

SHORT COMMUNICATION

RESEARCH AND LINGUODIDACTIC ANALYSIS OF TECHNICAL TEXT

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The gradual international integration of particular disciplines, speedy information exchange, growing contacts and specialists' cooperation in the spheres of science, technics and economy result in the pressing need for elaborating and partially unifying technical economic terminology. A certain degree of language harmonization of economic terminology in the agrarian sector, influencing notably the market situation, can be achieved by research analysis in the form of particular technical texts being excerpted and reviewed, and the resulting conclusions being made. Linguodidactic analysis of the technical text is carried out at several levels, even though it has to be understood as a complex, and single aspects cannot be investigated as independent units. Relations between the sender and the receiver are being investigated on a communicative pragmatic level; this means, who is the sender and who the addressee, and what is the level of their technical ability. The morphologic sphere. The typologic nature of each particular language is to be considered. In the agrarian economic French language, a considerable reduction of some grammatical aspects is warranted so that the training need not be focused on complete paradigms, and more attention and time can be paid to training in those grammatical aspects relative to technical expression. That means a selection of grammatical tools by function. From the viewpoint of the lexical-semantic level vocabulary stratas are characterized. The frequency of individual terms is investigated, the most important syntactic processes and means are stated. From the syntax viewpoint we concentrate on those syntactic structures that are preferred in technical texts and on the reason why. The technical text analysis results in the integration of all important marks of language levels and it leads to a thorough understanding of communication phenomena, processes and relations in the given sector.

linguodidactic analysis; harmonization of economic terminology; morphologic sphere; lexical-semantic level; syntax viewpoint

INTRODUCTION

The research analysis of technical foreign language text is to be aimed toward the terminology in the given field, i.e. in our case agrarian economy, and characteristic issues are to be investigated, not only the lexical plan, but also in the syntactic one. Our research aim is to elaborate on foreign language technical dictionaries dealing with the problematic of the research intention with the title: **Effective integration of the Czech agrarian sector in the frame of European structures – a presupposition of sustainable development.** The main task of the research intention of the Department of Agricultural Economics is a complex analysis of the economic-legal determinants of the effective integration of the Czech agrarian sector with European structures, and the treatment of system regulations of its economic and environmental effects, the latter being the decisive supposition of its sustainable development in a free economy. The gradual international integration of particular disciplines, speedy information exchange, growing contacts and specialists' cooperation in the spheres of science, technics and economy result in the pressing need for elaborating and partially unifying technical economic terminology. Our concern is also to achieve the same perception and understanding of single conceptions, not only in our country, but at present mainly in member countries of the European Union in their own languages. The problematics of economic terminology in the agrarian sector, when there are both newly adopted and currently used terms that are differently understood, are very real, not only on an international scale, but also in one single country and in one single language.

MATERIAL AND METHODS

A certain degree of language harmonization of economic terminology in the agrarian sector, influencing notably the market situation, can be achieved by research analysis in the form of particular technical texts being excerpted and reviewed, and the resulting conclusions being made. In order to prevent any possible misunderstanding in the perception of the most important economic conceptions, it will be useful to elaborate technical dictionaries in particular languages, and at the same time, respect their binding unity in the frame of the European Union.

The process of the linguodidactic analysis of the technical text is different from that of the linguistic analysis, especially concerning the professionalism of the addressee, its didactic aim and the teaching process. Texts suitable for adoption of certain capabilities are used not only with regard for the analysis, but for the text production as well. Simultaneously, strategies are used that

have been used most often in text formations of technical communications, such as definition, explanation, report, etc.

Linguodidactic analysis of the technical text is carried out at several levels, even though it has to be understood as a complex, and single aspects cannot be investigated as independent units.

Technical language and style from the viewpoint of a communicative functional language mode are subjected to the following criteria:

- Derivation of the technical language and style and their relative autonomy within the frame of non-professional language.
- Relative stability and variability of expression of both non-professional and technical languages.
- Methodologic implication and results of the existence of technical language dynamic function.
- Role of technical terminology in scientific-technical communication with regard to training technical expression ability in foreign languages.

