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This paper was first presented at the first symposium in Klagenfurt in July 2015. Since 2015 there has been one important change to the Czech school system, particularly to pre-school education. For children, who, by 31st August of a given year, are 5 years old, kindergarten attendance has become compulsory 4 continuous hours on all working days. On page 3 (last paragraph), I mention that this matter is just being discussed by our Parliament. Compulsory pre-school education for 5-year-olds was enacted in 2017/18 school year.

Teaching initial reading and writing at the very beginning of compulsory school attendance in the Czech Primary School

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Introductory Facts

From the point of language typology, Czech is a flecational language (like Latin, for example), which means that language morphology is rather complex: we have 7 cases in both singular and plural noun declination patterns and 6 forms in verbal conjugation (3 in the singular and 3 in the plural). In addition, the language uses the illogical grammar gender system (table=male, chair=female, window=neuter).

From the perspective of language genealogy, Czech is a West Slavic language (like Slovak or Polish). With a highly phonemic orthography it may be described as having **regular spelling**. Another scriptor is that of *shallow* orthography, where the depth of an orthography is the degree to which it diverges from being truly phonemic.

The Czech alphabet consists of 42 letters (including the digraph *ch*, which is considered a single letter in Czech):

a á b c č d d' e é ě f g h ch i í j k l m n ň o ó p q r ř s š t ť u ú ů
v w x y ý z ž

As you can see, the Czech orthographic system is **diacritic**. The **háček** /ˇ/ is added to standard Latin letters for expressing sounds which are foreign to the Latin language. The acute accent is used for **long vowels**.

There are two ways in Czech to write long [u:]: *ú* or *ů*.

In practice, it means that we have only one digraph, namely 'ch', which is always pronounced the same, as /X/ as in the English *loch*. All over Europe the *ch*-consonant combination makes problems as this 'X' sound can be spelt in as many as eighteen ways: *c, č, ç, ě, ê, ě, ch, çh, ci, cs, cz, tch, tj, tš, tsch, tsi, tsj, tx* and even *k*. In the oldest Czech texts, 'ch' was written as *c*. But this same *c* could also stand for the sounds /ts/ and /k/. Present-day Czech reserves the *c* letter for the /ts/ sound – and never uses the letter *c* for the /s/ or /k/ sounds, unlike many

Western languages which do exactly that. Czech uses, quite sensibly, the *s* and the *k*. It may look odd to you, for example with *tsar* written as *car*.

Czech experienced the same chaos with the digraph *ch* until the early fifteenth century, when Jan Hus, a religious reformer, took it upon himself to rationalize the Czech spelling system by placing special symbols above some letters, known as diacritics or diacritical marks. (By the way, on 6th July 2015 it was 600 years since Jan Hus was burnt as a heretic at a stake in Constance (Germany)). Without him Czech would have no vowels with an acute accent (*á, í, ý, é, ó, ú, ů*), nor would it have consonants such as *ř, š, č, ž*. We call this accent a *háček*, which means 'little hook'. The term in English is *caron* or *inverted circumflex*.

This system, which was modified in the succeeding centuries, has since gathered quite a following in four other Slavic languages (Slovak, Slovene, Serbo-Croatian and Sorbian). And also two Baltic languages (Latvian and Lithuanian) show signs of this Czech influence.

Orthographic Principles

Czech orthography is primarily phonemic because an individual grapheme usually corresponds to an individual phoneme. However, some graphemes and letter groups are remnants of historical phonemes which were used in the past but have since merged with other phonemes. Some changes in the phonology have not been reflected in the orthography.

Consonants can be either **hard, soft** or **ambiguous**:

hard: h, ch, k, r, d, t, n – can be followed with 'y' only.

soft: ž, š, č, ř, c, j, d', t', ň – can be followed with 'i' only

ambiguous: b, f, l, m, p, s, v, z – can be followed by either 'i' or 'y'. It applies to words of Czech origin.

Voicing assimilation

All the obstruent consonants are subject to **voicing** (before voiced obstruents except 'v' or **devoicing** (before voiceless consonants and at the end of words); spelling in these cases is morphophonemic (i.e. the morpheme has the same spelling as before a vowel).

