ZÁVĚREČNÁ ZPRÁVA PROJEKTU

specifického výzkumu - zakázka č. **2104**

(pracoviště 01240, činnost 1210)

Analýza verbálního chování učitelů-lexikální negace a možnosti pozitivní reformulace

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Celková částka přidělené dotace: 24 000,- Kč

Stručný popis výzkumného problému

Obecný cíl: Analýza verbálního chování učitele z hlediska míry negativity, popis stavu.
Konkrétní cíle:

- lokalizovat negativní výroky učitele – obsahová deskritpivní analýza,
- identifikovat možnosti pozitivní reformulace – narativní analýza,
- vyjádřit obecnou míru negativity učitele (poměr negativní : všechny výroky) – matematicko-statistická analýza,
- vyjádřit volitelnou míru negativity učitele (poměr volitelně : nutně negativní výroky) – matematicko-statistická analýza.

Další cíle:

- využít zjištění ve výuce studentů učitelství na PdF UHK,
- podpořit kontakt studentů učitelství s praxí,
- seznámit učitele praxe s výsledky,
- získat explicitní východiska pro následný experiment.

Splnění kontrolovatelných výsledků řešení

Výsledky výzkumu byly prezentovány na 1. konferenci pozitivní psychologie v České republice (23.-24. května 2012, Brno, ČR) a na konferenci na The 3rd International Conference on Education and Educational Psychology (10. – 13. října 2012, Istanbul, Turecko) a publikovány v Procedia-Social and Behavioral Journal (ISSN 1877-0428, v tisku). Výstup a je zadaný v OBD jako rozpracovaný s vazbou na RIV. Kromě teoretických výstupů byly formulovány praktické návody jak eliminovat míru verbální negativity učitele, resp. rodiče a byl realizován praktický workshop Jak komunikovat pozitivně v rámci konference Komunikace (9.11.2012, UHK). V lednu a únoru jsou plánovány semináře pro mateřská centra Sedmikráska a Domeček.

Výstupy

HAVIGEROVÁ, J.M., KARÁSKOVÁ H. Lexical negation in Czech initial education – negative imperatives from the teacher's mouth. *Procedia – Social and Behavioral Sciences*, 2012, č. ???/2012, s. ???. ISSN 1214-9187.

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Seznam příloh
Příloha č. 1 - Příspěvek v Procedia – social and behavioral studies

Vyúčtování

Příloha č. 2 – Výsledovka po účtech s pohyby - výpis z Magionu (pracoviště 01240, zakázka

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Lexical negation in Czech initial education – negative imperatives from the teacher's mouth

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Abstract

The cognitive psychology research state the direct relationship between thinking and other cognitive processes. Change to positive thinking influences change toward experiencing positive emotions, positive interpretation of events, evocation of positive memories. External manifestation of thinking is speech. We start from the position of positive psychology and ask the following question: Do we speak positively? It is really difficult to reliably answer, therefore a procedure by Carl Raimund Popper was chosen, based on the evidence in the form of falsification, and we formulated hypothesis: we speak negatively unnecessarily. This paper focuses on the exposure of lexical negative verbs in the teachers' speech. A frequency analysis of the Czech National Corpus SCHOLA2010 was done. Corpus contains transcript of spoken language from 204 lessons of Czech initial education (representative selection). There were 9377 lexical negative verbs identified, 409 of them in the form of imperative. Top ten imperatives are: do not worry (49 occurrences), do not forget (44), do not say (26), do not write (24), do not talk (13), do not do (12), do not be naughty (9), do not be (8), do not pack (6), do not give (6). All founded imperatives can be (from a lexical point of view) positively reformulated, while maintaining the meaning) positively reformulated. Conclusion: Analysis of teaching process in initial education in the Czech Republic in terms of lexically negative imperative verbs, suggests that Czech teachers do use negative imperatives unnecessarily. The article discusses some of the psychological consequences of these findings.

