

# SOUND FORM SIGNALIZATION IN L1 POLISH, CZECH AND SLOVAK TEXTBOOKS

In search of best practices

ELŻBIETA AWRAMIUK\*, JANA VLČKOVÁ-MEJVALDOVÁ\*\* & ĽUDMILA LIPTÁKOVÁ\*\*\*

*\*Uniwersytet w Białymstoku, Poland; \*\*Univerzita Karlova, Czech Republic, \*\*\* Prešovská univerzita v Prešove, Slovakia*

## Abstract

Phonetic transcription is concerned with how the sounds used in spoken language are represented in written form. In specialized sources, phonetic transcription is a conventionalized notation system; in non-specialist sources, the methods of sound form signalization (SFS) are less conventionalized, but they have important educational functions.

The purpose of this study is to present the results of a comparative analysis of several L1 Polish, Czech, and Slovak textbooks to answer the following questions: how sound form is signalized and what practices are best for the development of pupils' phonetic awareness and more generally for the improvement of their spoken and written communication skills.

Textbooks from the second stage of primary schools (Grades 4–6, age 10–13) were analyzed. This qualitative analysis focuses on searching for instances where orthographic representation changes to fulfil the needs of SFS and where the sound form of language represents the point of didactic interest; it illustrates the function of SFS and its means, as well as compares results obtained in three countries.

Keywords: primary school, textbook analysis, respelling, West Slavic languages

## 1. INTRODUCTION

An adequate use of the sound of a language is one of the important factors of a successful communication act. In traditional L1 education at the school level, it seems that the sound form is rather oppressed due to difficulties engendered in its fleetingness. By the time children start to learn to read, they have already effortlessly become masters in using the spoken language for communication (Richardson & Nieminen, 2017, p. 264), so that the dominant educational goal is set at the acquisition of mastering written language. As a result, real sounds are neglected and pupils lose their natural sensitivity to the sound reality of their mother tongue that surrounds them.

However, phonological awareness is crucial for learning to read and write (Ziegler & Goswami, 2006). The evidence summarized by the National Early Literacy Panel (2008) report<sup>1</sup> suggests that phonological awareness (understood as the ability to detect, manipulate, or analyze the auditory aspects of spoken language, independent of meaning) and knowledge of letters are considered to be the key factors in successfully learning how to read and write in languages which have an alphabetic script. Children are called on to understand how a written system relates to familiar, naturally acquired spoken language or—in other words—how the phonological structure of language is symbolized in written text.

This principle reason is among those that highlight the importance, from the language education point of view, of the significance of clarifying how sounds used in spoken language are represented in written form. Of course, there are other factors that shape phonetic awareness during L1 school education. For example, it is necessary to teach the orthophonic and orthoepic norms and spelling, in reading aloud and reciting with voice interpretation, as in appreciating phonetic means of artistic expression, etc. Standard pronunciation used in formal public communication (schools, politics, state and public institutions, media, etc.) is codified in our countries; therefore, schools should strive to cultivate the pronunciation of the students as a part of the overall culture of language expression of an individual. Furthermore, knowledge of the sound system, both at the segmental and suprasegmental levels, is useful in developing the learner's spoken production and listening comprehension for different communication purposes. Some of these reasons will be discussed more thoroughly below.

There are many ways to develop phonetic awareness, and one of them is signaling a sound form of words in written form. This technique is used not only in school textbooks, but also in mono- and multilingual dictionaries which are also important

---

<sup>1</sup> *The report of the National Early Literacy Panel provides an extensive meta-analysis of approximately 300 studies showing which early literacy measures correlate with later literacy achievement. It also provides a series of meta-analyses of a comprehensive collection of experimental and quasi-experimental studies of ways of teaching early literacy (e.g. the effects of code-based instruction, preschool/kindergarten interventions).*

in the context of the educational purpose, such as to prepare the learner to use various types of dictionaries. The forms of transcription commonly used in schools, although they basically perform a supporting function can have a significant impact on the effectiveness of achieving the intended educational goals. Thanks to transcription, elusive spoken language becomes better available for further analysis; it explicitly visualizes direct pronunciation of sounds and words and phrases.

The aim of this study is to present the results of an analysis of selected Polish, Czech, and Slovak textbooks to answer the question of how they signal the sound form of words and what practices are best to develop pupils' phonetic awareness. We also try to outline the implications of good practice in sound form signalization to improve the spoken and written communication skills of students. Poland, the Czech Republic and Slovakia are countries from one region in Central Europe with continuous political, cultural, and educational changes (especially in mother tongue teaching). Although these countries have adopted independent development paths since 1989, the search for the optimal means of delivering language education is a common goal for all of them (Pieniżek & Štěpáník, 2016, p. 21). Furthermore, we have chosen these three languages for their linguistic (both genetic and typological), geographic, and cultural cognation.

To begin, some remarks about the ways of representing the sounds in written form are presented, along with an explanation of basic terminology. Then the focus shifts onto phonetic instruction in L1 education, as well as linguistic determinants of the Polish, Czech, and Slovak languages (section 1). In the subsequent section (section 2), methodological clarifications are outlined. The main body of the paper presents the results of the analysis of selected L1 Polish, Czech, and Slovak textbooks from the primary school level. This part contains general remarks about the scope and conventions of respelling (section 3), as well as a discussion on specific problems concerning respelling (section 4). The search for answers to the questions posed leads to the best teaching solutions (section 5).

### *1.1 Speech in written form*

Interpersonal communication takes place through written or spoken texts which have their own material form. In relation to writing, they are graphic symbols, and in relation to speech, these forms are phonetic symbols. Both spelling and phonetic transcription are graphical representations of certain elements of a given language, but the goals of both notation systems are completely different. "Spelling uses notation to write items of lexis and grammar which by definition are language-specific, whereas phonetic transcription uses notation to write an analysis of pronunciation-forms using language-independent symbols" (Heselwood, 2013, p. 9–10).

Orthographic representation of words is established and there is no importance attached to how closely it matches pronunciation. For some languages (e.g. Finnish), knowing how to pronounce a word is to know how to spell it; for others (e.g. English)—word-specific information about spelling is required (Katz, Frost, 2001, p. 298).

However, it is much easier to read than to write in many languages. Although English has an opaque orthography, it has a higher degree of consistency when not only the spelling-to-sound patterns are taken into account (Venezky, 1970), which means that many words are regular for reading.

Many specialists, including linguists, speech therapists, lexicographers, opera singers, professional speakers, actors etc. use notation systems to see what is heard. There are many ways to represent sounds using written symbols which are connected with different purposes and priorities. First of all, the main distinction between phonetic transcription and other ways of sound form signalization (SFS) should be explained.

Phonetic transcription is a notation system used in specialized sources. It comprises a set of special symbols linked to the theory by interpretative conventions (Heselwood, 2013, p. 25), such as those of the International Phonetic Alphabet (the IPA) or the Slavonic Phonetic Alphabet (the SPA). Various systems of transcription are based on these alphabets. However, it is important that—no matter what type of transcription is used—phonetic transcription, whether the IPA (Handbook of IPA, 1999) or its Slavic version (Krčmová, 2017), has its own established rules. The basic rules of phonetic transcription dictate that one letter always corresponds to one sound, and the same sound is represented in the notation by one symbol.

Other methods of sound form signalization (SFS) are used in non-specialist sources and they are less conventionalized and often adapted in an *ad hoc* fashion, according to prevailing needs and educational themes. One of these methods is respelling, which uses orthographic conventions but regularizes their correspondences with sound so that, as far as possible, the same character corresponds to the same pronunciation element (Heselwood, 2013, p. 28). This quasi-phonetic transcription produces a strategy for indicating pronunciation more accurately than the normal spelling does but eschews having to learn new graphic symbols and new spelling conventions. For example, the Polish word *przyjaciół* 'friend' in the IPA is written [pʃɨˈjãt͡ɕɛl], in the SPA—[pšyĵáčel], and as a respelled word it is [pszyjaciel]. Using the IPA and the SPA conventions requires knowledge of the phonetic value of the new graphic symbol such as *ʃ* or *š*, while the respelled form [pszyjaciel] is closer to the orthographic representation (*przyjaciół*), and the ability to read it requires knowledge of only the letters of the Polish alphabet where the symbol *sz* is connected with the sound marked in the IPA as [ʃ] or in the SPA as [š]. So then, respelling uses the letters from the regular alphabet of a given language, but with a very simple version of grapheme-phoneme correspondence, e.g. in Polish orthography the sound [ʃ] can be represented by *sz* (*szafa* 'wardrobe'), *rz* (*trzy* 'three') or *ź* (*też* 'also'), but *sz* is the simplest and most common way to represent such a sound.

Respelling understood as using graphic signs commonly used in the language, with a direct reference to the sound form, is not a standardized system of transcription. This causes a lot of possibilities to record pronunciation, which in turn makes the practical use of respelling a continuum of spelling and phonetic writing.

Respelling is used in different sorts of publications that are aimed at users who are assumed to have no specialist knowledge of phonetics. Usually, it helps them with the pronunciation of single words. This code is commonly used in the likes of orthophonic guidebooks, monolingual and bilingual dictionaries, travel phrasebooks, as well as in school textbooks. It can also be considered one of a number of pedagogical tools used during L2 education (Furtak, 2015), which facilitates the process of developing accurate pronunciation skills at the primary and secondary levels of education. In all the above-mentioned situations, respelling reflects the pronunciation of words, which enables learners to see what is uttered and as a result, comprehends that it differs substantially from what is actually written in orthography.