Final devoicing

Unlike in English but like in German and Russian, voiced consonants are pronounced voicelessly in the final position in words. In declension, they are voiced in cases where the words take on endings. led /let/ x ledy /ledy/

There are five periods in the development of the Czech orthographic system:

Primitive orthography. For writing sounds which are foreign to the Latin alphabet, letters with similar sounds were used. The oldest known written notes in Czech originate from the 11th century. The literature was written predominantly in Latin in this period. Unfortunately, it was very ambiguous at times, with *c*, for example, being used for *c*, *č*, and *k*.

Digraphic orthography. Various digraphs were used for non-Latin sounds. The system was not consistent and it also did not distinguish long and short vowels. It had some features that Polish orthography has kept, such as *cz*, *rz* instead of *č*, *ř*, but was still crippled by ambiguities, such as spelling both *s* and *š* as *s/ss*, *z* and *ž* as *z*, and sometimes even *c* and *č* both as *cz*, only distinguishing by context. Long vowels such as *á* were sometimes (but not always) written double as *aa*. Other features of the day included spelling *j* as *g* and *v* as *w*, as the early modern Latin alphabet had not by then distinguished *j* from *i* or *v* from *u*.

Diacritic orthography by Jan Hus. Using diacritics for long vowels ("virgula", an acute, "čárka" in Czech) and "soft" consonants ("punctus rotundus", a dot above a letter, which has survived in Polish *ź*) was suggested for the first time in "*De orthographia Bohemica*" around 1406. Diacritics replaced digraphs almost completely. It was also suggested that the Prague dialect should become the standard for the Czech language.

Brethren orthography. The Bible of Kralice (1579–1593), the first complete Czech translation of the Bible from the original languages by the Czech Brethren, became the model for the literary form of the language. The punctus rotundus was replaced by the caron ("háček"). There were some differences from the current orthography, e.g. the digraph ff was used instead of *š*; *ay*, *ey*, *au* instead of *aj*, *ej*, *ou*; *v* instead of *u* (at the beginning of words); *w* instead of *v*; *g* instead of *j*; and *j* instead of *í* (*gegj* = *její*, hers). *Y* was written always after *c*, *s* and *z* (e.g. *cizí*, foreign, was written *cyzý*) and the conjunction *i* (as well as, and) was written *y*.

Modern orthography. During the period of the Czech National Renaissance (end of the 18th century and the first half of the 19th century), Czech linguists (Josef Dobrovský et al.) codified some reforms in the orthography. These principles have been effective up to the present day. The later reforms in the 20th century mostly referred to introducing loanwords into the Czech language and their adaptation to the Czech orthography.

Pre-school education

The present teaching of reading and writing is linked directly to the pre-school language development of the child. Maintaining this developmental continuity from the pre-school period to the school period is accentuated. Most Czech children attend the kindergarten because their parents usually go to work.

Some recent statistics:

98.9% of 3-5-year-old children attend the kindergarten.

89.1% of 5-year-old children out of the whole 5-year-old cohort go to the kindergarten.

There are 4,931 kindergartens in the country + 108 special kindergartens.

This means that the total number of children in kindergartens is 342,521, and the annual increase is 4.2%.

Many experts believe that kindergarten education has proven life-time benefits as children share the natural social milieu of their peers. It is generally believed that it helps to even out variabilities in the children's development before they start their primary school education.

So far, kindergarten attendance has always been voluntary. However, at present, our Members of Parliament are discussing a bill according to which kindergarten attendance may become compulsory in the last year before the compulsory school attendance, i.e. at the age of 5, because it has been proved that children going to the kindergarten are usually mentally ahead of their peers when they start their school at the age of 6. However, I have spoken with several kindergarten teachers who are against this proposal saying that not all 5-year-old children are alike, and that kindergarten should remain voluntary. Some children are more sensitive and not prepared to do something compulsorily every day. If the law is passed, these teachers fear that these more sensitive children will develop a negative attitude towards formal school from the very beginning of their education because it will deprive them of one precious year of their childhood.

Children in kindergartens are not taught any particular letters, but they are taught correct articulation of speech sounds:

Figure 1: All these things contain a particular sound. Children are shown the set of pictures and either say by themselves or repeat the sound after the teacher.

