for instance, that the phoneme /s/ can be represented either by the letter *c* or *s*, as in *cite* and *site*.)

However, Spanish spelling contains three practically identical deviations that are sources of inconsistency not dissimilar to those found in English, although certainly less abundant. In Pérez González's terminology (1996, p. 26), they involve "*poligrafía de fonemas*," "*polifonía de los fonogramas*," and "*heterografía de morfemas uniformes*." The first of these terms refers to what Coltheart (1984) called irregularity of graphemic assignment: One phoneme can be represented by diverse phonograms or letters. In Spanish, this type of polygraphy is sometimes regular (e.g., the phoneme /g/ is written as *g* before *a*, *o*, and *u* and *gu* before *e* and *i*), and sometimes irregular (e.g., /k/ can be represented by *c*, *k*, or *qu*). Second, "*polifonía de los fonogramas*" refers to Coltheart's irregularity of phonemic assignment: One particular phonogram or letter fulfills more than one phonemic assignment (e.g., the letter *c* is pronounced as /k/ prior to *a*, *o*, and *u* but as /z/ before *e* and *i*). Finally, "*heterografía de morfemas uniformes*" is the introduction of variations in spelling which are not accompanied by a linguistically relevant change in pronunciation or meaning (e.g., uniform morphemes finished in /k/ or in /g/: /sak/ from *sacar* is sometimes written *sac* and sometimes *saqu*; /pag/ is sometimes written *pag* and sometimes *pagu*). To these violations of the universal phonemic principle, we must add the increasingly logographic nature of spelling in many parts of Andalusia (southern Spain) due to the disparity between pronunciation and writing.

These violations of the universal phonemic principle have been the cause of the long orthographic reform tradition that has characterized English and Spanish spelling. Many attempts have been made over several centuries to simplify the spelling of the English language. Demands for rationalization go back to the late 16th century, when John Hart took an active interest in the problems of written English and Thomas Scott suggested a restoration of letters from the Old English alphabet to allow a more phonetic rendering. Such outstanding figures as Benjamin Franklin; Noah

Webster; Mark Twain; Charles Darwin; Alfred, Lord Tennyson; Sir Arthur Conan Doyle; Andrew Carnegie; Theodore Roosevelt; and George Bernard Shaw have advocated spelling reform and supported movements for that cause. And, surprising as it may seem, we find numerous complaints about the Spanish Academy's decision not to modify and simplify spelling. Casares (1941), Mosterín (1981), Pelegrín Otero (1962), and Unamuno (1968) were all outspoken against this lack of reform.

Psychological processes involved in spelling acquisition and production

Further connections can be established between the psychological processes involved in the acquisition and production of English and Spanish spelling. Indeed, one model has traditionally been dominant in accounting for the acquisition of the orthography of both languages, namely, the dual-route or dual-process framework (see Álvarez, Alameda, & Domínguez, 1999, and Pérez González, 1996, for Spanish spelling and Barry, 1992, 1994; Seymour, 1992, 1997; and Zesiger & de Partz, 1997, with respect to English orthography). This theory postulates that there are two separate neural pathways, mechanisms, or processing systems that can be employed to spell. These pathways operate in parallel and are linked but can be dissociated. The phonological module or route is responsible for the spelling of consistent or regular words and for the production of unfamiliar or pseudowords, as it assembles or generates the spelling of words with the aid of phoneme-grapheme rules. The visual-orthographic strategy or procedure involves words whose spellings have been memorized. It allows direct lexical access without intermediate phonological processing, as it relies on word-specific information. It is responsible for the generation of familiar words, which are retrieved from the memory store as single units.

If we accept that the psychological processes involved in the acquisition of English and Spanish spelling are parallel, it can be deduced that those at work in the production of both orthographies are no less similar. Thus, Pérez González (1996) distinguished three processes that need to operate adequately for correct spellings to be produced in Spanish, and these are precisely the same ones that

Leybaert and Content (1995), Shemesh and Waller (2000), and Strickland (1998) documented as essential for English orthography. Hence, in order for the speller to be successful at his or her task in both English and Spanish, he or she must possess adequately functioning phonological and visual modules, master the phoneme-to-grapheme and grapheme-to-phoneme conversion mechanisms, and be capable of reproducing the serial order of letters in words.