### *1.2 Phonetic instruction in L1 education*

The phonetic representation in L1 textbooks pursues completely different goals from phonetic representation in foreign language textbooks. Pupils know the sound form of their mother tongue; it represents their primary means of communication. The pupils don't need to know "how it sounds", but what the relation between the sound and its orthographic representation is. Another reason could be comparing the formal and informal pronunciation of the same phoneme, morpheme or word.

The problem of clarification in textbooks of how the sounds used in spoken language are represented in written form is connected with the objectives of teaching phonetics at school. Two dimensions of phonetic instruction can be found: functional and normative.

The functional dimension refers to fostering language skills, e.g. spelling and reading aloud. In many languages spelling is strongly connected to morphology and the positive impact of grammar knowledge on spelling skills is not in doubt (Apel & Werfel, 2014; Bowers, Kirby & Deacon, 2010; Goodwin & Ahn, 2013; Graham, Santangelo, 2014). Teaching morpho-phonological spelling where the pronunciation of a morpheme can exhibit changes, the syntactic or phonological context is connected with the need to draw attention to the differences between phonology and spelling.

The normative dimension attaches importance to correct pronunciation no matter whether doing so contributes to fostering language skills. To acquire normative pronunciation means to be able to switch between formal and informal speech situations; it allows the speaker to differentiate between such situations, and also, by the way of sound-speech characteristics, to distinguish and express different attitudes.

Both of the above-mentioned dimensions are present in L1 primary education in Polish, Czech, and Slovak schools. However, the functional dimension is assumed to be more important according to core curricula (at the declarative level). The reflection on the written and spoken form has a long tradition in L1 education in these countries because of Polish, Czech and Slovak spelling, as well as orthophonic information (especially in the Czech Republic and in Slovakia) and distinguishing between formal and informal pronunciation (including dialects, especially in Slovakia).

Core curriculum (CC) for teaching Polish as a mother tongue encouraged the integration of the content of education (language, literature, culture and communication), functionalization of grammar, and maintaining a balance between the cognitive and practical approaches (Awramiuk & Szymańska, 2019). Pupils in Grades 4–6 should understand the terms: voice, letter, syllable, accent; they should also be in possession of knowledge of the rules for accenting words and applying correct intonation according to the purpose of the speech act (CC 2017, p. 63). The learners should use their knowledge in their own speaking and writing (CC 2017, p. 64).

In the Czech education system, mother tongue teaching is divided into the areas of language education, communication and style. As part of primary education (Grade 1–5), the pupils are guided (according to the Framework educational programme, *Rámcový vzdělávací program, RVP 2017*), to achieve proper pronunciation through self-correction of inappropriate pronunciation, and through learning how to breathe correctly, along with moderating their speech rate to an adequate frequency. In the lower secondary education (Grade 6–9 of elementary school or lower high school), the pupil is supposed to distinguish correct and incorrect pronunciation (the “correctness” of pronunciation is defined by the orthoepic norm in Czech) and to use them according to the situation of communication. In the curriculum, systematic instruction on the sound aspect of the language is situated in the 6<sup>th</sup> grade, but already in textbooks for lower grades, we can find some attempts or at least indications of attempts to acquaint pupils with possible graphical signalization of the sound form of speech.

The Slovak language as an L1 education subject consists of three constituents: language education, communication and style, and literary education. In the last years, a communicative and integrative approach to L1 education has been stressed, but more on the declarative than the practical level. The State education program (*Štátny vzdelávací program, ŠVP 2014a, b*) sets out teaching/learning content and achievement requirements that can then be specified at the school level. As to a phonetic curriculum, in the first two school years, the functional dimension of phonetic instruction prevails in order to build children reading and writing skills. In the subsequent years of primary education, the functional approach is still dominant, but the normative approach occasionally appears.<sup>2</sup>

### *1.3 Linguistic features of the Polish, Czech, and Slovak languages*

Since we are talking about three languages, linguistic determinants of teaching phonetics in these languages should also be shortly clarified. Polish, Czech, and Slovak are languages belonging to the West-Slavic group. All are inflected languages with rich morphology which is associated with numerous systemic morphological alternations. The Latin alphabet adapted to each language (enriched with diacritics) is used

---

<sup>2</sup> *The reader who may be interested in a more accurate description of mother tongue teaching in Poland, the Czech Republic and Slovakia can reach for the book Pieniżek & Štěpáník (2016).*

for writing. Written words encode morphological information which means that some morphemes are written in the same way even if they are pronounced differently in different phonetic contexts. Spelling is based on two main orthographic principles: phonemic (grapheme-phoneme correspondence), and morphemic, i.e. the same morpheme (roots, affixes, grammatical endings, etc.) is written in the same way even if it is pronounced differently. The etymological principle is also taken into account in spelling: in Czech to a lesser extent, in Polish and Slovak—in a wider scope.

The main differences between these three languages concern—except for a few differences in the phonemes' set—vowel length and word stress. Below, we use the IPA alphabet, although its use for the transcription of Slavic languages is sometimes problematic. The phonetic categories used in the descriptions of the Slavic languages do not exactly match those used in the construction of the IPA. Moreover, the IPA symbols used to describe individual Slavic languages also have a different phonetic value. The symbols <c>, <ɟ> are an example. In relation to the Polish language, it means palatal plosive consonants which form the opposition to velar plosive /k/ /g/, cf. *kielnia* [cɛlnja] 'a trowel'—*kelner* [kɛlnɛr] 'waiter'; *drogie* [drɔɟɛ] 'dear (nom.pl)'—*drogę* [drɔɟɛ(ɔ̃)] 'way (acc. sg)' (Jassem, 2003)<sup>3</sup>. In relation to the Czech and Slovak languages, the symbols <c>, <ɟ> mean a palatal plosive consonants which form the opposition to alveolar plosive /t/ /d/; cf. in Czech *tápota* [ca:pota] 'footprint'—*tát* [ta:t] 'melt'; *dábel* [ja:bɛl] 'devil'—*dát* [da:t] 'give' (Šimáčková, Podlipský, & Chládková, 2012); in Slovak *čava* [cava] 'camel'—*taška* [taʃka] 'bag'; *časno* [jasno] 'gum'—*darca* [darʃa] 'donor' (Hanulíková & Hamann, 2010). We stick to the solutions adopted for individual languages in the publications listed above available to English-speaking readers with a minor update regarding the symbols of two Polish vowels.

The Polish phonological inventory consists of 37 phonemes, among them 6 vowels, 3 semivowels and 28 consonants (Ostaszewska & Tambor, 2004). 6 qualitative different vowels (/a/, /ɛ/, /i/, /i/, /ɔ/, /u/) are marked with letters *a*, *e*, *i*, *y*, *o*, *u*/*ó*; their length is not phonologically relevant. In the written form, two more vocalic graphemes are used (*ą*, *ę*), which refer to old nasal vowels, now pronounced asynchronously, as diphthongs (e.g. *wąs* [vɔɔ̃s] 'mustache') or a combination of vowels and consonants (e.g. *ząb* [zɔmp] 'tooth'). Among consonants, there are three characteristic series of sibilants and affricates: dental /s/, /z/, /ʃ/, /dʒ/, palatal /ç/, /ʒ/, /tʃ/, /dʒ/ and alveolar /ʃ/, /ʒ/, /tʃ/, /dʒ/. Polish pronunciation involves systematic devoicing of voiced consonants, occurring either in the final position (e.g. *sad* [sat] 'orchard') or preceding an unvoiced consonant (e.g. *ławka* [wafka] 'bench'), with the voiced phoneme being preserved in writing. Lexical stress (the potential for phrasal accent) usually falls on the penultimate syllable, but there are various exceptions with antepenultimate stress (Jassem, 2003).

The Polish alphabet is composed of 23 basic letters and 9 supplementary letters with diacritics. Additionally, 11 digraphs (*si*, *ci*, *ni*, *zi*, *dz*, *rz*, *ch*, *sz*, *cz*, *dź*, *dż*) and one

<sup>3</sup> In Jassem's work Polish vowels /ɛ/ and /ɔ/ are represented by the symbols <e>, <o>.

trigraph (*dzi*) are used to represent Polish phonemes. Altogether, the Polish alphabetical system uses 44 graphemes, i.e. letters and letter combinations referring to particular phonemes. There are eight phonemes that have double graphemic designations. Five of them form a series referring to soft consonants: *ś* = *si* /*ɕ*/, *ź* = *zi* /*ʑ*/, *ć* = *ci* /*t͡ɕ*/, *dź* = *dzi* /*d͡ʑ*/ and *ń* = *ni* /*ɲ*/ . Depending on the phonetic/graphemic context, softness may be marked either by a diacritic (e.g. *ś*, *ń* before a consonant and at the end of a word) or by the letter *i* (e.g. *si*, *ni* before a vowel). Most difficulties in the acquisition in Polish spelling are caused by the following three, historically motivated, doublets, namely: *u* = *ó* corresponding to /*u*/, *z* = *rz* corresponding to /*ʒ*/ and *h* = *ch* corresponding to /*x*/ . Their distribution is much less systematic, as they are related to historical changes in Polish phonology and morphophonology.