Before leaving kindergarten the children should know their whole name (first name and surname), their address, all the colours, which is right/left, forward/backward, up/down, their family members, names of domestic animals and their young, names of the days of the week and months, parts of the human body; they should be able to count up to 10, they should be able to hold their pencil correctly, they should be able to connect dots into a solid line

Figure 2:

Connecting dots into a solid line.

Examples of some activities currently practised in kindergartens:

Figure 3:

Practising drawing a circle following arrows in the right direction.

Figure 4:

Odd man out

At the age of 5 the children should be able to draw a human figure, a house, basic geometrical shapes (circle, square, oblong, triangle), and, only occasionally, they are taught to recognize the letters in their own first names.

In addition, kindergarten children are taught to sing folk songs and memorize nursery rhymes and short poems, they are read or narrated fairy tales or interesting stories (usually to be continued), and they play.

Children are never forced to engage in these activities, everything is voluntary – by choice.

At registration for compulsory formal school attendance, children are asked questions based on the above mentioned activities. The aim is to assess whether the child is mature enough for starting school attendance. If not, their going to school is postponed for 1 year, which according to the recent statistics happens in cca 22% of cases.

The most common causes of school attendance postponement are:

logopaedic faults and speech deficiencies – 31.9%
attention and concentration defects – 31.3%
underdeveloped graphomotor activity – 14.6%
subnormal speech development – 11.6%

The most frequent problems of first-graders from the point of view of the Primary School are:

lack of independence
lack of concentration
disrespect for rules
insufficient level of graphomotor activity
insufficient level of speech production
problems in communication
faulty grasp of the pencil
specific learning problems

Teaching reading and writing

Actual teaching reading and writing in accordance with the established tradition starts at the age of 6 in the first year of compulsory school attendance.

The Czech education transformation which began immediately after the 1989 ‘Velvet Revolution’ brought a number of substantial changes to the whole conception of education as well as influencing the teaching of individual teaching subjects.

Teaching initial reading and writing also underwent a marked change and, in the first instance at least, constituted one of the most problematic areas of educational policy in the Primary School.

There were several reasons for this:

- lack of respect for individual pupils’ educational abilities
- emphasis on the „mechanics“ of reading and writing at the expense of developing the abilities to make effective use of these skills
- underestimation of the significance of inner motivation and personal interest of pupils, and, consequently,
- making inappropriately high demands on pupils immediately after starting school, which often resulted in an aversion to reading and writing by bringing about stress and apprehension

At present, primary education is based on the teachers’ consistent support for the pupils’ individual achievements, and on the development of their attitude and their inner motivation for those skills acquisition. At the same time, it is based on the application of these skills right at the beginning of their school studies.

The present-day aim of teaching initial reading is to teach children to read correctly, at a suitable speed and with understanding, using texts appropriate to pupils’ ages. As regards initial writing,

the pupil should master the basics of correct, legible and appropriately agile writing. Another goal is to foster in the pupils a positive attitude towards reading and writing so that they start to feel a sense of responsibility for their personal skills development. They are also encouraged to habitually use reading and writing as a means of communication with the surrounding world.

In order to achieve these aims it is necessary to provide optimal teaching conditions: i.e. not only a positive, cheerful and, for the pupils, a 'safe' atmosphere, but also a variety of teaching strategies for assessing their individual progress, including effective collaboration with others.

The **preparatory period** at the Primary School takes about 2 months and it is based on the so-called 'holistic language development' (narration, listening, spoken and written language). Speech focuses on the extent of vocabulary, speech habits, social experience, personal interests, motivation, different ways of expressing thoughts, feelings, judgements, question and answer formulation, and the comprehension of heard speech. This 'whole language' method is regarded to be very topical especially because of its complexity in interconnecting individual aspects of language education in the reading and writing development process, as well as being essential for maintaining continuity from pre-school to school individual skills development.

At the very beginning of the preparatory period various breath, voice and articulation exercises are introduced because they lead to providing correct and aesthetically balanced speech habits and, at the same time, bring about a feeling of relief and relaxation in the teaching process.

Parallel to the above, and if possible as an integrated activity, physical **preparation for writing** is introduced. It consists of relaxing the hand muscles and achieving swinging and continuous, smooth, graphomotor movement. Quite a lot of time is spent on working habits, such as workplace preparation, correct sitting posture of right-handers and left-handers, correct writing equipment holding, activities aimed at muscle and nerve system tension and relaxation. Activities change with regard to 6-year-old children's attention sustaining, friendly, approachable and safe atmosphere encouraging beginning writers. Emphasis is given to clarity and an active approach to practising new phenomena.

