

PUPIL PRECONCEPTION AS A SOURCE OF SOLUTIONS TO LINGERING PROBLEMS OF GRAMMAR TEACHING?

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Abstract

The main aim of the paper is to show pupil language preconception as a fundamental part of L1 teaching. This notion is aligned with the model of educational reconstruction and constructivist principles in education which are the sources of the modern productive culture in education. Based on concrete examples of grammatical subject matter in Czech, the study demonstrates how research into pupil preconceptions can guide teaching grammar so that it is functional, communication-oriented and cognitively challenging. The results of the presented studies show that even primary school pupils possess developed preconceptions of language phenomena, which, however, school education often ignores. This fact is later a potential source of various lingering problems and failures of L1 teaching. The study illustrates (a) how lingering problems of L1 teaching can be linked to the fact that pupils' understanding and thinking about language is mostly neglected, and (b) how it is possible to use language preconceptions as a source for modelling the curriculum of L1 teaching.

Keywords: Czech, L1, preconception, grammar, model of educational reconstruction, pedagogical content knowledge, constructivism

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1. INTRODUCTION

The “grammar war”, which has been going on in L1 didactics around the globe, has also afflicted L1 teaching in the Czech Republic. The debate about the model of Czech language teaching in primary and secondary schools has even become a public topic (comp. the continuing media debate—summarised in Štěpáník & Šmejkalová, 2017). As this is the case for many other countries as well, the questions that we are going to elaborate in this paper use teaching Czech as an example of international concerns—that is to say, the context is Czech, while the audience is international (comp. e.g. Ongstad, 2015).

Even though both Czech didactics (starting in the 80s) and the curriculum (*Rámcový vzdělávací program – Framework Education Programme*) stress a communicative approach to the subject matter, the educational reality is still “locked” in the almost 200-year-long tradition. This tradition dates back to the teaching of traditional grammarians (e.g. Becker or Wurst) who based their opinions on Humboldt’s theory of the relationship between speech and language (comp. Schneuwly & Vollmer, 2018). For example, Becker’s (1775–1849) judgements were based on the close relation between language and cognition. Becker inappropriately converged the linguistic and logical categories and ignored the fact that grammar is the “logic” of language, not of cognition (Jelínek, 1979, p. 62). As a result, he asserted that grammar teaching ought to become a means of teaching logic and that grammar should be taught according to the rules of logic (Jelínek, 1972, p. 102). Becker therefore advocated the logic-grammatical approach and considered grammar teaching as “popular logic” (ibid.). Consequently, the roots of L1 teaching in the Czech Republic (like in many other countries) can be found in traditional grammar (for definition see Weaver, 1996, p. 1f.). While this approach has been challenged several times throughout Czech language teaching history (e.g. Chlup, 1959; Průcha, 1978, and others), due to various other reasons (e.g. strong ideologisation of L1 teaching especially during the communist period—comp. Šmejkalová, 2010, p. 249f.; Šmejkalová & Štěpáník, 2016) and the strong relation of Czech L1 didactics to its mother subject field (Šmejkalová, 2010, 2015), there has been persisting tendency towards teaching grammar in an isolated, decontextualized way (comp. e.g. Čechová, 2011/12; Rysová, 2007/08; Štěpáník, 2016; Zimová, 2005/06). As a result, there is a great deal of teachers who still consider sentence structure analysis and decontextualized parsing exercises as a good method for developing cognition—and the prevailing aim of Czech teaching (Šmejkalová & Štěpáník, 2016; Štěpáník & Slavík, 2017; Štěpáník & Chvál, 2016).¹ As a result, not only can we say that L1 teaching in the Czech Republic very much resembles traditional grammar teaching, but also that the Czech model

¹ Research shows that this is the case not only for the Czech Republic (comp. Pokrivčáková & Pokrivčák, 2016; Sólyom, Heltai, & Pintér, 2016; Štěpáník et al., in press; Szymańska, 2014; Van Rijt & Coppen, 2017; Weaver, 1996, etc.).

of L1 teaching—as far as grammar and its relation to the development of communication skills is concerned—has to deal with several lingering critical issues (summarised in Štěpáník & Slavík, 2017, p. 66; Štěpáník et al., in press). The major issue is that the transfer of grammar knowledge into situations of language use is very limited (Čechová, 2013; Kostečka, 2012a, b; Chvál & Šmejkalová, 2018; for elaboration of this issue in a wider international context see also Andrews et al., 2006; Locke, 2010; Wyse, 2001, or the extensive research done by Myhill et al., who also state the ideal characteristics of functional and meaningful grammar teaching).

2. DEFINITION OF TERMS

Before we start the elaboration of the main issue of this paper, we need to define some basic terminology that we are going to use throughout the text.

The terminology in the area of pupil (pre-)understanding is considerably fuzzy (Doulík found 28 different terms that can be used for this phenomenon—Doulík, 2005, in Škoda & Doulík, 2011, p. 89). However, the dispute is generally focused on the relation between three basic concepts, resp. terms: *notion*, *preconception* and *conception*. As we have already defined these terms before (Štěpáník & Slavík, 2017), we are only going to clarify the understanding of those terms that we are operating with in this text. In our opinion, it is most important to make a clear distinction between the terms *preconception* and *conception*, which are sometimes used interchangeably (e.g. Fontich, 2014, 2016; Fontich & Camps, 2014).