The Czech phonological inventory consists of 38 phonemes, among them 10 vocalic phonemes, 3 diphthongs and 25 consonant phonemes (Krčmová, 2017). There are 5 qualitative different vowels (/a/, /ɛ/, /ɪ/, /ɔ/, /u/); their length is phonologically relevant. In the written form, 14 vocalic graphemes are used (*a*, *e*, *i*, *o*, *u*, *y* and their long equivalents *á*, *é*, *í*, *ó*, *ú*, *ů*, *ý*—the use of *ú/ů* refers to the word etymology, the sound is the same /*u*:/); the grapheme *ě* signalizes palatalization of the precedent consonant followed by the phoneme /ɛ/. 25 consonant phonemes are realized through 31 sounds—6 phonemic variants are produced as a consequence of assimilation. Palatalization or posteriorization is marked with a little hook: *š*, *ž*, *č* are pronounced [ʃ], [ʒ], [tʃ], (postalveolar, while [s], [z], [ts] are prealveolar), *ť*, *ď*, *ň* are pronounced [c], [j], [ɲ] (dorsopalatal, while [t], [d], [n] are apicoalveolar). The relation between the written and spoken forms of the language is rather direct (not definitely) and is closer to Slovak than to Polish, due to the system of punctuation. The dominant difference between written and spoken form of Czech is based on the morphological principle of orthograph. Morphemes are stable in their written form, whereas their sound form can vary most often according to the regressive voicing assimilation: *vzpomínat* [fspomi:nat] ‘to remember’. Vowel length is independent of the word stress. The word stress is dynamic, stable and fixed on the first syllable of a stress group, which corresponds most frequently to a given word.

The Czech alphabet is composed of 23 basic letters and 14 supplementary letters with diacritics. Additionally, 1 digraph is used to represent the Czech phonemes. Altogether, the Czech alphabetical system uses 25 graphemes (there is no absolute symmetry between phonemes and graphemes). Czech orthography represents complex, mutual combinations of morphological, phonological, lexical and etymological principles. Among the most frequent divergences between the written and sound forms of languages, we can find the changing of consonant voicing (*hrad* [hrat] ‘castle’, *zpívat* [spi:vət] ‘sing’). The graphic signs *ě*, *i* used after graphemes *d*, *t*, *n* signalize the palatalization of precedent consonant, sign *ě* after graphemes *b*, *p*, *m* signalizes the insertion of a [j] *běžet* [bjɛʒet] ‘to run’. The pronunciation of Czech is regular and well defined. Principally, one sound pronounced corresponds to one grapheme in Czech, with some exceptions.



The Slovak phonological inventory consists of 47 phonemes, among them 11 vocalic phonemes, 4 diphthongs and 32 consonant phonemes (Kráľ, 1996). There are 5 qualitative different vowels (/a/, /ɛ/, /ɪ/, /ɔ/, /u/); their length is phonologically relevant, 1 only short vowel (phoneme /æ/ (written as *ä*) in higher style or in certain dialects, mostly pronounced as /ɛ/), and 4 diphthongs (/ia/, /je/, /ju/, /yo/). In the written form, 14 vocalic graphemes are used (*a, ä, e, i, o, u, y, á, é, í, ó, ú, ý, ô*) and three two-component graphemes (*ia, ie, iu*). 32 consonant phonemes are realized through 38 sounds (Kráľ, 1996). Similarly to Czech, palatalization and posteriorization is marked with a little hook (*d', t', ň, l', š, ž, č, dž*—pronounced /tʃ/, /c/, /ɲ/, /ʎ/, /ʃ/, /ʒ/, /tʃʃ/, /dʒʒ/), except for an orthographic rule that before front vowels (/ɛ/, /ɪ/, /ɛ:/, /i:/) and diphthongs (/ia/, /je/, /ju/) on the *d, t, n, l* no hook is used (compare: *lan* [ʎan] 'linen'—*len* [ʎɛn] 'only'). The dominant Slovak phonological features are the confluent pronunciation (i.e. words are pronounced together without pause); the regressive voicing assimilation (as one of the consequences of confluent pronunciation between words: *k bratovi* [g bratɔvi] 'to the brother', *pes breše* [pɛz brɛʃɛ] 'a dog barks', and at the end of a word: *dub* [dup] 'oak' or morpheme: *dubček* [dupʃɛk] 'a little oak'); and the rhythmical rule (a long syllable cannot be followed by another long syllable in the same word, with several exceptions to this rule) (Kráľ, 1996). The main word stress in standard Slovak is fixed on the first syllable of the stress group. (But in dialects in eastern Slovakia the word stress is on the penultimate syllable, similarly to the Polish word stress.) In words with more syllables, there is a secondary stress on the penultimate syllable.

The Slovak alphabet is composed of 23 basic letters and 17 supplementary letters with diacritics. Additionally, 6 digraphs (*ia, ie, iu, ch, dz, dž*) are used to represent Slovak phonemes and 3 foreign graphemes used in loanwords or foreign words (*q, x, w*: e.g. *Quebec, taxík* 'taxi', *whisky*). Altogether, the Slovak alphabetical system uses 49 graphemes. As to the relation of spoken and written Slovak, the Slovak spelling is more or less transparent based on the prevalence of the phonemic orthographic principle (grapheme-phoneme correspondence). The spelling of many foreign words tends to adopt a grapheme-phoneme correspondence as well (e.g. *tinedžer* [ti:nɛdʒɛr] 'teenager', *skejt* [skɛjt] 'skate', etc.). But the presence of the morphemic orthographic principle causes a difference between spelling and pronouncing the same morpheme within the voicing assimilation process (e.g. *ježko* [jɛʃko] 'a little hedgehog'; *podchod* [pɔtʃɔt] 'subway', etc.). For that and other particular reasons, children need an explicit knowledge of sound-letter relation in order to avoid interferences in spelling and reading aloud (the so-called "letter pronunciation" in the initial phase of learning to read).

The vowel length is therefore phonologically significant only in Czech and Slovak languages. There is also a difference in word stress. In Polish it is penultimate and in Czech and standard Slovak it is initial. However, the stress does not influence the meaning of words in any of the three languages. In all the analyzed languages herein, teaching spelling requires references to pronunciation when introducing morphological and historical rules.

## 2. METHODOLOGICAL REMARKS

The present study adopts a qualitative research design. The data used in this study were collected through a content analysis of textbooks. The information pertaining to the textbooks and the procedure employed are provided below.

### 2.1 *Analyzed textbooks*

Our consideration is the effect of an analysis of two series (each consists of 3 textbooks) of Polish and Czech textbooks for the second stage of primary schools (Grades 4–6, age 10–13), as well as a set of Slovak textbooks for the same educational stage. The analyzed textbooks are popular series in Poland and the Czech Republic, whereas in Slovakia they are the only existing series as we have mentioned above. The decision to choose this particular educational stage resulted from an analysis of the core curricula, which pointed to the fact that it is then that phonetic knowledge in a more explicit way is formed, and that therefore this stage is crucial for shaping language awareness.

Selected Polish textbooks were published in the years 2013–2018. They are based on different core curricula. The most recent one (CC 2017) is still being implemented. The differences which occur in textbooks of the same series published in 2013–2016 and those published after 2017 are generally small and do not apply to the analyzed issues. In general, we believe that the identified problems are also valid in relation to new textbooks published on the basis of the latest curriculum.

As in Slovakia, during our research, the state subsidizes only the series of Slovak language textbooks selected by the Ministry of Education, the offer of textbooks is limited. We have analyzed two currently existing series of textbooks for the 4<sup>th</sup> grade of elementary schools, the state-subsidized textbook of the AITEC publishing house (4A) and the textbook of the TAKTIK publishing house (4T). For the 5<sup>th</sup> and 6<sup>th</sup> years we had only one currently used series of textbooks from the Slovak Educational Publishing House (5<sup>th</sup> year: 5S; 6<sup>th</sup> year: 6S), so we reached for an older textbook published by Orbis Pictus Istropolitana (5<sup>th</sup> year: 5O1, 5O2; 6<sup>th</sup> year: 6O1, 6O2).

All analyzed textbooks are presented in Table 1. Full bibliographical information is provided in the references section.

Table 1. Analyzed sources

Textbooks	Title	Publisher	Symbol
Poland	Między nami. Język polski 4	Gdańskie Towarzystwo Oświatowe	MN4
	Między nami. Język polski 5		MN5
	Między nami. Język polski 6		MN6
	Teraz polski! Podręcznik [...] dla klasy czwartej szkoły podstawowej	Nowa Era	TP4
	Teraz polski! Podręcznik [...] dla klasy piątej szkoły podstawowej		TP5
	Teraz polski! Podręcznik [...] dla klasy szóstej szkoły podstawowej		TP6
Czech Republic	Český jazyk 4 pro základní školy	Státní pedagogické nakladatelství	SPN4
	Český jazyk 5 pro základní školy		SPN5
	Český jazyk 6 pro základní školy		SPN6
	Český jazyk pro 4. ročník základní školy	Nakladatelství Fraus	Fraus4
	Český jazyk pro 5. ročník základní školy		Fraus5
	Český jazyk 6. Učebnice pro základní školy a víceletá gymnázia		Fraus6
Slovakia	Slovenský jazyk pre 4. ročník základných škôl—učebnica	AITEC	4A
	Slovenský jazyk 4 (Nezábudka). Učebnica pre 4 ročník základných škôl	TAKTIK	4T
	Slovenský jazyk pre 5. ročník základných škôl	SPN—Mladé letá	5S
	Slovenský jazyk pre 5. ročník základných škôl. Učebnica I		501
	Slovenský jazyk pre 5. ročník základných škôl. Učebnica II	Orbis Pictus Istropolitana	502
	Slovenský jazyk pre 6. ročník základných škôl		6S
	Slovenský jazyk pre 6. ročník základných škôl. Učebnica I	Orbis Pictus Istropolitana	601
	Slovenský jazyk pre 6. ročník základných škôl. Učebnica II		602

## 2.2 Procedure

In our research we applied an explorative, inductive approach, i.e. we followed the steps from the specific phenomena and their analysis to the summarizing. The method of qualitative content analysis with the support of quantitative data was used (see Gavora, 2006). Within the constituent components of content analysis, we

applied their following specific manifestation (according to Gavora, 2015) in our research. As to types of content, we used the instructional texts (textbooks). As to types of sampling, the research sample was chosen intentionally and consists of the sets of textbooks mentioned above. As to the direction of analysis, we used an inductive procedure. As to the depth of the analysis, we tried to combine a manifest and latent level i.e. visible phonological curriculum items in textbooks were detected, then ordered according to type, function and mean of SFS, and afterwards deeply interpreted by a particular researcher. As to modes of presentation of findings, we used both the verbal and numeral modes.