Keywords: lexical negation; negative verbs; imperatives; teacher's verbal behaviour; corpus; positive psychology

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1. Introduction

"Do not think of green salamander" - this seemingly easy task initiates series of Rosicrucian order adepts spiritual exercises (Amorc, 1992). Why is task seemingly easy? What makes it difficult? The answer lies in the principle of functioning of the human cognitive system and the uniqueness of human language (Christensen, 2009).

For a deeper understanding, let's have a look at the following statements:

- Mother to child: Don´t run under the car!
- A friend to a friend, "I don't get why you don't like it."
- A colleague at work to a colleague: "You better not ask what happened to me today ... You wouldn´t believe it!"
- A teacher to child: "Don't think I haven´t seen it!"
- Dentist to a client: "Do not worry, it will not hurt .."
- A sister to a brother: Haven´t you seen my card?
- Pupil to a friend: Don´t you know what is for lunch today?
- Professor to students: " I do not feel well today. I do not know if we´ll finish earlier. "

What have the statements in common? First, all were created in a dialogue. Secondly, all were said by women. Thirdly and that´s essential, all contain the phenomenon of negation.

What is it? Sentences in Czech have a positive or negative form. A positive sentence expresses either claim, order or request. By a negative sentence a speaker denies the validity of sentence content, or prohibits its implementation to someone, or does not wish the realization of the content.

Negation in Czech language is formed by typically negative morpheme in the shape of a prefix, particle *ne-*. *Lexical negation* means the use of negative morpheme *(prefix, particle ne-)* to create a negative form of words such as nouns *(nepritel (enemy), nedochvilnost (tardiness),* adjectives *(nelaskavy (unkind), nestaly (volatile)* and adverbs *(nedobre (bad), nezajimave (uninteresting) (Mikulova et al., 2005)*. A negative sentence is formed by negative morpheme ne-, which retained its characteristic position in the front of verbs (nebude (will not), *neverim (I do not believe)*. This study deals with negative verbs (neboj *(do not worry), nevis (you do not know)*.

The cognitive psychology research state the direct relationship between thinking and other cognitive processes. External manifestation of thinking is speech, it is realized through language utterances (f.e. Plháková, 2004). The negative formulation may be a manifestation of negative thinking setting. Language instruments allow that the same ideas can be formulated more than one way. Change to positive thinking influences change toward experiencing positive emotions, positive interpretation of events, evocation of positive memories. This paper focuses on the exposure of lexical negative verbs in the teachers' speech.

On the basis of the positive psychology (f.e Slezackova, 2012) among others we can postulate the following assumptions:

1. negative statements of a teacher are an indicator of:
- negatively oriented experience of a teacher,
- negatively focused attention of a teacher,
- negatively oriented thinking,
1. negative statements influence
- focus of students' attention toward negative phenomena,
- students' feelings toward negative emotions
- thinking of students toward negative interpretations
- students' remembering (less of remembering, storing memories linked to negative emotions),
- class climate.

Negative statements are for the purpose of this research operationalized as sentences containing words with the prefix "ne-".

2. Method

1.1. *Purpose of study*

We think the same way as we talk - this fact is the starting point for this study. We start from the position of positive psychology, or positive education and we ask the following question: Do we speak positively? It is really difficult to reliably answer, a procedure was therefore chosen by Carl Raimund Popper based on evidence in the form of falsification, and hypothesis was formulated: we speak unnecessarily negatively. There are a lot of ways to embed the negativity in language (Miestamo, 2005), for this study we operationalized negativity as the use of verbs with the negative prefix "ne-" (the English equivalent is for example "un-" or "dis-").

Research questions are: How many lexical negative imperative verbs are used by teachers? Which negative verb imperatives occur most frequently? What percentage of returned imperatives can be positively reformulated?