When one wants to express themselves, they need knowledge of language phenomena and the way these phenomena function in the language system. We call this (initially implicit) L1 knowledge *preconception*. Preconceptions come into existence spontaneously as “concentrated” experience with using language in communication situations the child encounters. This competency is unconscious and has three basic components: (a) cognitive, (b) affective and (c) conative. Correspondingly, the complex structure of a language preconception has three layers: (a) *language reason*, with which we reflect on language (the cognitive component), (b) *language sense*, with which we “sense” language (the affective component) and (c) *language action*, with which we “execute” language (the conative component; based on the theories of Dolník, 2010, p. 26). The preconception is an “individual disposition to use language” (Štěpáník & Slavík, 2017, p. 61), or “natural language competency” (Štěpáník, 2015), a sort of (unconscious) language awareness. As a result, in L1 teaching, the quality of one’s language preconceptions directly influences the quality of one’s communication skills (or, one could say, functional literacy).

We see the main role of L1 teaching as transforming this implicit (or tacit) knowledge into an explicit one. Preconceptions are the basis for learning knowledge about language (or, in a narrower sense, grammar—on the definition of these terms comp. Myhill, 2005) and for transforming unconscious knowledge of language into conscious so that one can deliberately choose from the options that the language

system gives. Höflerová (2015, p. 534) accurately calls it “rediscovering” the language system. First, the pupil “knows language” but is not able to “understand” or “think about language”. As actors in various communication situations “we are called upon to make choices in respect of how we read situations and how we compose our textual acts. Explicit language (or grammatical) knowledge enhances language-users in these choices” (Locke, 2010, p. 8; comp. also Myhill, 2018). Language is seen as a “meaning-making system through which we interactively shape and interpret our world and ourselves” (Halliday’s reflection in Derewianka & Jones, 2010, p. 9). As such, in school the knowledge of language becomes apparent and captured through the knowledge of science—in our case linguistics. Through comparing their preconceptions with the knowledge that is presented by the teacher (i.e. scientific knowledge), pupils discover language *conceptions* (Štěpáník & Slavík, 2017, p. 63).

Conceptions are intersubjective and can be shared and made explicit (comp. also Fontich, 2016) through metalanguage. Even without knowing linguistics, individuals implicitly and intuitively master the concepts as they are able to produce language constructions to fulfil their communication aims—that is, they have preconceptions of how language works. However, with functional linguistic knowledge, language users have an interpretative and explanatory framework that gives them the opportunity to connect their notions and preconceptions with conceptions. Such knowledge then allows the speakers to use the language accurately and functionally, gives them the awareness they need for deliberately choosing those language elements that best serve their communication purpose and also gives them the instruments to reflect on and explain their language use. Language awareness may be characterised either as a prerequisite—that is, a predisposition—or as a consequence of learning (Olson in Mittins, 1991, p. 23).

Pupil preconceptions are one of the most important characteristics of the learner (Doulík & Škoda, 2003; Woolfolk, 2010, p. 307). Studies have proven that they are “stable and resistant to change, especially through direct instruction” (Gabler & Schroeder, 2003, p. 15). If not targeted properly, misleading, wrong or incorrect preconceptions, i.e. *misconceptions*, can endure from the beginning of education to the end (Gardner, 1991). This, of course, is harmful for further learning and a functional “genuine understanding” (ibid.) of the matter taught.

3. THE IMPORTANCE OF PUPILS’ PRECONCEPTIONS IN L1 TEACHING

One of the current key issues in field didactics concerns the integration of two dimensions: the *ontodidactic* (the knowledge of the educational content stemming from the knowledge of the discipline’s content) and the *psychodidactic* (the knowledge of the educational content stemming from the student’s knowledge; Slavík et al., 2017, p. 424; Štěpáník & Slavík, 2017, p. 59). Moving between these two poles and balancing the perspective of linguistics, on the one hand, and the perspective of their pupils, on the other, is one of the crucial questions all teachers face. As we have pointed out (Štěpáník & Slavík, 2017, p. 59), the demands on the L1 teacher

are, in this respect, even higher because the pupil enters school with an (implicit) knowledge of language, i.e. both the object and instrument of instruction, in its almost complete width as formal construction of the language of a six-year-old is similar to that of an adult (Jelínek, 1979).

The designed curriculum (i.e. the *Framework Education Programmes*²) formulates the expected outcomes of the subject of Czech Language and Literature in a communicative way, and stresses the development of the four basic communication skills, i.e. reading, writing, listening and speaking. These form the function-oriented framework for grammar teaching. This means the curriculum's intention is to maintain a cognitive approach to learning about the language, but at the same time to make use of this knowledge in order to improve pupils' communication. However, as we have already said, educational reality is still mostly shaped by the grammar tradition. Thus, in Czech teaching we are witnessing a discrepancy between the designed, implemented and achieved curriculum (comp. e.g. Kostečka, 2012a, b; Palečková, Tomášek, & Basl, 2010; Palečková et al., 2013; Pavelková, Škaloudová, & Hrabal, 2010; Šmejkalová & Chvál, 2018).

In the process of looking for complex solutions to the problems outlined above, various L1 didactics have come up with a solid amount of research findings (for instance, in Poland—comp. e.g. Dyduchowa, 1988; Nagajowa, 1994; Szymańska, 2016; Slovakia—comp. Liptáková, 2012; Liptáková et al., 2011; Palenčárová, Kesselová, & Kupcová, 2003; or the UK—e.g. Andrews et al., 2006; Myhill, 2005; Myhill, 2018; Myhill, Jones, & Watson, 2013; Wyse, 2001). In contrast with these extensive research efforts, so far, the debate about Czech teaching has been more a contemplation about the methods and forms of work rather than the content or the overall conception of the subject.³ As a result, unlike in other countries, Czech L1 didactics has not yet been able to find the *modus vivendi* between grammar and communication development; in other words, to create a new framework that would satisfy both developing conscious awareness about how the language system works and the needs of communicatively and functionally oriented L1 didactics.

We assume that the perspective L1 teaching model should be *cognitively-communicative* (Liptáková, 2012; Liptáková et al., 2011), and *function-oriented* (Szymańska, 2016). Such a model brings a new perspective not only to the methods and forms of work, but—most importantly—on the content of the subject and its aims.