The inductive procedure of textbooks analysis was conducted in the following steps. Firstly, the analysis was focused on searching for places where orthographic representation changes to fulfil the needs of SFS, and where the sound form of language represents the point of didactic interest. The outcome of this step were three lists (of three languages) of respelled words. Then the qualitative analysis was carried out to answer the following questions: (1) When (in which teaching situations, in what curriculum items) is SFS used? (2) For what purposes is SFS used? (3) How (by which means) is pronunciation signalized? (4) What constitutes examples of both good and inferior practices as pertains to the teaching of segmental and suprasegmental systems and SFS in L1 education?

### 3. SFS IN POLISH, CZECH, AND SLOVAK L1 TEXTBOOKS—GENERAL REMARKS

This section gives an overview of how and why pronunciation is signalized in Polish, Czech, and Slovak L1 textbooks. There are three types of language units, the sound form of which is signalized in the textbooks: sounds, morphemes and words. The last group (respelled words) is the most numerous. In all the analyzed textbooks the pronunciation is signalized by using the native alphabet. In one Slovak textbook (602) the authors are using also the phonetic transcription of the entire text<sup>4</sup>.

#### 3.1 Types of respelled words

Four categories of respelled words have been represented in analyzed textbooks<sup>5</sup>:

- 1) native words, e.g. “jeśli na końcu wyrazu występuje głoska dźwięczna, to wymawiamy ją jako bezdźwięczną, na przykład *sad* [sat]” (if there is a voiced sound at the end of the word, we pronounce it as a voiceless sound, for example *sad* [sat] ‘orchard’) (MN5, p. 346); “*podšívka* se vyslovuje jako [potšífka]” (*podšívka* ‘lining’ is pronounced [potšífka]) (Fraus5, p. 37); “*mestečko* vyslovujeme mäkko [mestěčko]” (*mestečko* ‘a small town’ we pronounce softly [mestěčko]) (6S, p. 32);

<sup>4</sup> As a special case, we don't include the words from the texts into the number of respelled words in Table 1.

<sup>5</sup> Polish *czytaj, czyt.*, Czech *čti*, Slovak *čítaj* mean ‘read’. Slovak *vyslov* means ‘pronounce’.

- 2) loanwords, e.g. *lunch* [czytaj: lancz] (MN6, p. 44), *casting* [kasting] (TP4, p. 67); *scoubidou* [skubidu] (Fraus5, p. 30), *squash* [skvoš] (SPN4, p. 39); *air-wheel* (čítaj: érvíl) (4T, p. 49), *interview* [vyslov: intervjú] (5O1, p. 23);
- 3) foreign proper names, e.g. *René Goscinny* [czytaj: rene gosiny] (TP4, p. 65), *Joanne Rowlingová* [džoun roulingová] (SPN4, p. 40), *Edgar Degas* [edgar dega] (4T, p. 64);
- 4) other foreign words, e.g. French word in Polish textbook—*naturellement* czyt. naturelmaq (MN6, p. 247), Slovak word in Czech textbook—*ľad* [ľjat] (Fraus4, p. 42), English word in Slovak textbook—*wow* [vou], 6O2, p. 53).

The term “native words” in Polish textbooks means respelled Polish words, in Slovak textbooks—respelled Slovak words, and in Czech textbooks—respelled Czech words. The term “loanwords” in Polish textbooks means e.g. English, French or Czech words, in Slovak textbooks—English words, while in Czech textbooks—e.g. English, French, Polish or Slovak words. The differences between groups 2 and 4 should be explained. Loanwords are more recent words in Polish, Czech or Slovak languages that have maintained their original spelling and which exhibit a high frequency in contemporary texts. Other foreign words mean foreign lexical units not treated as borrowings, but rather as quotes from a foreign language.

Although no entire quantitative analysis has been carried out, some comments on the proportions between distinguished groups can be made (see Table 1). There are fewer SFS of foreign proper names in Czech and Slovak textbooks than in Polish textbooks. In both Polish series, the SFS of foreign proper names is definitely predominant. This is related to the concept of literary and cultural education adopted in the textbooks, especially in the TP one. Culture is represented by an international and very diverse set of texts. All names of the authors and the titles of their works are transcribed.

Table 2. The distribution and frequency of respelled words in analyzed textbooks

Categories of words	Polish text-books		Czech textbooks		Slovak textbooks			
	TP	MN	SPN	Fraus	4A	4T	5-6O	5-6S
native words	2	43	11	19	11	43	70	27
loanwords	37	24	4	21	0	0	13	1
foreign proper names	438	147	19	11	0	2	0	0
other foreign words	12	16	2	15	0	0	1	0
<b>Total</b>	<b>489</b>	<b>230</b>	<b>36</b>	<b>66</b>	<b>11</b>	<b>45</b>	<b>84</b>	<b>28</b>

In Czech and Slovak textbooks, the SFS does not appear systematically, e.g. the sound form of the name of the French author Antoine de Saint-Exupéry (SPN5, p. 60) or French painters Claude Monet, Edgar Degas (4T, p. 64) is signalized, the names René Goscinny, Richard O'Neil (SPN5, p. 77), Gary Thuerk (4T, p. 75) (all authors of text extracts in the textbooks) are not signalized. Similarly, the SFS in one textbook appears in some loanwords, e.g. SMS—“we pronounce *esemes*”, but in other loanwords, this is not the case, e.g. *phishing*, *hoax*, etc. (5S).

### 3.2 Context and didactic functions of SFS

SFS is used in different contexts and has a different function. It can be stated that in the textbooks under consideration here, the sound form is signaled in two types of cases: (1) as an object and a means of interpretation and practice or, (2) as accompanying occasional information.

The reflection on the sound form (1) as an object and a means of interpretation and practice concern mainly the native words and—less often—morphemes. Usually, this type of activity is a separate lesson unit concerning the reflection on the correctness, as well as differences between spelling and speaking. For example, in Polish textbooks, the pronunciation of certain morphemes is given to explain differences between pronunciation and spelling, e.g. “Jeśli w 3. osobie czasu przeszłego wymawiamy zakończenie [-oɫ], zapisujemy je zawsze jako *-qł*. Przykłady: *zdjął*, *płynął*.” (If in the third person of the past tense we pronounce the ending [-oɫ], we always write it as *-qł*. Examples: *zdjął* ‘he took off’, *płynął* ‘he sailed’) (TP5, p. 30). In Czech textbooks, the topic *Sound Form* as the form of the most natural means of communication is an example. Acquiring the spelling form is not the only goal of teaching L1: it should also raise awareness of the relationship between different forms (written and spoken) which improves competencies in both of them. In Slovak textbooks, e.g. “Ak chceme zistiť, akú spoluhlásku vnútri slova napísať, povieme si k slovu príbuzné slová. Príklady: *dedko*, vyslovíme *detko*, podľa príbuzných slov *dedo*, *deduško* napíšeme *dedko*.” (If we want to find out what letter to write inside the word (= the regressive voicing assimilation on the border of morphemes—Ľ.L.), we compare this word with similar words. Examples: *dedko* ‘grandpa’, we pronounce *detko*, but according to words with similar form and meaning *dedo* ‘referent word grandfather’, *deduško* ‘expressive word grandpa’ we write *dedko*) (4T, p. 33).

The reflection on the sound form (2) as accompanying occasional information concerns both the native and the foreign words. In Polish textbooks, this type of information concerns only foreign words which occur in the text extracts, e.g. *yeti*—czyt. *jeti* (MN4, p. 250) or concern the authors’ proper names, e.g. Vincent van Gogh [czytaj: *winsent wan gog*] (TP4, p. 26). The goal of this SFS is just to enable correct reading aloud. In Czech textbooks, the quasi-phonetic transcription appears most often as marginal, supplementary information (in textbooks from the publisher Fraus). In the 6<sup>th</sup> grade, when the sound form of language is one of the learning themes, SFS occurs systematically throughout the whole chapter. In this case, the

prosodic phenomena (as stress and intonation) are also mentioned. When speaking about the flexion or derivation, mutual influence of speech sounds is randomly mentioned (*kresba* [krezba] ‘drawing’, Fraus6, p. 91). In Slovak textbooks from the Orbis Pictus Istropolitana publishing house, SFS occurs as marginalia (*We learn a proper pronunciation*), where both native and foreign words are respelled. We find it useful that the phonetics given in marginalia were connected with other linguistic areas, e.g. with morphology: a problematic pronunciation in particular word classes, for instance: compare pronunciation in adjective *pekný* [n] ‘nice’ and in adverb *pekne* [ň] ‘nicely’ (502, p. 42); differentiate a standard and non-standard pronunciation in pronouns *kto* ‘who’, *ten* ‘this’: standard [kto], [ten]—non-standard [gdo], [‘ten] (502, p. 34).

The difference between SFS purposes in native and foreign language units can be observed. SFS of native words, morphemes and sounds serves mainly to explain differences between sound form and orthography, with a primary aim to stabilize pupils’ orthographic skills. SFS of foreign words has a more practical function—just to explain pronunciation, or—in the case of foreign words—to provide approximate pronunciation. In one of the Czech textbooks we analyzed, even the sound form of popular authors’ names (Shakespeare) or of popular first names (John) is signaled (SPN5, p. 77). It can be added that there are more linguistic purposes of foreign words’ SFS in Czech textbooks. It is also used to explain the pronunciation when giving “linguistic” explanations about the characteristics of other languages or about the origin of words.