1.2.   Participants and material

The Corpus is a set of computer-stored texts (in the case of spoken language, transcripts of recorded speech), which serve primarily for linguistic research. Corpus Schola2010 contains close transcripts of spoken language lessons from 204 lessons (i.e., 9180 minutes of education) acquired in 115 different classes from first grade to last grade of secondary school all types of school (state, church, private; urban, housing, rural) over the Czech Republic. The material for the Corpus Schola 2010 was obtained from 47 teachers and 2347 students, the ratio of male: female being approximately 1:1. Teachers' age ranges from 23 to 53 years; half of the teachers are younger than 30 years (median = 30), so the file contains younger teachers. Corpus Schola 2010 contains 792,764 words.

1.3.   Procedure

Verification was performed using the method of frequency analysis of the corpus Schola2010. Statements of teachers were analyzed. A verb in a negative form (in Czech with the prefix ne-) was determined as the criterion of negativity. Because the corpus is not lemmatized, identifications of verbs took place in two stages: first all words beginning with the letters "ne" were obtained by machine and their spokesman was identified. In the second phase, all verbs in the file were identified by hand-coding. The coding was carried out 3 times. Finally, person, number and time were identified for all obtained verbs. For this study, data regarding teachers' imperative were processed.

1.   Results

There were 9361 lexical negative verbs identified from the teachers' mouth, 409 of them in the form of imperative. Top ten imperatives are "not to": Do not worry (49 occurrences), do not forget (44), do not say (26), do not write (24), do not talk (13), do not do (12), do not shout (9), do not be naughty (9), do not be (8), do not (6) and do not give (6).

Table . Negative imperatives from the teachers' mouth top ten – descriptive statistics

Negative imperatives TOP TEN	Frequency	Percent	Cumulative percent
1 do not worry	49	12.0	12.0
2 do not forget	44	10.8	22.7
3 do not say	26	6.4	29.1
4 do not write	24	5.9	35.0
5 do not talk	13	3.2	38.1
6 do not do	12	2.9	41.1
7 do not shout	9	2.2	43.3
8 do not be naughty	9	2.2	45.5
9 do not be	8	2.0	47.4
10a do not pack	6	1.5	48.9
10b do not give	6	1.5	50.4

1.4.   Examples and positive reformulation options

We have tried to reformulate all the statements so it will no longer need to use a verb in negative form. For each verb in the database it was indicated whether it can be reformulated or not. We show some random examples to illustrate:

•   "Do not worry, it's not an exam, no big deal" (teacher 37 years, chemistry in the 8th grade) => calm down, for the moment we are only practicing…

- "Do not worry, the weekend will be soon over and then you go back to school" (teacher 45 years, chemistry lesson, the topic of density of liquids, prima grade on the eight-year grammar school) => be sure that the weekend will soon be over …
- "Do not be afraid to talk when you have prepared so well and speak aloud" (teacher 27 years, biology lesson, the topic of protozoa, grade 6) => Take courage and …
- "Prepare your notebook on time, so you do not have to look for it during mathematics, or natural history" (teacher 27 years, the theme of protozoa, grade 6) => Prepare your notebook on time, so you have it ready in mathematics and particularly in natural history…
- "Do not forget on Thursday, we will write a test" (Teacher 29 years, the Czech language lesson, prima grade in the six-year of grammar school) => keep in mind that …
- "Do not forget the punctuation" (teacher 27 years, listed words, 3rd grade) => focus on punctuation..
- "Do not tell me that you, such a practical man, cannot tell me what rolling bearings are consisted of" (woman, 51 years, the topic of chain drives, 1st grade of grammar school) => I believe that a guy like you …
- "Do not say you do not know, when you do know. That's what I wanted to hear." (teacher 42 years, the theme of Central Europe, quart grade in the six-year of grammar school) => you say that you do not know, yet you do know….
- "Do not mimic, you are just embarrassing yourself" (man 32 years, the theme of culture, 7th grade) => you are making a fool of yourself…
- "Sir, who nominates people for the Nobel Prize?" (a student) "Do not hope for it...." (a teacher 21 years, the theme of Otokar Brezina, fifth grade in the eight-year of grammar school) => be realistic …

Conclusion: All founded imperatives can be (from the lexical point of view, while maintaining the original meaning) positively reformulated.