² FEP; *Rámcový vzdělávací program pro základní vzdělávání – FEP for elementary education, 2016; Rámcový vzdělávací program pro gymnázia – FEP for secondary general education, 2007; and rámcové vzdělávací programy pro odborné vzdělávání – FEPs for secondary technical and vocational education*

³ In her chapter on the development of Czech language didactics, Šmejkalová (2015) analyses the situation thoroughly and acknowledges very lively research activities in the areas such as teaching Czech as L2 or foreign language, corpus or cognitive linguistics and their influence on teaching Czech, ICT implementation, Czech didactics for pupils with special needs, etc. As we can see, none of these, however, are connected with the core of the subject or the basic subject's aims.

Of course, as one might assume, this is an extremely difficult task for all of those concerned, especially for the teachers as it requires a complete shift in their thinking. But if the achieved curriculum is to match the designed curriculum, then these alterations are inevitable.

Among other things, it is important to bear in mind that “the communication model of L1 teaching will be more a proclaimed than realised notion, more a partial and occasional method than an elaborated and systematic approach” (Kesselová, 2001, p. 7) without proper and thorough understanding of how pupils use language (*ibid.*) and, most importantly, how they think about language, i.e. what their understanding of various language phenomena is. Our principal idea for designing a new model of Czech language teaching is therefore equalising the subjective and inter-subjective dimensions of the content (which of course applies not only to Czech, but also to any other language—e.g. Fontich & Camps, 2014; Liptáková et al., 2011; Liptáková, 2012; Metz, 2018; Szymańska, 2016).

4. THEORETICAL FRAMEWORK OF THIS STUDY

There are three fundamental theoretical concepts underlying our reflections: (1) the model of educational reconstruction, (2) the theory of constructivism, and (3) the concept of pedagogical content knowledge.

4.1 *Model of educational reconstruction*

The most complex theoretical model that corresponds with our views is the *model of educational reconstruction* (e.g. Jelemenská, Sander, & Kattmann, 2003; Komorek & Kattmann, 2008). It was originally intended to improve instructional practice and teachers’ professional development in science education (Duit et al., 2012, p. 13), but we find it an extremely useful perspective for modelling L1 education as well.

The model has three basic components: (1) the pupils’ preconceptions, i.e. the pupils’ understanding of the subject matter, (2) scientific conceptions, i.e. scientific knowledge about the matter, and (3) the educational environment created by the mutually connected processes of learning and teaching. These components are intertwined and elicit the need to (a) select the key subject matter (the basic concepts and principles), (b) investigate the pupil and teacher perspectives regarding the selected subject matter, and (c) design and evaluate the learning environments (Duit et al., 2012, p. 13). Through understanding and valuing pupils’ preconceptions and the blend of this understanding with scientific knowledge, the matter can be “reconstructed” so that it is understandable for the pupils (Slavík et al., 2017, p. 268). In a broader sense, this means the creation of a meaningful educational environment as the “reconstruction” affects not only the overall aims of the subject, but also the selection of the subject matter, the methods and approaches to conveying the matter, i.e. the complete structure of the educational environment.

Here we see the key role of field didactics as it connects experts and teachers—educational research with teaching practice. The focus of field didactics should be on (a) pupils (their preconceptions, thinking, opinions, values, expectations, cognitive processes, etc.), (b) the development of the field (new trends and findings and their educational potential), and (c) the didactic structure of the teaching content (research into factors influencing the pupils' achievement; Knecht, 2007, p. 74).

4.2 *Theory of constructivism*

The model of educational reconstruction is closely linked to *constructivism*, which the current productive culture of teaching and learning is mostly associated with (Janík, 2013; Reich, 2012). Our basic assumption is that knowledge cannot be transmitted (comp. Larochelle & Bednarz, 1998, p. 8) nor somehow obtained or absorbed (Terhart, 2003, p. 31)—as Gabler & Schroeder (2003, p. 15) fittingly put it: “We can transmit words but not understanding.” Instead, knowledge “is constructed, negotiated, propelled by a project, and perpetuated for as long as it enables its creators to organize their reality in a viable fashion” (Larochelle & Bednarz, 1998, p. 8). Every individual creates their own idiosyncratic version of reality based partly on identical experiences, but shaped by individual experience and upon an individual's prior knowledge, understanding and experience (Pritchard & Woollard, 2010, p. 5).

Therefore, we are convinced that if we want to build a function-oriented and communicative model of teaching L1, it is necessary to understand the pupils' preconceptions and the way pupils use language, since this represents the basic framework for building metalinguistic knowledge.

4.3 *Pedagogical content knowledge*

It is generally accepted that the fundamental determinant of the teaching process is the teacher. As Janík, Lokajíčková, & Janko (2012) show, the components and characteristics of instructional quality can be consolidated into four areas: (1) classroom organisation and management, (2) dealing with aims and contents, (3) design of learning tasks, and (4) supportive learning climate. All these factors are closely connected to the teacher's teaching style, their knowledge and skills, as well as their actions, values and thinking. To be able to achieve a high level of instructional quality, based on these characteristics, the teacher needs to have good knowledge of the content, but also of the content's educational value—Shulman (1987) calls this *pedagogical content knowledge* (PCK). PCK “is seen as a unique knowledge domain denoting the blending of content and pedagogy into an understanding of how particular topics, problems, or issues may be organised, represented, and adjusted to the diverse interests and abilities of learners” (Duit et al., 2012, p. 28). PCK comprises (a) knowledge of the content taught, (b) pedagogical knowledge, i.e. possessing pedagogical competencies, and (c) knowledge of pupils (comp. Metz, 2018).