### 3.3 The SFS means

The SFS can be based on the standard or non-standard orthographic representation. Both can use lexical and typographical means which gives the following combinations:

- 1) lexical means in orthographic representation,
- 2) typographical means in orthographic representation,
- 3) lexical means in non-orthographic representation,
- 4) typographical means in non-orthographic representation.

An example of (1) the lexical SFS based on the standard orthographic representation is the case of native sounds in Polish when only words “sound” and “letter” differentiate the language sub-code. The lack of special indications in sounds case means that letters and sounds are not visually differentiated, e.g. “Pamiętaj, że w wielu wyrazach zapis literowy nie odpowiada temu, co wymawiamy. Na przykład w wyrazie „początek” *q* wymawiamy jako *on*.” (Remember that in many words, a letter does not correspond to what we say. For example, in the word *początek* ‘beginning’, we pronounce *q* as *on*) (MN4, p. 19). In Czech textbooks, the explanation comes before the example: “Na konci slova se všechny znělé párové souhlásky vyslovují nezněle: *sud* [sut], *lid* [lit], *sníh* [sňich]” (On words ends, all voiced pair consonants are pronounced as voiceless: *sud* ‘barrel’ [sut], *lid* ‘people’ [lit], *sníh* ‘snow’ [sňich]) (Fraus6,

p. 96). A similar approach is present in Slovak textbooks, e.g. “Prečítaj slová a povedz, ktorú hlásku si vyslovil na ich konci.” (Read the words and say what sound you pronounce at their end) (4A, p. 46).

An example of (2) typographical means in orthographic representation is the stress in Polish words. The stress is distinguished only in the spelling form (not when respelling is used) by underlining or bolding an accented syllable (e.g. *fizyka* ‘physics’, MN5, p. 347). In Czech books, typography is used to signalize differences between the sound and written form of the word *zpívat* ‘to sing’ [sp], *rybka* ‘little fish’ [pk] or to distinguish stressed syllables *nevím* ‘I don’t know’, *při pohledu* ‘by seeing’, where stressed syllables are underlined (SPN6, p. 19–20). The typographical means are often found in Slovak textbooks in signaling both segmental and suprasegmental sounds. For example, grapheme-phoneme relation: *dub*—*dup* ‘oak’ (4T, p. 30); consonant combination in regressive voicing assimilation (but bolded is only in the spelling form, not in the pronounced form): *vlak* ‘train’—*včela* ‘bee’ (4A, p. 54) [vlak, fčela]. Word stress signalization is the same as in Polish textbooks, i.e. only found in the spelling form by underlining or bolding an accented syllable: e.g. *na stôl* ‘on the table’; *na prestretý stôl* ‘on the covered table’; “Observe the sentence rhythm”: *Prečo si neprišiel?* (Why did you not come?) (6O1, p. 15). In sentence stress, a bolding is used (due to the flexibility of word order in Slovak, the meaning of a sentence can be modified by the sentence stress): *Ty stále krmiš svojho psa?* (Do you still feed your dog?) *Ty stále krmiš svojho psa?* (Do you still feed your dog?) (5S, p. 28). There was one example in a textbook where typographical signalization of sentence intonation was indicated by means of downward, upward and direct arrows (6O1, p. 16).

(3) Lexical SFS in non-orthographic representation involves introducing or announcing a sound form with certain words (e.g. *wymawiaj* ‘pronounce’ or *czytaj* ‘read’ in Polish; *vyslov* ‘pronounce’ or *čítaj* ‘read’ in Slovak).

(4) Typographical SFS in non-orthographic representation concerns using square brackets, as it is in the case of the pronunciation of words, e.g. Daniel Defoe [czytaj: defo], (TP5, p. 27), [plot] ‘fruit’ (SPN6, p. 19), *mozzarella* [mocarela] (Fraus5, p. 12); *interview* [vyslov: intervjú] (5O1, p. 23); *vyšší* [vi>ši] ‘higher’ (5O1, p. 58).

Each method is proper if it serves to achieve the set goals. For example, if the aim is to develop speaker competence, understood as a reading or reciting aloud with voice interpreting, the lexical ways of describing the properties of the voice (e.g. read quickly, with emotions, like a sports commentator) are very helpful. However, if the aim is to develop phonetic awareness, the best effect is given by those solutions that clearly differentiate the level of speech and writing.

#### 4. IN SEARCH OF THE BEST SOLUTIONS

By analyzing L1 textbooks from three countries, some questions can be asked about solutions that best serve pupils' language awareness. This section should be treated as a part of the discussion with the results of the comparative analysis.



#### 4.1 What alphabet should be used?

SFS in the analyzed textbook takes place through the native language alphabet, i.e. by respelling—a strategy for indicating pronunciation more accurately than the normal spelling does. Although the authors of all the analyzed textbooks use respelling, they do so in a slightly different way. Some differences will be discussed below, but at this junction, we wish to concentrate only on the kind of alphabet employed.

Neither the IPA nor the SPA alphabets were used in the analyzed textbooks. Only Slovak textbooks from the Orbis Pictus Istropolitana publishing house was an exception by providing more or less systematic respelling and using chosen elements of IPA or SPA, e.g. *charakteristický* [xarakteristickí] ‘characteristic’, *francúzsky* [francúski] ‘french’, *vyšší* [vi>ší] ‘higher’. It is our assumption that the authors of these sets of textbooks have considerable linguistic expertise in phonology.

The use of phonetic transcription ensures correct and consistent sound-symbol correspondence and it signals the discrepancy between sounds and letters better than respelling. Certainly, a different set of symbols, other than the native alphabet, is a stronger signal than the two modalities of language (written and spoken). What is more, a phonetic transcription could be a useful tool for learning foreign languages. In spite of these advantages, L1 language-based respelling notations are used in school textbooks for primary education because the simpler code is easier for both pupils and teachers.

Respelling can be used also to reflect L1 language approximation of L2 sounds and code the outcomes using letters from the native alphabet. The respelling of foreign words, predominant in Polish L1 textbooks, poses some problems related to the use of the mother tongue alphabet for decoding foreign-language sounds (Awramiuk & Citko, 2020). One of them is the swapping of sounds. It occurs when there is no unambiguous equivalent of an L2 sound in the L1 phonological system and hence—no suitable letter in the L1 alphabet. In this case, the same sound could have a different graphic representation, e.g. English sound [ə] (voiceless, fricative, dental) is represented by Polish sound [f] with a slightly different place of articulation (voiceless, fricative, labiodental) or [t] with a slightly different way of articulation (voiceless, plosive, alveolar)<sup>6</sup>, as illustrated in the Polish textbook examples **E**than [Ifen] (MN6, p. 58) and **E**lizabeth [elizabet] (TP5, p. 37). Another domestication-related problem is no vowel length distinction (long, short and reduced), e.g. *fantasy* [fantazy] (TP5, p. 123), where a short vowel (though perceptually relatively long) [æ] and a reduced (much shorter and less tense) vowel [ə] are represented two times by the same [a]. Respelling does not allow for the transfer of those L2 phonological features that do not have a distinctive function in L1, such as vowel length or diphthongs in Polish. This results in inevitable simplifications. Illogical ways of representing foreign sounds lead to inconsistent records of the same words, e.g. René Goscinný [rene

---

<sup>6</sup> Both dental and alveolar are articulated with the tip of the tongue.

gosiny] (TP4, p. 65; TP6, p. 288), [gosini] (MN4, p. 100) or [gościny] (MN5, p. 29; MN6, p. 162).

In Czech textbooks, the principle of phonological approximation is respected, in accordance to Czech orthoepic rules (Hůrková, 1995): the phoneme which doesn't exist in Czech is replaced with an existing phoneme, e.g. *La Manche* [la manš] (Fraus5, p. 58)—since there are no nasal vowels in Czech, it was replaced by a sequence vowel-nasal consonant, or *Düsseldorf* [dysldorf], where a labialized high anterior vowel is replaced with an orthographically contaminated sign [y] (SPN4, p. 40).

In Slovak textbooks, since only a few foreign proper nouns are respelled (see Table 1), we find no example of phonological approximation.

Respelling is not meant to be phonetically precise, but rather practically helpful because it does not require learning an additional alphabet (both for teachers and pupils). It uses orthographic means of one's first language to demonstrate the pronunciation. Its usage needs to be the subject of certain limitations, for instance, those referring to the age of learners or the aim of the class, as well as educational tradition.

#### 4.2 How to differentiate speech and writing?

As it was mentioned above, speech and writing should be clearly differentiated in educational materials. Lexical means on their own are not proper for this goal, or more precisely—they prove insufficient when it comes to shaping phonological awareness of segmental features. They should be reinforced by typographic means. However, even this could be done in different ways.

In all Polish textbooks, lexical and typographical means in non-orthographic representation are mixed. In the TP series, the pronunciation of words is given in square brackets after the word *czytaj* 'read' with a colon, e.g. Edward Henry Potthast [czytaj: edłard henri potast] (TP4, p. 9). In the MN series, pronunciation is signaled by the abbreviation *czyt.* (without square brackets) after which proper names are written with capital letters, e.g. Francesca Simon—*czyt.* Franczeska Sajmon (MN4, p. 10). This way of signaling pronunciation poorly separates the representations of writing and speech.