1. Discussion

409 lexical negative verbs in the imperative were found in the corpus.

There can be distinguished between two types of negation: a short form construction involves the occurrence of a negative modal auxiliary (in English f.e. "not", "don't") and long form where the verb being negated occurs with the suffix (in English f.e. "un-", "dis-") (Garry, Rubino, 2001: 396). Among the ten most common verbs in the presented research, a short version of negation occurred once ("don't be"). This form of negation in this research was not examined separately but it will be subjected to further study in the following activities in order to determine the combinations of verbs where the negative modal form of the imperative "do not be" can be found.

From the psycho-linguistic perspective, other two types of negation can be described: symmetric and asymmetric. Symmetric negation is said to be motivated by intra-linguistic analogy, as type of negation copies the pattern of the affirmative and merely adds a negator to it. Asymmetric negation is related to extra-linguistic analogy, said to be iconically motivated and four types can be described: static negation (would be motivated by the static character of negation that affirmativeness can code changes in the state that negatives typically convey that no change happens), irrealis negation (categories involves irrealis markers – negation prototypically codes non-realized categories), emphatic one (is related to the need for reinforcement in negation) and several co- and contextual aspects (DeCuypere et al., 2007). Because this study included only imperatives, it is understandable that it is primarily situations where a teacher anticipates behaviour and wants to achieve it by a negative imperative that this was not implemented (irrealis negativity).

It is often said within the popularization of science that the human brain can not think negatively. We have not found an evidence for this claim, but serious researches show that negative sentences required longer processing times (but not level of performance) and were associated with higher error rates (MacDonald, Just, 1989). It suggests that negative sentences are syntactically more demanding than affirmative sentences, or there is reduced access to conceptual representations of the negated items because of reduced activations of the brain circuits involved in conceptual representations are to be expected. Christensen (2009) found negative and affirmative sentences increase activation in different areas in the brain: results showed increased activation in the left premotor cortex from negation, compatible with rule-governed memory processing, and increased activation in the right supramarginal gyrus from affirmation, compatible with semantic processing. It can be concluded therefore that the human brain, perhaps the only brain in living nature, can think negatively, but it does so in a different way, energy and time consuming way and with higher errors.

In line with the broad concept of a media as extensions of human senses (McLuhan, Lapham, 1994) speech may be considered as a media device. By the analogous method, the theory originally from the area of mediology "agenda-setting theory" from the authors Maxwell, McCombs and Donald L. Shaw (McCombs and Shaw, 1972, Czech McCombs, 2009) can be applied for the use of negative imperative. According to this theory, the media (in this case speech) sets an agenda to audience – it constructs the reality by offering topics and by that

it says what the recipients should think of and what they should notice (Petrikova, Stepanek, 1998). A negatively worded statement, then paradoxically works by setting agenda, and thus focuses attention on the phenomenon that is negated at the same time. For example a situation at a dentist: a doctor bends down with a drill and says *Do not worry, it will not hurt.* What is happening to the recipient? First, the "pain" naturally activates and subsequently its negation "not". In the subconscious, however, there are doubts going on - "but it could hurt," why else would the dentist talk about it?

Content analysis can specify what agenda are activated by teachers using negation in the minds of their pupils. From the top ten, the following count: do not worry = fear, do not forget = forgetting, forgetfulness, negligence, do not say = speaking, speech (also bragging, lying), do not write = writing, do not talk = speaking again, talking, speech, talking, (with a classmate), do not do = doing, activity, do not shout = shouting, do not be naughty = misbehaving, do not pack = packing things, tidying up (a pupil thinks of a break or home) and do not give = giving, committing. From this list it is clear that they are largely a phenomenon with either negative denotation, i.e. primarily negative phenomena (fear, forgetting, shouting, misbehaving) or phenomena with negative connotation (commit – it is usually used in the sense of coming something evil or committing something wrong, talk - here in the meaning to talk when I'm not asked, which in Czech school means to break rules, it is unwanted behaviour).