As we have said, one of the components of the model of educational reconstruction is research into pupils' and teachers' understanding of the content. As a result, there is close connection between the teacher's pedagogical content knowledge and the model of educational reconstruction (comp. Van Dijk & Kattmann, 2007). Teachers' thinking about the subject matter is one of the sources for modelling the learning environment.

As suggested, one of the vital layers of teachers' reflections of the subject should be the perspective of the pupils—not only their needs (which determine the teaching aims), but also the personal characteristics they bring to school: namely the preconceptions of the subject matter taught. Metz (2018) suggests that teachers' awareness of the pupils' preconceptions (he uses the term “knowledge of students”) about language does not only help to identify the pupils' misconceptions—as professionals traditionally accept—but if valued fully, it changes the linguistic content taught. On the basis of the results of his study he therefore proposes reframing the traditional term “knowledge of students” as “valuing student knowledge” (Metz, 2018, p. 23; we would use the term “pupils' preconceptions”).

The following text presents some of the findings in the area of pupils' preconceptions of Czech. Its aim is to demonstrate (a) what research into preconceptions can show us about pupils' thinking about language, and (b) how it can guide L1 teaching.

5. WHAT CAN BE GATHERED FROM RESEARCH INTO CZECH PUPILS' PRECONCEPTIONS SO FAR

Research into pupils' preconceptions is not a new phenomenon in both Czech general, and STEM⁴, didactics (e.g. Doulík & Škoda, 2008; Hejný & Kuřina, 2009; Škoda & Doulík, 2006, etc.). However, in Czech language didactics, research has begun only recently. One of the first endeavours in this respect was Zouharová's work (2005). The true breakthrough that established this kind of research as one of the important streams of thought in Czech L1 didactics, was Hájková's project *Vztah kognitivních struktur žáka a struktur jazykového systému v procesu edukace českého jazyka* (*The relationship between pupil's cognitive structures and systemic language structures in the Czech language education process*), supported by GAČR (Grant Agency of the Czech Republic) and undertaken in 2012–2015. Our current project *Didaktika českého jazyka v současném vzdělávacím kontextu* (*Czech language didactics in current educational context*), supported by Charles University and its Faculty of Education, relates to this research effort.

In this paper we present (a) selected findings of previous research (these have already been published elsewhere and can therefore be cited) and (b) selected research findings of our current research (which have not been published anywhere else yet and therefore cannot be cited), and put them in context to demonstrate and analyse certain key issues that L1 didactics has been dealing with worldwide.

⁴ Science, Technology, Engineering and Mathematics.

It is not in the capacity of this paper to describe the research methodology of all the studies presented and the findings mentioned; detailed information can be found in the papers themselves. However, all the studies we refer to use one of the following methods (or a combination thereof):

- Interviews with pupils based on exercises specially designed for research purposes;
- Observations of pupils working with language materials specially designed for research purposes;
- Observations of classes or individual pupils in the lessons;
- Experiments in the form of teaching interventions when work with selected language material or specially designed exercises is observed.

5.1 *When teaching goes against pupils' understanding of language*

One of the topics of L1 teaching in year 2 of Czech primary school⁵ is the conception of the *sentence* and *utterance*. What pupils should learn is the relation between form, melody, punctuation marks and, most importantly, meaning. Indeed, currently, emphasis is put on the connection between the sound and graphic aspects of a sentence, the main aim being punctuation. What is offered to the pupils is the *classification of sentences according to the speaker's attitude to reality*. The pupils are expected to classify sentences into four categories—declarative (which are taught to end with a full stop), optative and imperative (which are taught to end with a full stop or an exclamation mark), and interrogative (which are taught to end with a question mark). Even though the concept taught is called *classification of sentences according to the speaker's attitude to reality*, no attention is actually paid to the meaning of the sentences. Instead, the main classification criteria are melody and punctuation (Hájková, 2013; Hájková et al., 2015; Svobodová, 2016), leading pupils to focus only on form.

Hájková (2013) shows the discrepancy with these examples: according to the current school approach to the matter, the sentence *Počkejte prosím chvíli v čekárně*. [Please wait in the waiting room for a moment.] would be classified as an imperative sentence. However, from the communication purpose point of view, it is not an imperative, but a request. Likewise, the sentence *Kdo by věřil na strašidla!* [Who would believe in ghosts!] starts with an interrogative pronoun (who) and has the form of a question. But, at the same time, it ends with an exclamation mark because its real function is exclamation. The rule of thumb presented to the pupils (that interrogative sentences end with a question mark) is misleading in this case. The example *Kolikrát jsem chtěl už odejít*. [How many times have I wanted to leave.] illustrates an identical problem, just this time the sentence has the form of a question ending with a full stop; its real function is again exclamation. *Mohl byste prosím zavřít to okno?* [Could you please close the window?] would be classified as an interrogative sentence, but

⁵ Pupils aged from 7 to 8.

surely the producer is not expecting a yes/no answer as the function of this utterance is not a question, but a request. The function of the sentence *Odpočívej v pokoji!* [Rest in peace!] is surely not an imperative.

Hájková et al. (2015, p. 90) precisely define the problem: “After entering school when [the pupil] can already communicate, uses a wider repertory of communicative functions and has a better grasp of utterance forms, the pupil is told that everything they learned to differentiate and classify instruction, demand, reproach, thanking, request, objection, disagreement, refusal or question needs to be squeezed” into four categories. This is a very good example of a flagrant case of discrepancy between school instruction, modern language findings and pupil preconceptions about language.

Hájková et al. (2013, 2014, 2015) researched primary school pupils’ preconceptions of sentence and utterance. They carried out a set of tests in the form of either interviews and observations of how the respondents operate with the language material which is given to them, or tests in the form of questionnaires.⁶ The tests focused on various aspects of the issue: (a) the preconception of a sentence regardless of its communicative function, (b) the preconception of communicative functions, (c) the preconception of punctuation with regards to the meaning and communicative function of the sentence (Hájková et al., 2013, p. 96f.), and (d) the preconception of the semantics of the verb that can evoke the communicative function of a sentence (Hájková et al., 2014, p. 167f.).