In Czech textbooks, we can find the SFS contaminated by orthographic rules. In all types of SFS use, i.e. both foreign and domestic words or proper names, the *y* sign is used to indicate pronunciation [i] and an alveolar pronunciation (non-palatalized) of precedent *d, t, n* [edytor] (SPN5, p. 94), [Monyka] (SPN6, p. 17), or it is used in accordance with orthographic rules, i.e. after the letter *k* [dycky] (SPN6, p. 18). The SFS without orthographical contamination would be \*[editor] or [dicki]. The SFS of non-palatalized pronunciation of [d], [t], [n] followed by an [i] is orthographically contaminated in all occurrences in all Czech textbooks we analyzed.

In Slovak textbooks, the way of indicating SFS is very different in each book series and also within a given book itself. For example, in the textbook for 4<sup>th</sup> year (4A) there are three different ways of indicating SFS, mixing lexical and typographical

means in orthographic and non-orthographic representation, even in the same word: typographical means in orthographic representation: “medved” ‘bear’ (pronounced as [mɛdvɛc] because of voicing assimilation at the end of a word); typographical means in orthographic and non-orthographic representation: “medve- (t—d)”; or lexical and typographical means in orthographic and non-orthographic representation: “Zapiš do zátvorky hlásku, ktorú vyslovíš na konci slova *medved* [?]” (Fill in the brackets the sound pronounced at the end of the word *medved* [?]). Likewise, as we mentioned above in the same textbook (5S) SFS appears in some loanwords, e.g. SMS—“vyslovujeme *esemes* správa” (we pronounce *esemes* message), but does not in other loanwords, e.g. *phishing*, *hoax*, etc. In most textbooks, when indicating the sounds or phoneme-grapheme relation, a spelling form is used as opposed to a respelling. Sometimes, mistakes even occur in signaling the pronunciation, e.g. in voicing assimilation at the end of a word, only one consonant is marked, instead of two, e.g. *drozd* (4A, p. 46) instead of *drozd* ‘blackbird’ [drɔst]. As a consequence of not systematically and properly using the methods of SFS, neither the writing nor the speech is sufficiently differentiated, resulting in phonological awareness being insufficiently shaped. As we mentioned above, a positive example of indicating SFS is the repetitive and meaningful use of chosen elements of IPA or SPA in textbooks of the Orbis Pictus Istropolitana publishing house. Furthermore, we consider the work with SFS of an entire text (comparing language registers, knowing historical relations, etc.) a good practice in this textbook series, which could be useful in developing students’ language and also cultural awareness.

The best ways in which speech and writing were differentiated in the analyzed textbooks, occurred with the use of consistent respelling (holistically, not merely partially), as well as by mixing lexical and typographical means and by refraining from the use of symbols that do not refer to pronunciation, such as uppercase letters.

#### 4.3 Which speech features should be signaled?

The segmental speech features (sounds) are signaled in all analyzed textbooks. The vowel length is a distinctive speech feature of the Czech and Slovak languages and as such is signaled in standardized orthography.

On the matter of suprasegmental speech features, only one is signaled in Polish (stress) and two in Czech (stress and intonation). In Slovak textbooks, five suprasegmental speech features (vowel length<sup>7</sup>, word stress, sentence stress, pause and intonation) are signaled. With the exception of the vowel length which is a distinctive speech feature of the Slovak language, other suprasegmental sounds are signaled not systematically and not in all the analyzed textbooks.

The stress in Polish words is signaled only when it is not typical in Polish words; this means when it is not penultimate. There is a lack of stress in foreign words SFS

---

<sup>7</sup> The vowel length in standard Slovak is evaluated as an intersection between segmental and suprasegmental phenomena (Sabol, 1989: 50).

in Polish textbooks, which in many cases makes it impossible to reconstruct the correct sound form, e.g. Paul Cézanne—czyt. Pol Sezan (MN4, p. 191) can be read [ˈsezán] instead of [seˈzán]. In the Czech textbooks, in accordance with the Czech orthoepic norm, in foreign names or words used in Czech speech, the stress is placed on the first syllable, as it is in standard Czech pronunciation.

When the speech features are signalized in orthography (e.g. the vowel length in Czech and Slovak) or are regular (e.g. penultimate stress in Polish or initial in Czech and standard Slovak) there is no need to signal it in respelled words. This condition changes when the feature is unusual. In such a case, when trying to reconstruct the sound form, applying the general rules will lead to an incorrect reconstruction, e.g. omitting word stress in the case of respelled foreign words in Polish textbooks may lead to incorrect pronunciation.

#### 4.4 How close should spelling be to a respelled word?

Although respelling is natural and useful, since it is a non-codified script, it presents some problems. The most problematic phenomenon in Polish, Czech and Slovak textbooks is the inconsistency of respelling. Respelling consists of using L1 letters for sounds that appear obvious, such as *sz* corresponding to the sound [ʃ], although it can be represented by *sz*, *rz* or *ż* in Polish orthography. There are many examples of non-compliance with these rules in the analyzed textbooks which comes down to mixing respelling and spelling, which in turn leads to an unconscious preference for the written form over the sound form. For example, the word *sherwoodzkich* (the Polish derivation of the English word *Sherwood*) should be written [szerłuckich] in Polish respelling because of the typical consonant assimilations in the Polish language but it was [szerłudzich] (MN6, p. 230), which is closer to the orthographic form.

Sometimes only problematic phenomena are signalized, other parts of words are omitted and preserve the orthographic form. In the word *jablko* ‘apple’ (SPN6, p. 73), SFS is concentrated on reduced pronunciation: [jabko], but the actual pronunciation is [japko] (with a regressive devoicing assimilation). The authors of the textbooks under analysis exhibited a fixation with the orthographic form, which led to the detriment of the real speech sound.

In the case of spelling of consonants at the end of a word before a pause, the sound reality of devoicing is often omitted by using a voiced consonant as in an orthographic form (Hubbleův is SFSed as [hablův] (SPN5, p. 77), while the correct pronunciation is [hablůf]); in addition, the rudiment of an etymological orthography (ů [ú]) is also conserved.

Another problem of SFS is the occurrence of letter sequence that primarily denotes digraphs or trigraphs but in some words, they are convergent graphemes which primarily correspond to a single phoneme, e.g. Polish *dzi* = /d͡z/ in the word *podział* /pɔd͡zaw/ ‘division’, but sometimes each of them can secondarily represent a separate phonological unit, e.g. *dzi* = /d/+/z/ in the word *podziemny* /pɔdzɛmni/

‘underground’. In this case, the atypical phonemic realization is signaled by a hyphen, e.g. *Uderzo*—czytaj: Uder-zo (MN6, p. 162), *odzyskać*—czytaj: od-zyskać (MN5, p. 345). However, the atypical phonemic realization of the sequence of letters can also apply to graphemes such as *si*, *zi ci*, *dzi*, which in some contexts refers to phonological units /ɕi/, /zi/, /tɕi/, /dʑi/ but occasionally can refer to phonological units /si/, /zi/, /tʂi/, /dʒi/. In this case, there are two strategies in Polish textbooks: typographic signaling untypical pronunciation, e.g. *merci* [mers-i] (TP6, 285), *Lucy* [lus-i] (TP4, p. 125), or no signal (as in orthographic representation), e.g. *Lucy*—czyt. Lusi (MN4, p. 164), which can lead to incorrect pronunciation [luɕi] instead of [luʂi].

In the analyzed Czech and Slovak textbooks, neither of these cases was observed. The answer to the question of how close to spelling, respelling should be is unambiguous: it should be close enough for the readers to use the basic principles of correspondence between graphemes and phonemes in their L1 language, and at the same time far enough that the spelling does not falsify the sound.

## 5. DISCUSSION AND CONCLUSION

Mapping sounds to letters seems to be a universal dilemma with language-specific solutions. In learning to read and write, children are faced with the difficult task of establishing a mapping between incompatible levels of representation in the orthographic and phonological domains. Later, they need the reflection on the sound form of L1 words, as well as an approximate pronunciation of L2 words.

Our aim was to discuss the ways of signaling the sound form of words in chosen textbooks from three countries and searching for the best practices to develop pupils’ phonetic awareness. Learners of Polish, Czech and Slovak languages—probably just like learners of other alphabetically written languages—need reflection on the sound form of L1 words for many reasons, which we have mentioned in the introduction. One of them is standard pronunciation and spelling. Although fluency requires automatic behaviour, explaining a given phenomenon may be the most effective way to achieve the assumed educational goals. When students’ pronunciation is not standard, writing down their pronunciation and comparing this SFS with standard pronunciation will make it easier for them to become aware of the problem. Similarly, when students make phonetically motivated spelling mistakes, explaining the differences between spelling and pronunciation (together with an explanation of spelling motivation) is an effective teaching method. In both situations, SFS could be employed as an aid in L1 teaching.

In the analyzed textbooks we encounter examples of good and bad practices on how to signal sound form. Table 2 summarizes our considerations. It should be added that our investigation shows something more than national core curricula: phonetic awareness is shaped not only by an object and a means of interpretation and practice (main information) but also as accompanying occasional information (additional information). We also try to outline other educational implications of SFS and its

broader sense, especially the importance of SFS for developing the communicative and cultural skills of students.