Causes of misspelling

The incorrect operation of any one of these three processes might be the explanation behind a given misspelling in either English or Spanish. The causes of such orthographic errors have intensely interested researchers, who have sought to identify them in both Spanish and English through empirical studies that have revealed remarkable coincidences between the two languages. For example, Pérez González (1978) studied the explanatory power of 35 linguistic, pedagogical, and psychological variables in relation to Spanish orthographic errors. Working with approximately 1,500 students in the second cycle of what was then Educación General Básica and employing differential, correlational, and factor analyses, he arrived at the conclusion that motivation and intelligence have scarce weight as sources of explanation for misspellings in Spanish. And, curiously, in a recent investigation I conducted (Pérez Cañado, 2003) with 67 third-cycle Primary Education pupils, I obtained practically identical outcomes with respect to English spelling. Indeed, the successive discriminant analyses carried out in that study revealed that none of the moderator variables considered—verbal intelligence, motivation, and academic performance in the curricular areas of English, Spanish Language and Literature, Mathematics, and Science—accounted for the differences observed between the orthographic performance in English of the experimental and control groups.

Didactic errors

It is perhaps the lack of familiarity with the previously mentioned processes and causes that has induced certain ill-fated didactic practices to become pervasive in both English and Spanish

spelling instruction. To begin with, this area is one of the most resistant to revision, as reformers in both languages have complained. In addition, in both Spanish and English, spelling is awarded slight importance (as Cramer, 1998; Hughes & Searle, 1997; Pérez González, 1996; and Upward, 1988, bemoaned), granted insufficient didactic time (as Pérez González and Reason & Boote, 1994, pointed out), and unsystematically reviewed or discontinued altogether (as Camps, Milian, Bigas, Camps, & Cabré, 1990; Hildreth, 1962; Moats, 1994; and Pérez González lamented). Furthermore, when spelling is taught, it is done inadequately, by fostering mechanical memorization and rote learning of isolated word lists and rules (as Heald-Taylor, 1998; and Pérez González remarked), erroneously prioritizing the visual route to the detriment of the phonological one (as Barry, 1994; Goulandris, 1992; and Pérez González stressed), or employing dictation as the sole method of spelling instruction (as Madrid Fernandez & Muros Navarro, 1984; and Pérez González highlighted).

Pedagogical implications

Precisely in order to avoid these “*dispedagogías ortográficas*,” as Pérez González (1996, p. 28) termed them, I present the following set of pedagogical implications that foster the successful instruction of this discipline. These are a result of knowledge of the psychological processes involved in the acquisition and production of orthography and of the causes of misspelling. Research on the design of a method for the teaching of Spanish orthography (Pérez González, Cañado Gómez, & Pérez Cañado, 1999), together with implementation of an intervention program in which I provided an experimental group of learners with explicit English spelling instruction for an entire academic year (Pérez Cañado, 2003), has led to affirmation that the same didactic practices apply in both languages.

To begin with, just as Spanish orthography is taught uninterrupted throughout Primary and, in some cases, Compulsory Secondary Education in Spain, there is also a definite place for the continued, systematic, and explicit instruction of English spelling in the foreign-language classroom, as it has remarkable differentiating and durable effects on orthographic performance. This pedagogical recom-

mendation, endorsed by numerous renowned figures in this field (e.g., Allal, 1997; Au, 2000; Bromley, 2000; Cramer, 1998; Goulandris, 1994; Hughes & Searle, 1997; Koda, 1997; Madrid Fernández & Muros Navarro, 1984; Moats, 1995; Moseley, 1994; Pinnell & Fountas, 1998; Rosencrans, 1998; Sgall, 1987; Tarasoff, 1990; Templeton & Bear, 1992; Templeton & Morris, 1999; and Wilde, 1992), has received empirical support in both the English and Spanish languages.

With regard to English spelling, a quantitative, quasiexperimental study with a pretest/posttest control group design was conducted with primary-grade Spanish students to determine the possible effects and durability of explicit spelling instruction on orthographic performance (Pérez Cañado, 2003). Its results made a clear case in favor of the explicit paradigm when it comes to English spelling instruction in the foreign-language classroom. Indeed, the ANOVA and the *t* test revealed statistically significant differences in favor of the experimental group on 72 (on the posttest) and 70 (on the delayed posttest) out of 79 spelling aspects sampled as representative for this level. Furthermore, the successive discriminant analyses carried out showed that it was the intervention program—and not the moderator variables considered—which was responsible for the clear differences between the experimental and control groups’ orthographic performance (Pérez Cañado).