Hájková et al. found that, at the end of year 1, pupils already have an idea of what a sentence is. The term is mostly associated with writing, the pupils are able to distinguish between the term “sentence” used for the written mode and “utterance” for the spoken mode. They are also able to recognise questions and are aware of intonation schemes. As such, they have no problem with using a full stop and a question mark. An exclamation mark is used when the sentence is said urgently or “very loud” (Hájková et al., 2014, p. 220). Children at a very young age formulate utterances with certain communicative functions, and they are also able to understand the communicative functions and behave accordingly (e.g. a demand, thanking, request, objection, disagreement, refusal, question, or command; Hájková et al., 2014, 2015; Kesselová, 2001). As such, the communicative function of the utterance is an expression of behaviour and vice versa.

We are now witnessing a situation when the current school approach to the matter is purely formal and goes directly against—or even completely contradicts—the way pupils think about language. It teaches something pupils master spontaneously and do not need to make abstract. Moreover, the offered rules and categories do

⁶ Phase I: interviews and observations, 4 tests: 2 in year 1 (pupils aged from 6 to 7) and 2 at the beginning of year 2 of primary school (pupils aged from 7 to 8), sample: 32 pupils (Hájková et al., 2013); phase II: questionnaires, 2 tests in year 2, 3, 4 and 5 (pupils aged from 7 to 11), sample: 243 pupils (Hájková et al., 2014).

not fit their reasoning about language. As such, the meta-language is very difficult to process and is mastered only formally, by heart.

On the basis of these results, Hájková et al. (2014, 2015) have designed a teaching strategy based on the theory of communicative functions. The verification tests they carried out in teaching practice suggest that, instead of classifying sentences according to the speaker's attitude, pupils of primary school (precisely year 2) can (or better—should) be taught the communicative functions of an utterance. The team's experiments show this is a functional approach.⁷

For Czech—as an inflective language—it is unavoidable to study the grammatical qualities of certain language phenomena, even already at primary school. Of the linguistic disciplines, teaching Czech traditionally focuses primarily on morphology and syntax (comp. Čechová & Styblík, 1998; Šmejkalová, 2010).

Hájková's team also researched the preconception of *noun gender*—how pupils identify the gender of nouns and classify it. This subject matter is part of the curriculum for year 3. Identifying the gender of nouns correctly is necessary for the declension of individual words and other connected words in the sentence.

Hájková's team carried out tests in year 1 and 2 (40 pupils, experiment), and in pre-school (29 children, the research was in the form of a game which the researchers observed; Hájková et al., 2013) and, based on these results, they formed an educational strategy which they tested with 449 pupils of year 3 and 233 pupils of year 2. To triangulate the results, the researchers included 50 adults (Hájková et al., 2014, p. 65f.). The aims of the research were to identify (a) if children are able to recognize the gender according to the morphological and word formation characteristics of the word, (b) if children use demonstratives *he*, *she* and *it* to identify noun gender, and (c) which part of the sentence helps the speaker to identify noun gender (in Czech as an inflective language it can be e.g. the form of the modifier or the verb).

The current typical teaching strategy is that pupils are offered the demonstratives *he*, *she* and *it*. However, as Hájková et al. (2014, 2015) found out, children spontaneously identify noun gender differently. They mostly bear in mind the situation in which they deal with the task, accentuating the semantics of the lexeme and its components. The preconception of noun gender is surprisingly precise much earlier than when pupils start school.

The educational implication of these findings is “to educate systematically at first the propaedeutic of gender, i.e. to find signals of grammatical gender in syntagmas⁸ in communicative practice because that fact can help the [development of—author's note] pupil's cognitive processes, it can help to create their meta-language and help them to master techniques related to confrontation of intuitive and knowledge-based level of language acquisition” (Hájková et al., 2015, p. 48).

⁷ These findings have now even been incorporated in propositions for the curriculum changes since 2020.

⁸ For explanation of this term see further.

5.2 *When L1 teaching neglects how pupils think about language*

In our current research, we have analysed the preconceptions of the language phenomenon of *verb mood*. The usual approach to the matter in Czech schools is transmissive, deductive. Verb mood is presented as another category of the verb (after person, number and tense). Pupils are given the classification—the types of verb mood in Czech—and they are asked to classify decontextualised examples using the terminology. The semantic, stylistic and pragmatic aspects of the problem, namely the function of this linguistic structure, are neglected.

Our research tool focused on finding out how pupils reflect this language means in real-life communication situations, i.e. in context. If—and if so, then how—they reason about the function of this linguistic means. The data that we have collected from individual interviews with 39 pupils of year 6⁹ indicate that pupils clearly sense the semantic and, most importantly, pragmatic aspects of verb mood. In a situation they are given—a request to the teacher—they are able to formulate their own utterances, or choose the most suitable one from several options, and, above all, they are able to give relevant explanations for their choice. From their justifications we can infer that they are aware of the semantics of the language means and its stylistic and pragmatic properties. We can deduce that native speakers are implicitly aware not only of the structures per se, but also the various interpretations that they can be associated with in communication. As such, this implicit knowledge represents a complex cognitive linguistic structure.

In our opinion, education should follow up on this implicit knowledge and should utilise it in terms of the communicational significance of the language phenomenon taught.