*Table 3. Summarizing of recognized (and wished) practice in SFS across 3 countries*

Country →	Poland	Czech Republic	Slovakia
<b>Good practice ↓</b>			
SFS of L1 words for improving the orthoepic skills and phonetic awareness	Yes	Yes	Yes/No (partially)
SFS of L1 words for improving the spelling skills	Yes	Yes	Yes/No (partially)
respelled foreign proper names and loan words connected with the literary and cultural context	Yes	Yes	No
using lexical and typographical means in non-orthographic representation	Yes	Yes/No (partially)	Yes/No (partially)
signaling atypical phonemic realization of the sequence of letters usually treated as a digraph	Yes/No (partially)	not relevant	not relevant
working with entire texts representing particular language registers	No	No	Yes/No (only in one textbook series)
differentiating formal (standard) and informal (substandard, dialect) pronunciation	Yes	Yes/No (only in one textbook series)	Yes/No (only in one textbook series)
<b>Bad practice ↓</b>			
inconsistent and chaotic ways of SFS causing of pupil misconceptions	Yes	Yes	Yes/No (exception is one textbook series)
prioritizing the written (and orthographic) form of language	Yes	Yes	Yes
orthographic contamination of SFS	Yes	Yes	Yes
omitted occasions of interconnection between sound and written form of language	Yes	Yes	Yes
no stress in foreign proper names and loan words	Yes	not relevant	not relevant
using capital letters in non-orthographic representation	Yes	No	No (but only a few cases are present)

We found that in many textbooks the emphasis is on the spelling of language units, which is not the best practice to pay attention to the sound of the language. The spelling principles are dominant in those sections of the textbook that present the sound form, either as the object of interpretation or as accompanying information. However, the use of spelling principles introduces or consolidates numerous misconceptions (e.g. that there is a difference in the pronunciation of [i] and [y] in the Czech and Slovak languages, or that there is no difference in spelling and pronouncing a loanword in Slovak). Overall, the fact that in each of the languages we studied, the SFS is based on orthography as some formulations explicitly lead to the notion that the written form of language takes precedence and that the spoken form is derived from it. Although probably in every alphabetically written language there are cases where spelling has changed standard pronunciation (e.g. Perlin, 2004), neither of the two main language subcodes (i.e. speech and writing) should be privileged. For example, in some Slovak loanwords, the adaptation process runs from both the spelling and spoken perspective (e.g. the standard Slovak pronunciation of the English word *laser* is derived at once from English spelling /*laser*/ and from English pronunciation /*lejzər*/; *Slovník súčasného slovenského jazyka*. H—L). However, as we mentioned above, in L1 education children need an explicit knowledge of sound-letter relation, e.g. in order to avoid interferences in spelling and reading aloud in decoding processes while learning to read. Prioritizing either spoken or written language form seems unhelpful for language improvement of students (e.g. Liptáková et al., 2015).

The authors of both selected *Czech textbooks*, however, signal the audio form of transcribed words according to ad hoc rules, in a frequently used inconsistent manner; but also, as we have unfortunately noticed, erroneously. With the exception of the textbooks of Orbis Pictus Istropolitana publishing house (see a positive valuation above), other *Slovak textbooks* use non-uniform and chaotic ways of phonetic notation and more attention is paid to spelling and its relation to pronunciation. Particularly in the textbooks for the 4<sup>th</sup> year, we encounter violations of the principle of the topicality of linguistic knowledge and the didactic principle of pupil orientation (creation of pupil misconceptions). In *Polish textbooks*, respelling is used more systematically but some examples of the negative impact of spelling on SFS also can be found here. Mixing the spelling and respelling conventions may favor the persistence of spelling mistakes, and it certainly does not shape language awareness appropriately. We are of the opinion that it is necessary not to mix the written and spoken form. In particular, we believe that the requirement of consistency for SFS in L1 textbooks is completely legitimate. However, our research has shown that these two requirements are far from being met: the written form of language, its arbitrary orthography, influences the graphic expression of the sound form.

The best practice in this context means using a consistent method of SFS, clearly differentiating speech and writing (e.g. writing the pronunciation in square brackets, not using capital letters in SFS), as well as signaling all the features necessary to reproduce the correct sound form (e.g. signaling the stress in SFS of foreign proper

names). Presumably, it is best to use phonetic spelling sparingly, in order not to disturb the storage of visual forms.

In almost all of the examples we cited above, the orthoepic form of pronunciation is represented. The orthoepic pronunciation should be obviously used in formal, public and official situations of communication. Both linguistic and non-linguistic impacts of its absence are very strong: the speech is less comprehensible, some misunderstandings can occur, and the speakers are intuitively perceived as more (even too) relaxed and their oral communication is less cultivated. For this reason, we insist on the importance of the presence of the sound form of speech and of its appropriate representation in textbooks. The desired practice (for all countries) means meaningful using of clear, proper, consistent and age-appropriate ways of SFS for particular educational purposes:

- balanced explaining of phoneme/grapheme relations (from spoken to written form, and vice versa, building spelling skills with help of sounds knowledge);
- improving all language skills (speaking, writing, reading, listening);
- comparing formal and informal pronunciation;
- differentiating pronunciation in particular language registers;
- preparing for formal, public or aesthetic speeches;
- building cultural self-awareness of students (to be aware of suitable, situation-dependent “spoken behavior”).

Several limitations of this paper must be pointed out. Only the methods of SFS in textbooks were analyzed; not all phonetics content in textbooks and no teachers' practices in the classroom were verified. It might be interesting for further research, which would provide a better understanding of how to shape language awareness while using textbooks, as well as to promote a metalinguistic activity in language education (Camps, 2014; Fontich, 2019). The SFS can serve for developing phonetic awareness by the way it is introduced, both in the technical sense (how the speech is written) and in a broader sense—what activities accompany it during the lesson. In this paper, we have concentrated only on the first aspect.

We believe that through textbooks, it is necessary to give pupils a more consistent sense of the curriculum and optimize its content, which should include the development of linguistic awareness delivered by meta-linguistic reflection on the aspect of sound in the mother tongue, as well as developing phonetic awareness in connection with the pupil's implicit phonological knowledge in order to develop spoken production and perception (active listening). Using the well-thought-out and age-appropriate SFS of language units is one of the methods that can be employed to achieve this goal. Both the explanation of problematic phenomena (e.g. the suprasegmental level of the language, orthoepic variability, links between the orthoepic and orthographic aspects of language units) and the occasional providing of pronunciation (e.g. pronunciation of foreign words) need proper ways of signalization of how the sounds used in spoken language are represented in written form. In this case, comparing solutions in different L1 textbooks can be seen as a way of searching for the best practice.



## 6. ACKNOWLEDGEMENT

We thank Carolyn Trotman-Grabek for having edited the English language text.

## REFERENCES

- Awramiuk E., Szymańska M. (2019), Grammar education at the turn of the millennium. The case of Poland. *L1-Educational Studies in Language and Literature*, 19, 1–30. <https://doi.org/10.17239/L1ESLL-2019.19.02.06>.
- Awramiuk E., Citko M. (2020), Unseized opportunity. Respelling of English words in L1 Polish textbooks, *Crossroads. A Journal of English Studies*, 30(3), 22–37. <https://doi.org/10.15290/CR.2020.30.3.02>.
- Apel, K. & Werfel, K. (2014). Using morphological awareness instruction to improve written language skills. *Language, Speech, and Hearing Services in Schools*, 45, 251–260. [https://doi.org/10.1044/2014\\_LSHSS-14-0039](https://doi.org/10.1044/2014_LSHSS-14-0039).
- Bowers, P. N., Kirby, J. R., & Deacon, S. H. (2010). The effects of morphological instruction on literacy skills: A systematic review of the literature. *Review of Educational Research*, 80(2), 144–179. <https://doi.org/10.3102/0034654309359353>.
- Camps, A. (2014). Metalinguistic activity in language learning. In T. Ribas, X. Fontich, & O. Guasch (Eds.), *Grammar at school: Research on metalinguistic activity in language education* (pp. 23–40). Brussels, Belgium: Peter Lang.
- CC 2017: *Podstawa programowa kształcenia ogólnego dla szkół podstawowych* [General education core curriculum for primary schools]. Appendix No. 2 to the Regulation of the Ministry of Science and Higher Education of 14 February 2017. *Journal of Laws* of 2017, Item 356.
- Fontich, X. (2019). Should we teach first language grammar in compulsory schooling at all? Some reflections from the Spanish perspective. *Crossroads. A Journal of English Studies*, 24(1), 26–44. <https://doi.org/10.15290/CR.2019.24.1.03>.
- Furtak, Ł. (2015). In defense of the usefulness of a Polish-based respelling phonetic transcription system in the elementary to lower-intermediate EFL classroom. In E. Waniek-Klimczak, & M. Pawlak (Eds.), *Teaching and researching the pronunciation of English: studies in honour of Włodzimierz Sobkowiak* (pp. 119–135). Cham: Springer. [https://doi.org/10.1007/978-3-319-11092-9\\_7](https://doi.org/10.1007/978-3-319-11092-9_7).
- Gavora, P. (2006). *Spríevodca metodológie kvalitatívneho výskumu* [A guide-book of the methodology of qualitative research]. Bratislava: Regent.
- Gavora, P. (2015). Obsahová analýza v pedagogickom výskume: pohľad na jej súčasné podoby [The content analysis in educational research: a view on its current aspects]. *Pedagogická orientace*, 25(3), 345–371. <https://doi.org/10.5817/PedOr2015-3-345>.
- Goodwin, A. P., & Ahn, S. (2013). A meta-analysis of morphological interventions in English: Effects on literacy outcomes for school-age children. *Scientific Studies of Reading*, 17(4), 257–285. <https://doi.org/10.1080/10888438.2012.689791>.
- Graham, S., & Santangelo, T. (2014). Does spelling instruction make students better spellers, readers, and writers? A meta-analytic review. *Reading and Writing*, 27(9), 1703–1743. <https://doi.org/10.1007/s11145-014-9517-0>.
- Handbook of the IPA*. 1999. Cambridge: Cambridge University Press.
- Heselwood, B. (2013). *Phonetic Transcription in Theory and Practice*. Edinburgh: Edinburgh University Press. <https://doi.org/10.3366/edinburgh/9780748640737.001.0001>.
- Hanulíková, A., Hamann, S. (2010). Illustrations of the IPA: Slovak. *Journal of the International Phonetic Association*, 40(03), 373–378. <https://doi.org/10.1017/S0025100310000162>.
- Hůrková, J. (1995). *Česká výslovnostní norma*. Praha: Scientia.
- Jassem, W. (2003). Illustrations of the IPA: Polish. *Journal of the International Phonetic Association*, 33(1), 103–107. <https://doi.org/10.1017/S0025100303001191>.