In turn, with respect to Spanish orthography, another recent investigation (Pérez González & Gómez-Villalba Ballesteros, 2003) with primary-grade Spanish pupils provided the students with two years of extensive free voluntary reading (as Krashen, 1993, termed it) in Spanish. At the end of this time, no statistically significant differences were found between the experimental and control groups in terms of reading comprehension, written composition, vocabulary, or spelling.

Thus, while acknowledging the undoubtedly beneficial effect of reading on, among other linguistic abilities, spelling (Jacoby & Hollingshead, 1990; Janopoulos, 1986; Krashen, 1993; Krashen & White, 1991; Moseley, 1994; Polak & Krashen, 1988; Schmidt, 1994; Veltman, 1992; and Wilde, 1997), in light of the previously mentioned empirical evidence, we must advocate the explicit instruction of this discipline, upholding, for both the English and Spanish languages, Bosman and Van

Orden's assertion that, "Beyond circumstantial evidence, experiments with beginning readers...show that reading is not always effective for learning to spell.... More [important],...all spelling instruction methods were superior to just reading as a means to learn spelling" (1997, pp. 184–185).

For direct instruction to be successful, spelling should be considered not as an isolated subject but as a tool for writing, and thus embedded within the text and integrated with the broader language arts curriculum. This tenet, defended by, among others, Bean and Bouffler (1997), Camps et al. (1990), Dole (2000), Morrow and Tracey (1997), and Rosencrans (1998), can be put into practice by using texts of diverse genres to present the spelling words that will subsequently be studied (cf. Pérez González et al., 1999) or by employing activities that enable students to view orthography as a tool for writing and as a means to use written language for real communicative purposes (e.g., classroom message boards or "guessing descriptions" are especially valuable in this sense; cf. Pérez Cañado, 2001).

It is equally advisable to appeal to all the cueing systems of the learner in teaching both English and Spanish spelling, that is, to follow a multisensory or multidimensional approach by combining visual, auditory, and tactile or kinesthetic activities ("What Am I?" and "Do You Know?" are enjoyable ways of achieving this; Shemesh & Waller, 2000) and by addressing both routes to the acquisition of orthography: the phonological or assembling procedure (e.g., through "tick what you hear" exercises; Pérez Cañado, 2002) and the visual or lexical one (by means of, for instance, word searches; Pérez Cañado). This principle, again grounded in practical and research experience, is upheld by myriad noteworthy figures, including Cramer (1998); McCracken and McCracken (1996); Miles and Miles (1994); Peters (1992); Pinnell and Fountas (1998); Reason and Boote (1994); Rosencrans (1998); Smith, Hinson, and Smith (1998); Sterling (1992); and Tarasoff (1990).

In connection with the previous pedagogical recommendations, it is also worthwhile to vary the facets and activities used to work on English spelling. Employing text and individual word dictations, proofreading activities, free composition, or cloze will enhance spelling practice auditorily, visually, receptively, and productively (the value of which are elucidated by Hildreth, 1962, and

Moats, 1995). Using word, picture, and writing sorts; word searches; unscrambling; gap-filling; matching; multiple choice; flashcards; whole-to-part and part-to-whole blending; crosswords; relay games; hangman; phonetic bingo; spelling bees; or a classroom message board, among other activities, will help the students to make generalizations about the spelling of words and related patterns and actively engage in drawing relationships between new words encountered in reading or writing, and will also add a playful element to the teaching of spelling (recommended by, among others, Forte & Pangle, 1985; Gentry & Gillet, 1993; Shemesh & Waller, 2000; Temple, 1995).

Another aspect that should be varied in the instruction of orthography is classroom organization. Individual, pair, group, and whole-class work can all be combined, as the learners will need to reflect on their own, share and obtain knowledge with and from a partner, actively participate in a group, and interact with the teacher to make the most of spelling instruction (Pérez Cañado, 2003).

A further didactic practice worthy of being taken into account is that of teaching developmentally appropriate words that are representative of what the students are expected to learn and do in school, which ensures what Moats (1995) termed ecological validity. It is also important, as Cooley (1985), Hughes and Searle (1997), and Madrid Fernández and Muros Navarro (1984) pointed out, to include some measure of orthographic difficulty in the sampling. Keeping the level of difficulty high enough for children to misspell will give us better insight on the logic they are using.