Teachers are expected to be well-versed in methodology and in diagnostic and remedial techniques. They should have patience and should be perceptive of the children's needs, they should look for new procedures and means of making lessons most effective and comfortable for every individual child.

Consistent respect for the **principle of individualization** is a significant trend in initial reading and writing development. Individualization does not concern only the choice and content of preparatory period activities, but also consistent methodological procedures. Individualization also depends on the chosen reading method, because the pupil can be enabled to read by letters, syllables or whole words depending on his/her individual abilities. The preparatory period can be prolonged, so the material being learned can be modified or completed by e.g. special graphomotor exercises. Teachers can and should match pace, methods and content to their pupils' needs and aspirations with view to avoiding early learning difficulties.

In the present-day Czech school transformation, reading and writing is being taught as a total package, but a flexible one. Not only work organization, evaluation, teaching materials and textbooks content are being changed, but, above all, teachers can choose teaching methods freely. This possibility places demands on their level of personal responsibility and increases

the need for specialist knowledge. Pupils learn to read either in parallel with developing writing skills, or through the use of writing, or writing is separated from reading and may be postponed to a later date.

At present, both **analytical-synthetic** or **genetic methods** are used for the teaching of initial reading and writing. Teachers can choose the appropriate mix of these two methods if their pupils' needs require this. In practice, it means that they can choose groups of letters for the initial periods of reading (vowels, consonants), with the analytical-synthetic method they can vary the proportion of analysis and synthesis, they can advance their reading development by recognizing two or four forms of the same letter, they can vary the script, they can write down the block letter forms as used for reading development, and so on.

At present, the **analytical-synthetic method** is more prevalent in Czech schools. In 1951-1990 it was the only officially permitted method in the CR, and owing to its long, well-established tradition, degree of refinement and support tools its dominance is understandable.

This method is based on the spoken word. First of all, a speech sound (phoneme) is recognized, its sound form (articuleme) is mastered and then a connection between the sound and letter (grapheme) is formed. Common expressions as they exist in the 6-year-old children's vocabularies are used for recognising the first sounds. The procedure is based on the phonematic hearing functions and visual memory.

It has its indisputable positives, and with regard to the Czech language structure it is believed to be most satisfactory for Czech pupils. Its weak points are a relatively long phase of symbols reading (letter, syllable), the connection of the deduced speech sound with four letter forms (capital, small, printed, hand-written), reading unonomatopoeic texts, the prevalence of emphasising the hand-written script techniques.

Figure 5: A page from the *Primer* practising reading the grapheme 'm' by the analytical-synthetic method..

Figure 6: Two pages from the *Primer* practising reading the grapheme 't' by the analytical-synthetic method.

Figure 7: One of the last pages from the *Primer* using the analytical-synthetic method (p.115): solve the riddles, find names of animals, complete names of animals and say if they live in the wood, solve the picture puzzles.

Figure 8: A page from a *writing copy-book* No. 1 practising the letter 'p' using the analytical-synthetic method of instruction.

For some children who have difficulties with synthesis, it is more natural to read words by individual speech sounds. The **genetic method** makes it possible to emphasise context in language teaching. Its tradition was in the above mentioned period (1951-1990) forcibly discouraged. Originally, it was founded by a prominent Czech educator of the interwar period Josef Kožíšek. At the beginning of the 1990s, this method was revived and modernized in Czech textbooks.

The genetic method respects the natural understanding of the script by the child – it accentuates the language teaching context, active listening, ideas, primary mastering the block letter

alphabet. A single difficulty principle is applied consistently, and the communicative element in language instruction is strengthened. From the very beginning, word analysis and synthesis in order to establish in pupils the ability to compose single words the pupil learns to read with comprehension. The main feature of the genetic method is the consistent practising of sounds/letters into words quickly and correctly. While getting acquainted with the block printed alphabet, children learn how to sign their names. Pupils do not syllabicate (i.e. read syllable by syllable), they only „decode“ the text, they spell out the text and then read the word all at once as a single entity. Sometimes, with slow readers the so called flowing reading method is used: e.g. *zamčená* is pronounced as /zaammččeeennááá/.