- Katz, L., & Frost, S. (2001). Phonology constrains the internal orthographic representation. *Reading and Writing: An Interdisciplinary Journal*, 14(3–4), 297–332. <https://doi.org/10.1023/A:1011165407770>.
- Kráľ, Á. (1996). *Pravidlá slovenskej výslovnosti* [Slovak orthoepic rules]. 3th edition. Bratislava: Slovenské pedagogické nakladateľstvo.
- Krčmová, M. (2017). Transkripce. In P. Karlík, M. Nekula, & J. Pleskalová (Eds.), *CzechEncy—Nový encyklopedický slovník češtiny*. Retrieved June 24, 2020, from <https://www.czechency.org/slovník/TRANSKRIPCE>.
- Liptáková, Ľ. et al. (2015). *Integrovaná didaktika slovenského jazyka a literatúry pre primárne vzdelávanie* [Integrative Didactics of Slovak Language and Literature for Primary Education]. 2nd edition. Prešov: Prešovská univerzita, Pedagogická fakulta.
- National Early Literacy Panel (2008). *Developing early literacy: Report of the National Early Literacy Panel*. Washington, D.C.: National Institute for Literacy. Retrieved November 20, 2019, from [lincs.ed.gov/publications/pdf/NELPReport09.pdf](https://lincs.ed.gov/publications/pdf/NELPReport09.pdf).
- Ostaszewska, D., & Tambor, J. (2004). *Fonetyka i fonologia współczesnego języka polskiego* [Phonetics and phonology of contemporary Polish language]. 2nd edition. Warszawa: Wydawnictwo Naukowe PWN.
- Perlin, J. (2004). Ile było w historii języka polskiego przypadków wpływu pisowni na ewolucję praw głosowych lub wymowę poszczególnych wyrazów? [How many cases of the spelling influence on the evolution of phonetic laws or on the pronunciation of some words have been in the history of the Polish language?]. *Biuletyn Polskiego Towarzystwa Językoznawczego*, LX, 11–15.
- Pieniázek, M., & Štěpánik, S. (2016, Eds.). *Teaching of national languages in the V4 countries*. Prague: Faculty of Education of Charles University in Prague.
- RVP 2017: Rámcový vzdělávací program pro základní vzdělávání. Retrieved February 26, 2020, from [http://www.nuv.cz/uploads/RVP\\_ZV\\_2017.pdf](http://www.nuv.cz/uploads/RVP_ZV_2017.pdf).
- Richardson, U., & Nieminen, L. (2017). The contribution and limits of phonological awareness in learning to read. In N. Kucirkova, C. Snow, V. Grover, & C. McBride (Eds.), *The Routledge international handbook of early literacy education. A contemporary guide to literacy teaching and interventions in a global context* (pp. 264–272). London-New York: Routledge. <https://doi.org/10.4324/9781315766027-24>
- Sabol, J. (1989). Zvuková sústava slovenčiny a ortoepická prax [Sound system in Slovak and orthoepic practice]. In J. Sabol, D. Slančová, & M. Sokolová, *Kultúra hovoreného slova*. Filozofická fakulta Univerzity P. J. Šafárika.
- Slovník súčasného slovenského jazyka. H—L* [The dictionary of contemporary Slovak. H—L]. Eds. A. Jarošová, & K. Buzássyová. Bratislava: Veda, vydavateľstvo Slovenskej akadémie vied, 2011.
- Šimáčková, Š., Podlipský V., J., & Chládková, K. (2012). Czech spoken in Bohemia and Moravia. *Journal of the International Phonetic Association*, 42, 225–232. <https://doi.org/10.1017/S0025100312000102>.
- ŠVP 2014a: *Štátny vzdelávací program pre primárne vzdelávanie. Slovenský jazyk a literatúra* [State education program for primary education. Slovak language and literature]. Retrieved December 15, 2019, from [http://www.statpedu.sk/files/articles/dokumenty/inovovany-statny-vzdelavaciprogram/sjl\\_pv\\_2014.pdf](http://www.statpedu.sk/files/articles/dokumenty/inovovany-statny-vzdelavaciprogram/sjl_pv_2014.pdf).
- ŠVP 2014b: *Štátny vzdelávací program pre nižšie stredné vzdelávanie. Slovenský jazyk a literatúra* [State education program for low secondary education. Slovak language and literature]. Retrieved December 15, 2019, from [http://www.statpedu.sk/files/articles/dokumenty/inovovany-statny-vzdelavaciprogram/sjl\\_nsv\\_2014.pdf](http://www.statpedu.sk/files/articles/dokumenty/inovovany-statny-vzdelavaciprogram/sjl_nsv_2014.pdf).
- Venezky, R. (1970). *The structure of English orthography*. The Hague, the Netherlands: Mouton.
- Ziegler J. & Goswami, U. (2006). Becoming literate in different languages: similar problems, different solutions. *Developmental Science*, 9(5), 429–453. <https://doi.org/10.1111/j.1467-7687.2006.00509.x>.

## Analyzed textbooks

*Polish textbooks*

- MN4: Łuczak, A., Murdzek, A., & Krzemieniewska-Kleban, K. (2018). *Między nami. Język polski 4*. Gdańsk: Gdańskie Wydawnictwo Oświatowe.
- MN5: Łuczak, A., & Murdzek, A. (2018). *Między nami. Język polski 5*. Gdańsk: Gdańskie Wydawnictwo Oświatowe.
- MN6: Łuczak, A., & Murdzek, A. (2014). *Między nami. Język polski 6*. Gdańsk: Gdańskie Wydawnictwo Oświatowe.
- TP4: Klimowicz, A. (2013). *Teraz polski! Podręcznik do kształcenia literackiego, kulturowego i językowego dla klasy czwartej szkoły podstawowej*. Warszawa: Nowa Era.
- TP5: Klimowicz, A. (2016). *Teraz polski! Podręcznik do kształcenia literackiego, kulturowego i językowego dla klasy piątej szkoły podstawowej*. Warszawa: Nowa Era.
- TP6: Klimowicz, A. (2017). *Teraz polski! Podręcznik do kształcenia literackiego, kulturowego i językowego dla klasy szóstej szkoły podstawowej*. Warszawa: Nowa Era.

*Czech textbooks*

- SPN4: Hošnová, E., at al. (2009). *Český jazyk 4 pro základní školy*. Praha: SPN.
- SPN5: Hošnová, E., at al. (2010). *Český jazyk 5 pro základní školy*. Praha: SPN.
- SPN6: Hošnová, E., at al. (2012). *Český jazyk 6 pro základní školy*. Praha: SPN.
- Fraus4: Kosová, J., & Babušová, G. (2010). *Český jazyk pro 4. ročník základní školy*. Plzeň: Fraus.
- Fraus5: Kosová, J., Babušová, G., Rykrová, L., & Vokšická, J. (2011). *Český jazyk pro 5. ročník základní školy*. Plzeň: Fraus.
- Fraus6: Krausová, Z., & Teršová, R. (2003). *Český jazyk 6. Učebnice pro základní školy a víceletá gymnázia*. Plzeň: Fraus.

*Slovak textbooks*

- 4A: Hirschnerová, Z., & Adame, R. (no year). *Slovenský jazyk pre 4. ročník základných škôl—učebnica (spracované podľa Inovovaného štátneho vzdelávacieho programu 2015)*. Bratislava: AITEC, s. r. o.
- 4T: Nguyenová Anhová, Ľ. (no year). *Slovenský jazyk 4 (Nezábudka). Učebnica pre 4 ročník základných škôl (v súlade s inovovaným ŠVP)*. Košice: TAKTIK vydavateľstvo, s. r. o.
- 5S: Krajčovičová, J., Kesselová, J., Sedláková, M., & Hirschnerová, Z. (2015). *Slovenský jazyk pre 5. ročník základných škôl*. 4. edition. Bratislava: SPN—Mladé letá, s. r. o.
- 5O1: Tibenská, E., Patráš, V., Sedláková, M., & Sabol, J. (1997). *Slovenský jazyk pre 5. ročník základných škôl. Učebnica I. diel*. Bratislava: Orbis Pictus Istropolitana.
- 5O2: Tibenská, E., Patráš, V., Sedláková, M., & Sabol, J. (1998). *Slovenský jazyk pre 5. ročník základných škôl. Učebnica II. diel*. Bratislava: Orbis Pictus Istropolitana.
- 6S: Krajčovičová, J., & Kesselová, J. (2012). *Slovenský jazyk pre 6. ročník základných škôl*. 3. edition. Bratislava: Slovenské pedagogické nakladateľstvo.
- 6O1: Tibenská, E., Patráš, V., Sedláková, M., & Sabol, J. (2001). *Slovenský jazyk pre 6. ročník základných škôl. Učebnica I. diel*. Bratislava: Orbis Pictus Istropolitana.
- 6O2: Tibenská, E., Patráš, V., Sedláková, M., & Sabol, J. (2002). *Slovenský jazyk pre 6. ročník základných škôl. Učebnica II. diel*. Bratislava: Orbis Pictus Istropolitana.