The rules that are the focus of instruction should also be useful for the level at which we are teaching, cover a sufficient number of words to be worth the effort of learning (that is, they should be pedagogically economical), and be at the level of difficulty of the pupils. It is advantageous to work together with the students to explore the rule under study and apply it to other words, to state it simply and provide plenty of examples, and to avoid teaching more than one rule at the same time (Hildreth, 1962). But, in any case, if there is an area acknowledged to be among the most amenable to teaching through rules, it is literacy, including spelling (Sharwood-Smith, 1994).

Providing explicit instruction not only of rules but also of spelling strategies is profitable (Bradley

& Huxford, 1994; Cramer, 1998; Goulandris, 1994; Hackman & Trickett, 1996; Honig, 2001; Moats, 1994; Moseley, 1994; Moustafa, 1997; Pinnell & Fountas, 1998; Reason & Boote, 1994; Rosencrans, 1998; Strickland, 1998; Tarasoff, 1990; and Templeton & Morris, 1999). Teaching the auditory, phonemic, or pronunciation strategy; visualization; word division into smaller parts; the use of analogy; or mnemonic devices enables the child to generalize across words and to predict the spelling of related but as yet unknown words and arms him or her with sufficient knowledge to cope with new and unfamiliar words, thereby preventing the memorization of isolated words and fostering independence, ownership, and personalization in the spelling process.

Repetition and cyclic revision of these rules and strategies have proven essential in my experience. Practice and review are what Pérez González (1996, p. 28) considered “*ley universal...del aprendizaje*” (a universal law of learning), which causes some sort of interface from explicit to implicit knowledge, from controlled to automatic processes, from explicitly taught spelling aspects to their spontaneous use in writing. Indeed, in my study (Pérez Cañado, 2003), explicit spelling instruction exerted its greatest long-term effect on the spelling facet most focused on meaning and least on form—the free composition—as the experimental group improved its outcomes most notably on this part of the spelling exam on the delayed posttest. This finding also seems to point to the possibility of transfer of spelling aspects that have been explicitly taught in class to the child’s spontaneous writing, a circumstance that would seem to back up R. Ellis’s (1985, 1994, 2000), Bialystok’s (1994), and Sharwood-Smith’s (1981) theories of interface.

In connection with this last pedagogical implication is the importance of regular testing and of keeping an ongoing record of the students’ exams, activities, or participation and performance in class (Rosencrans, 1998). This allows the learner to receive valuable feedback and the teacher to be sensitive to the children’s spelling progress and needs, stopping to review and consolidate where necessary.

Finally, a further guideline, which, in my experience (Pérez Cañado, 2003), has proven valuable in the teaching of orthography in the English-as-a-foreign-language classroom, and which could also be useful in a bilingual or dual-immersion setting, involves establishing connections between the

similarities and differences of Spanish and English spelling wherever possible. Although we sampled and explicitly taught six dimensions—the visual, auditory, morphological, orthographic, semantic, and capitalization and punctuation ones—we found it especially helpful to establish these links between both languages in the morphological realm that is so influential in both spelling systems (e.g., when teaching common affixes—*bi-*, *tri-*, *super-*, *re-*, *sub-*, *tele-*, *multi-*, and the like—and word roots, such as *geo*, *photo*, or *cycle*, in English and Spanish), and in the capitalization and punctuation layer (by formulating rules as similarly as possible in both languages and by pointing out contrasting uses of the comma, the colon, exclamation points, question marks, and capital letters).

Knowing what to do

While acknowledging the undeniable differences that exist between a shallow, transparent orthography like the Spanish one and a deep, asymmetrical spelling system such as English, this article has also striven to portray the notable coincidences that can be discerned between both orthographic systems upon closer examination. Experience and research have revealed that English and Spanish spelling violate the universal phonemic principle in exactly the same three ways, that identical psychological processes are involved in the acquisition and production of both orthographies, that similar causes underlie the commitment of spelling mistakes, that comparable didactic errors have traditionally been made when implementing spelling instruction in both languages, and that equivalent didactic principles can be followed in this instruction. Therefore, these similarities allow us to view both spelling systems in the same light, destroying the popular and misguided belief—absent any supporting data—that English spelling is a chaotic, unapproachable discipline whose acquisition is best left to chance. Quite the contrary, both orthographies can be incorporated actively into teaching by following the same clear-cut pedagogical guidelines. In other words, there is no longer any excuse to dismiss overt spelling instruction in either Spanish or English. Reason and Boote expressed it very well: “Knowing what

to do makes it easier to find the time for doing it” (1994, p. 10).

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