One of the basic preconditions of the syntactic analysis of a Czech clause is the ability to distinguish its syntagmatic structure. The aim of such analysis is developing the skill to recognise the syntagmatic relations and with this knowledge to be able to both perceive and produce syntactically appropriate, perfectly comprehensible sentences and texts, which also comprises the ability to punctuate precisely. One of the fundamental phenomena pupils need to master is the concept of a *syntagma*¹⁰. This matter is introduced in year 4. As Šmilauer (1977) points out, unless this elementary proficiency is perfectly mastered, the teacher cannot proceed to further steps in sentence analysis. Unfortunately, as our teaching experience shows, even at the university level, we encounter students who do not possess such skill. Their misconceptions in this area prevail despite the effort of the students' tutors. This indicates that teaching the conception of the syntagma might be problematic.

⁹ Pupils aged from 11 to 12.

¹⁰ In Czech sentence analysis, the term *syntagma* (*skladební dvojice*) designates a syntactic structure (i.e. a grammatical unit) which is a functional component of a larger construction (a clause). A *syntagma* represents a grammatical (structural) unit composed of two clause elements that are syntagmatically related.

Therefore, we decided to research how pupils in year 3 and 4 think about the syntagmatic structure of a sentence. We gave two classes (a total of 54 pupils) in year 3 and 4¹¹ the following sentences cut into individual words:

Naše maminka upekla tvarohový koláč a šikovný tatínek uvařil čaj. [Our mom baked a curd pie and skilful dad prepared tea.]

Naše maminka upekla ořechovou bábovku a šikovný tatínek uvařil kakao. [Our mom baked a nut sponge bread and skilful dad prepared cocoa.]

The experiment was conducted by the teacher of these classes, who, at the same time, was the researcher, the second researcher (the author of this paper) observed the process and made notes. The pupils were given the task to assemble the words so that they formed a meaningful sentence. After they did so, we gave them a worksheet and asked them to select the words that “belong together”, that “form a syntagma” (*skladební dvojice*—close translation *syntactic pair*; the Czech word for *pair* (*dvojice*) is a word that the pupils of this age commonly use and therefore understand). Last, we asked them to explain how they got to some of the syntagmas they had written down.

From the answers, it is again evident that pupils primarily think about the semantics, the meaning of the sentence, that they associate common things from their lives. Their thinking about language is primarily non-linguistic. As native speakers, they are able to form meaningful sentences. However, when asked to pick out the individual syntagmas (“the words that belong together”), many of them put the words *maminka* (*mom*) and *tatínek* (*dad*) together “because mom and dad belong together”. Similarly, *bábovka* (*sponge bread*) and *kakao* (*cocoa*), and *koláč* (*pie*) and *čaj* (*tea*) fall together because “we eat them for breakfast” or “we eat them together”. Likewise, the words *maminka upekla* (*mom baked*) are associated together because “that is what mothers do”—accordingly, *tatínek uvařil* (*dad prepared*) were associated much less. This means that pupils do not reflect the syntagmatic structure of a sentence spontaneously, and need to be taught the conception of syntactic relations step by step. In general, it is apparent that the matter represents a key didactic issue that needs to be closely observed.

Additionally, there are two research outcomes that we still need to elaborate on: (a) how it is possible that a small number of pupils, native speakers, mechanically followed the grammatical concord between the forms of the Czech adjective and noun and put words like *tvarohový* (*curd*) and *tatínek* (*dad*) or *šikovný* (*skilful*) and *čaj* (*tea*) together—which means they completely disregarded the meaning; and (b) how it is possible that the pupils with special educational needs (specifically those on the autism spectrum) did not deal with the task in compliance with their associations of everyday experience—as most of the other pupils without special needs did—but acted upon the linguistic content, i.e. matched those words that linguistics (and the current teaching approach) would match (*maminka upekla, tvarohový*

¹¹ Pupils aged from 8 to 9.

koláč, tatínek uvařil, naše maminka—mom baked, curd pie, dad prepared, our mom, etc.). It appears that, for autistic pupils, the structural way of linguistic reflection might be more natural.

5.3 When L1 teaching neglects current pupils' language development

One of the most widely used textbooks for year 7¹² includes a detailed classification of *adjuncts*, including the adjunct of instrument, origin, purpose, reason, condition, concession, and even viewpoint and measure adjuncts. From the character of the exercises (most commonly Identify / Label adjuncts in the following sentences.) and definitions (e.g. “Přísllovečné určení zřetele vyjadřuje, vzhledem k čemu platí obsah věty. [The viewpoint adjunct expresses the viewpoint which the content of the clause relates to.]” —Hošnová et al., 2008, p. 111), it is easy to guess that teaching such matter will be pure training in linguistics without any communication purpose. Moreover, no special research needs to be carried out in order to confirm that such matter is highly above the level of cognitive development of pupils in year 7, and that classifying adjuncts from a linguistic perspective does not help them to communicate better. This is not to say that the pupils would not be prepared to understand the notion of an adjunct; indeed, it is useful for enhancing the pupils' reading comprehension as well as effective structuring and putting together sentences. Therefore, we are not talking about not teaching the matter—what we are criticising here is the current approach to how the matter is taught, i.e. purely from a linguistic point of view, and when it is taught. As we have already said, pupils do not think primarily linguistically and certain phenomena that they use in actual communication do not need to be theorised. We consider detailed classification of the individual types of adjuncts to be one such area.

Moreover, the metalanguage offered—based on the scientific discipline of linguistics—is very distant from pupils' active vocabulary in year 7—words like *přípustka* (*concession*) or *zřetel* (*viewpoint*) will most likely serve only as isolated terms.

If the authors of the textbook had thought about the psychodidactic aspects of teaching the matter, they would have never included it so early and in such a form—atomised and disconnected from the pupils' communication needs and functional approach to language. As we have gathered from plenty of informal interviews with teachers, this is one of the matters that even they do not know the purpose of.