Figure 9: *We are learning to read* (p. 27) (beetroot, granny, granddaughter, dog, cat, mouse).

Instructions: Write down one of the two sentences.

Draw a picture showing how grandpa pulled out the beetroot.

Think of names for the granddaughter, dog and cat and write their names down.

Dramatise the fairy tale.

Figure 10: Page from the *Workbook of the genetic method Primer* practising the grapheme 'Á'.

Instructions: Say what you can see in the pictures, colour the pictures.

Circle the pictures that begin with the vowel 'Á'.

Put a cross in the squares under the pictures where you can hear the sound /A:/: at the beginning, in the middle or at the end of the word.

Trace the letter 'Á' in colour.

Write down and practise the letter 'Á'.

Figure 11: Page from the *Workbook of the genetic method Primer* practising E, I, A, Y:

Instructions: Show how the froglet jumps. Read the letters on the stones.

Write the letters on the stones as the little frog is jumping (i.e. a dictation of the learned letters).

Figure 12: Page from the *genetic method Primer: The Story about Naughty Kids* (p.49).

Instructions: Underline the word KIDS (i.e. *kůzlátka* in Czech) as it is used in the whole text.

Demonstrate how the kids called their mother.

Read the first sentence once again carefully, and write it down into your exercise-book. At home, write down a sentence that you have chosen.

The present-day concept of reading and writing is based on using the pupils' personal activities and interests supporting their creativity. The active approach is reinforced in all the stages of reading and writing development. Simultaneously, accent is put on the pupil's experience, which is regarded to be an irreplaceable motivational stimulus. This enables the pupil to perceive reading and writing as an indispensable practical means of acquiring such experience.

At present, primary school pupils learn to write either the traditional Latin cursive script or a new Czech-developed handwriting script called **Comenia Script**.

máma máma
teta teta
láme láme
pes pes
ráno ráno
kokos kokos
duha duha

citrón citrón

velikost písma 33 b

Eliška

Fedor

Gábina

Helena

Igor

Jiřina

Kryřtof

Láďa

This new type of disconnected handwriting was proposed in 2009 and has been tested in a pilot project in 40 schools. As it has brought about some controversy, so schools may teach it only with the pupils' parents' approval.

The first year is most important because children form the crucial habits. The modern concept of initial writing education prefers legibility to the form perfection. Playful and attractive forms of work are applied as much as possible.

I have asked people who specialize in the field of primary education if there are any noticeable empirical studies about difficulties children characteristically encounter in our orthography, about developmental stages and about comparisons of different teaching methods, but so far, nobody has replied. I am sure there will be common difficulties but people are slow to respond to information requests, except for a very few helpful people!

I would like to mention an empirical study about the comparison of two teaching methods:

Marie Kocurová et al. *Analyticko-syntetická a genetická metoda ve výuce čtení (Analytical-synthetic and genetic methods in teaching reading)*. Praha: Karlova Univerzita v Praze (Prague: Charles University in Prague), Pedagogická fakulta (Faculty of Education). 2012 ISBN 987-80-7290-578-2, 259pp.

Funded by the Czech Republic's Grant Agency research was carried out in the period 2009-2011 the aim of which was to compare the results of teaching reading in pupils of the 1st and 2nd classes by either analytical-synthetic method or genetic method. Up to now more than 600 comparisons have been made.

In the first years of school attendance pupils were monitored from the point of view of functions which are most often considered to be significant for beginning reading, namely hearing and visual perception and speech. Better results (in 6 comparisons out of 8) were achieved by pupils who attended classes taught by the genetic method.

At the end of the 1st year the speed of reading, the number of errors, and text comprehension were determined. In the first research phase the results did not prove any statistically significant differences between pupils taught by either of the monitored methods. The speed of reading as well as text comprehension were very good in both groups of pupils but with slightly better results in comprehension found in children taught by the genetic method. However, the differences were not statistically significant. The numbers of errors pupils made

were minimal. Partial differences occurred in hearing analysis and synthesis in which pupils reading with genetic method were better.

At the end of the 2nd year the speed of reading, number of errors and text comprehension were tested again and, additionally, a test of reading nonsensical words was included. The differences between both monitored groups were not statistically significant. In reading artificial (nonsensical) words pupils reading with analytical-synthetic method were better, as one might expect.

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