Of the ten most common, about half of the negative imperatives concern guiding the behaviour of pupils so they behave in accordance with generally accepted standards, the expectations or requirements of the speaker - teacher (e.g. do not shout). The negative directing is confusing for the psyche, because a negative formulation leads to a finding of "I know what I should not do", but also implicitly there applies "while I still do not know what to do".

Positive reformulation of teacher's instructions, then brings many expectable benefits. First of all, it offers more guiding content to students (e.g. Do not pack your things, the bell has not gone off yet .> *Wait until it rings, then you can pack your things.*). Furthermore, the positive formulations (e.g. Corominas, 2003):

- lead to diversion of attention from the negative effects,
- diversion from experiencing negative emotions,
- change the content and better equipped memory contents,
- inclination to neutral and positive interpretations of phenomena and events
- strengthening the positive aspects of personality,
- reinforce positive social relationships,
- improving the climate and atmosphere.

Reformulation ability of a teacher's negatively worded statements into positive may imply a number of positive changes in the educational process, from both psychologically and pedagogical point of view with its entire proven positive impact on all participants in education – students and teachers too.

1. **Conclusion**

Analysis of the teaching process in initial education in the Czech Republic in terms of lexically negative imperative verbs suggests that Czech teachers do use negative imperatives unnecessarily.

Acknowledgements

References

AMORC (Antiquus Mysticusque Ordo Rosae Crucis). *Duchovní cvičení*: *interní materiály bratrstva* (spiritual excercises: internal material of the brotherhood). Praha, 1992. Unpublished material.

Český národní korpus - SCHOLA2010 [online]. Praha: Ústav Českého národního korpusu FF UK, 2010 [cit. 2012-05-01]. Available from: http://www.korpus.cz.

Christensen K.R. (2009). Negative and affirmative sentences increase activation in different areas in the brain. *Journal of Neurolinguistics*. Vol. 22, Iss. 1, pp. 1–17.

Corominas F. (2003). *Positive education*. Madrid: Ediciones Palabra.

DeCuypere L., Johan van der Auwera & Klaas Willems. (2007). Double negation and iconicity. In: Tabakowska E., Ljungberg Ch., Fischer O. (Eds) *Insistent Images,* pp. 301-322. Amsterdam: John Benjamins Publishing Company

Garry J., Rubino C.R.G. (eds.) (2001). *Facts about the world's languages : an encyclopedia of the world's major languages, past and present*. New York: H. W. Wilson.

Kosta P. (2001). Negace a větná struktura v češtině. In: *Čeština: univeryália a specifika.* Vol. 3, pp. 117-138.

MacDonald, M.C., Just, M.A. (1989). Changes in activation levels with negation. ournal of. Experimental Psychology: Learning, Memory, and Cognition, Vol. 15, pp. 633–642.

McCombs M. (2009). *Agenda setting: nastolování agendy, masová media a veřejné mínění.* Praha: Portál.

McCombs, M.E., & Shaw, D.L. (1972). The Agenda-Setting Function of Mass Media. *Public Opinion Quarterly*, 36, pp. 176-187.

McLuhan M., Lapham L.H. (1994). *Understanding Media: The Extebsions of Man.* Massachusetts : The MIT Press.

Miestamo M. (2005). *Standard negation. The negation of declarative verbal main clauses in a topological perspective.* Berlin: Mouton de Grulyer.

Mikulová M. et al. (2005). *Anotace na tektogramatické rovině Pražského závislostního korpusu. Anotátorská příručka*. TR-2005-28, Praha: ÚFAL MFF UK.

Petříková J., Štěpánek, D. (1998). *Média - prostředky transferu informací.* Brno: FF MU Brno.

Plháková A. (2000). *Učebnice obecné psychologie*. Praha: Portál.

Slezáčková A. (2012). *Průvodce pozitivní psychologií*. Praha: Grada.

Příloha č. 2 – Výsledovka

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