The detailed classification of adjuncts is not the only example where the terminology offered to the pupils might, in certain cases, complicate learning by being too distant from their cognitive and language development. Similarly, Hájková (2013) gives the example of the Czech verb *tázat se* (*to enquire*), related to the term *tázací věta* (*interrogative sentence*), which is on the periphery of pupils' active vocabulary. As a result, pupils often create pseudo-terms, which sound more familiar to them (in

¹² Pupils aged from 12 to 13.

this specific case e.g. *věta ptací* [from the verb *ptát se* – to ask], which is much more frequent).

It is self-evident that terminology and linguistic knowledge which is only formal and which neglects the pupils' current level of cognitive and language development cannot serve any functional purpose.

5.4 When L1 teaching suppresses pupils' preconceptions

Our other research findings also indicate that pupils do not think primarily linguistically (Štěpáník, 2014; Štěpáník & Slavík, 2017). First and foremost, they apprehend the meaning and connect it to their everyday experience.

We asked students of the 1st year of upper-secondary school¹³, who should already be equipped with metalinguistic knowledge from previous levels of education, to comment on two sentences in which we highlighted examples of *modification*:

incongruent modification: *Skandál s opravenými testy z matematiky vyvolal v Cermatu smršť.* [The scandal with corrected Maths tests caused disarray in Cermat¹⁴.]

congruent modification: *Na podporu svého tvrzení uvedu jeden včerejší příklad.* [In support of my statement I will give one example from yesterday.]

We individually interviewed eight students and followed their contemplations about the language material. The research showed that all respondents explained the meaning of the sentences or the highlighted clause elements through associations from everyday life. When they were asked about the function of the highlighted elements, they were able to grasp the substance and verbalise it in their own words. All of them had a preconception of the clause element of modification based on their previous use of language. Only two respondents (out of eight), however, labelled it with the term modification—despite the instruction all of them had already received at lower-secondary school.

When we introduced terminology, there was an obvious decrease in motivation to continue with the tasks because, in the previous levels of education, the students had developed a negative association with the matter. Additionally, their thinking changed. Instead of using the preconceptual knowledge they had (and had demonstrated), they switched to the formal method for classifying modification which they had learnt before. However, this appeared to complicate their effort to deal with the task successfully. Previous traditional (decontextualised) grammar teaching proved to be ineffective. Not only was the pupils' ability to identify the examples of modification (which they had been learning for at least three years) rather insufficient, but they approached the task formally, mechanically, without real understanding, showing very little motivation; the low-achieving pupils gave up the task completely.

¹³ Pupils aged from 15 to 16.

¹⁴ Cermat is a government organisation preparing standardised examinations in the Czech Republic.

What does this mean for L1 instruction? It is always necessary to substantiate implementing metalinguistic description and terminology. It is more valuable if the pupil can explain the function of a language phenomenon in their own words (showing us how they understand it) than to give a linguistic definition or a “label”¹⁵.

5.5 *When L1 becomes a collection of rules of thumb and learning by heart*

Other syntactic matter in year 8¹⁶ is *relations between coordinate clauses in a compound sentence*. The traditional approach to it is purely deductive. Following textbooks, teachers give the pupils a table with a list of the types of relations and connectors for each of them. What happens is that pupils learn the list by heart and classify the relations mechanically according to the connectors on the list. Under the impression that, if pupils master the list, they will be successful in subsequent formal exercises (e.g. Label the relations between the clauses in the following compound sentences. or Identify compound sentences with copulative / adversative... relation between the clauses.), teachers (no doubt, with good intentions) even encourage the pupils to do so (comp. Šalamounová, 2013).

The objectives of this matter, however, obviously lie somewhere else. Pupils should realise the content of the sentences and be aware of their mutual relation. They should also be able to choose from the inventory of connectors the one that is most suitable for expressing the relation when producing sentences. Through that, they should also enrich their repertoire of connectors and learn correct punctuation. All these objectives are closely connected to semantics, to functional literacy, through being bound to both productive and receptive communication skills. Nevertheless, in the traditional model, none of this happens. Again, pupils are forced to condense their spontaneously used language primarily into six categories for the sake of linguistic analysis.

For the experimental intervention that we carried out, first, we researched pupil preconceptions in this area through an interview about specially designed materials with one respondent, a student of the 2nd year of upper-secondary school¹⁷. We found out that the pupil was able to describe the relation between coordinate clauses in a compound sentence with her own words. In the cases where she had a

¹⁵ For instance, we were fascinated by how many ways even low-achieving pupils found to describe the function of modification: the pupils said that modification complements, specifies the meaning, adds meaning, clarifies, specifies more closely, elaborates on another word, details, identifies, gives more information, is a bonus to another word, practically wouldn't have to be there, etc. (Štěpáník & Slavík, 2017, p. 70). All these explanations perfectly capture the function of modification; however, at school, modification is usually explained linguistically as a means that “develops the noun and qualifies its meaning more precisely” (comp. e.g. Melichar & Styblík, 2005, p. 179). Obviously, this definition is far from the pupils' way of thinking.

¹⁶ Pupils aged from 13 to 14.

¹⁷ Aged 17.

well elaborated preconception, she was even able to verbalise the substance of the phenomenon and give reasons for her solutions (Štěpáník, 2014).

Taking these findings into account, we designed a teaching strategy based on constructivist principles and tested it in two classes of the 3rd year of upper-secondary school¹⁸ (Štěpáník & Chvál, 2016). One class served as the experimental group in which we applied a teaching strategy based on the constructivist approach to the subject matter, the other class served as the control group in which we applied the traditional approach. We wanted to find out how the approach to manipulating the matter influences pupils' writing; i.e. if—and if so, how—various teaching procedures for making implicit linguistic knowledge explicit may influence pupils' writing.

The results of the quasi-experiment showed that, in the constructivist class, the transfer of explicit metalinguistic knowledge into pupils' practical mastery of the content, demonstrated in text production, was higher. Pupils made fewer mistakes in expressing the relations, their expression of the relations between clauses in compound sentences was more precise and they used a wider range of connectors. In contrast, the pupils in the control class, where we approached the matter traditionally, i.e. in the transmissive manner outlined above, did not show any significant progress between the pre-test and post-test. They made similar mistakes, their stylisations were less clear than in the experimental class and the range of connectors did not show any signs of change. This indicates that, in a constructivist educational environment which elaborates on pupil preconceptions, the transfer of explicit knowledge about language might be more straight-forward in relation to use in communication.

6. DISCUSSION AND CONCLUSION

The instances which we used to illustrate the problems in L1 teaching of Czech show a phenomenon that can be observed not only in Czech schools: prescription is still more important than function-oriented description (comp. e.g. Pieniżek & Štěpáník, 2016, or Štěpáník et al., in press, for wider Central-European context).

We are convinced that teaching prescription is, to a certain extent, necessary, especially with an inflective language like Czech. The main issue, however, is that the L1 teaching model resembles "small linguistics". Thus, already at primary school, teaching the mother tongue, as we have demonstrated, often becomes a decontextualised linguistic exercise. In principle it remains unclear what purpose this kind of training serves. It has been impugned by both pupils (e.g. Rysová, 2005/06) and teachers (comp. Štěpáník & Šmejkalová, 2017); there is extensive evidence that it is ineffective in numerous aspects (e.g. Čechová, 2013; Kostečka, 2012a, b; Pavelková, Škaloudová, & Hrabal, 2010; Palečková, Tomášek, & Basl, 2010; Palečková et al., 2013). As such, at present, the aim of including grammar in teaching Czech remains rather unclear because the theoretically declared objectives remain unfulfilled.

¹⁸ Pupils aged from 17 to 18.

We are convinced that poor results in Czech L1 education are mostly caused by the inappropriate approach taken towards the matter. Pupils' preconceptions, one of the most important determinants of learning, are ignored. Teaching is trying to overwrite the way pupils reason about language, which means "it is building a sandcastle" (Hájková, 2013, p. 10). The knowledge that is not anchored in the pupils' understanding stays in the pupils' minds as knowledge solely for school—but at the same time, there is still knowledge for everyday communication practice. As a result, this gives rise to *parallel conceptions* of the same phenomenon, which is collateral damage of traditional instruction based on transmission.

Even though there are teachers who do value the cognitive-communicative and functional perspective to L1 teaching, in practice, their perspective is not recognised either, and so they often return to the traditional models they were subject to in primary and secondary school (which is—again—an international phenomenon—comp. Goodman, 1986; Šimoník, 1994; Williams & Burden, 2002). Also, the teacher training programmes at Czech universities are mainly focused on theoretical linguistics and the didactisation of the courses studying the individual linguistic disciplines is low (comp. e.g. Štěpáník & Holanová, 2017/18, or Vlčková-Mejvaldová & Sojka, 2016). The teachers' pedagogical content knowledge and their beliefs about the subject matter therefore rely mainly on a theoretical background. This, of course, is insufficient.

From an international perspective, we see common problems in teaching grammar in many other countries: the issue of terminology, inadequate cognitive difficulty, formalism, mechanical dealing with tasks, improperly used methods, decontextualisation, lack of semantic-pragmatic aspect, etc. As we have tried to show, if more attention was paid to the pupils' preconceptions, spontaneous language development and implicit reasoning about language, it would surely contribute to finding solutions to the difficulties listed.

As the solution to the problems, we see restructuring the L1 learning environment according to the model of educational reconstruction as described above. The school subject should not be understood as a simplified version of the scientific field. The content needs to be "*elementarised*"¹⁹ to make it accessible for students but also enriched by putting it into contexts that make sense for the learners" (Duit et al., 2012, p. 21). What comes into play here is the teachers' pedagogical content knowledge, i.e., in this context, the ability to add meaningful educational contexts. Through putting the content into meaningful contexts, the teacher gives pupils the opportunity to reconstruct their preconceptions—Kattmann (2007) calls it *conceptual reconstruction*. Knowledge is the result of "re-shaping", "re-organising" and "re-ordering" its structure (Schneuwly & Vollmer, 2018, p. 4). And this is exactly what we

¹⁹ This involves (1) identifying the individual elements (entities) of a complex content domain, (2) reducing the complexity of a particular content (not merely „simplifying”, but making the phenomenon accessible to the pupils in its complexity), and (3) planning the pupils' learning processes (Duit et al., 2012, p. 18).

mean by the terms *cognitively-communicative* and *function-oriented* model of L1 teaching.

Nevertheless, the gap between educational research and practice is a well-known phenomenon. In this respect, what has been shown to be most important for the research findings to be applied in schools is working with teachers. A great deal of research (and ours is no exception) has proved that teacher beliefs and convictions about the subject are more important than official declarations and theoretical approaches—which appears to be the case not only in the Czech Republic (comp. Pokrivčáková & Pokrivčák, 2016; Sólyom, Heltai & Pintér, 2016; Szymańska, 2014; Van Rijt & Coppen, 2017; Watson, 2015, etc.). The teacher is the main factor of any change. Therefore, it is necessary not only to make teachers aware of the impact preconceptions can have on their teaching, but it would also be practical to equip them with procedures they could use in order to find out the pupils' preconceptions in class.

The aim of this paper was to show how important it is to reflect the learners' cognitive development and reasoning about the language phenomena taught. Grammar theory, algorithms or linguistic descriptions must not overwhelm the pupils' language intuition. If school continuously denies the pupils' implicit language awareness, it damages their self-assurance in communication as native speakers. Thus, research into pupils' language preconceptions and teachers' beliefs about L1 teaching could be valuable not only for content selection, but also the way of its educational realisation in the class.

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