RESULTS AND DISCUSSION

1. Relations between the sender and the receiver are being investigated on a **communicative pragmatic level**; this means, who is the sender and who the addressee, and what is the level of their technical ability. In our situation, when the sender is usually the author of the university technical textbook, a visiting professor, etc., and the addressees are students, there prevails the usual supposition making both the sender and the receiver equal concerning their professional level. The sender (in this case f. i. a visiting foreign professor, being both expert and speaker by birth at the same time) knows well that the addressees – students – have a lower level of technical and language knowledge than himself, but he explains the technical problematics, as if they were partners of equal value as to their knowledge. It is the same f. i. concerning simulated technical games (diplomatic games among students using actual themes, such as the admission to the EU, trade wars, negotiation etc.), when the sender plays the observer's role or acts as presenter a.s.o.

On the other hand, a foreign language teacher and a student meet a different situation, when the latter is a doctoral student. In this case, the technical knowledge of the foreign language teacher may be lower than that of the doctoral student who already graduated from the technical study with success. An interesting situation develops here. Should the technical knowledge of the foreign language teacher be insufficient in the given field, or on the other hand, should the language knowledge of the doctoral student not be on the required level, there is no possibility to achieve the desired positive result. Therefore, both parties must make an effort to improve their capabilities so

as to be able to meet at the same point and thus to make the training effective for both parties; i. e. the foreign language teacher (FLT) could improve his technical knowledge and the doctoral student (DS) his language ability.

The above mentioned different situations can be expressed as follows:



2. **The morphologic sphere.** The typologic nature of each particular language is to be considered. In the agrarian economic French language, a considerable reduction of some grammatical aspects is warranted so that the training need not be focused on complete paradigmats, and more attention and time can be paid to training in those grammatical aspects relative to technical expression. That means a selection of grammatical tools by function. Concerning verbs, i.e., the system of persons is considerably reduced, and consequently the system of personal pronouns is reduced similarly, too. One can observe the influence of two factors here that are typical for technical language training: communication predominates in writing and impersonality is stressed.

The use of the 1st p. sg. (*il, on*) is much preferred in order to express the perception of actions, processes, states, etc. The use of imperative forms in the 1st p. pl. (*souignons, notons*, etc.), as well as of infinitive constructions (*pour affirmer*) is very common. As to the verb forms, in the large majority of technical texts oriented to economy, there predominates the use of passive voice, in order to express the principle of general validity. Great attention is to be paid to passive voice training, because its forms express the course of various processes, and moreover, keep the impersonality requirement.

A further important criterion typical for technical texts from the linguodidactic viewpoint is the frequency of occurrence of particular kinds of word. The most important role is allocated to the substantive – noun as a carrier of significant information.

According to Hoffmann (1984) there are more nouns in technical texts compared to artistic prose by up to 44 percent. According to our findings in agrarian economic texts in French, the noun takes the first place as to its frequency. The second place is taken by the adjective and the verb is placed in the third place only. Consequently, adjectives should not be forgotten, be it in the adjective function, or as a part of nominal predicates. At the same time the noun, being the most frequented word form in technical agrarian

I. Statistic analysis of the representation of word sorts among terms in the text

1500 words	Nouns: share in %	Adjectives: share in %	Verbs: share in %
Representative scientific publication	69	23	8
University textbook	66	21	13
Popular scientific publication	65	30	5
Scientific articles	60	25	15

economic texts, should be used often when training. All that was proved by previous linguistic research in other languages as well, in the same way as by our statistical analysis (Table I).

3. From the viewpoint of the **lexical-semantic level** vocabulary stratas are characterized. The frequency of individual terms is investigated, the most important syntactic processes and means are stated. The lexical level of technical texts is characterized by a high amount of terms, the latter being the most notable mark of technical texts. In principle it applies that technical texts are inconceivable without terms, i. e. not only from the viewpoint of their frequency, but also from that of their structure. As to the syntactic processes, formations of compounds of several words in French economic texts come first, and derivation follows. Terms compounded from several words play an important role in communication, because they attempt to express the main term types. Furthermore, abbreviations should not be forgotten, the initial basis of which is a simple term or a compound or an expression of several words.

4. **From the syntax viewpoint** we concentrate on those syntactic structures that are preferred in technical texts and on the reason why. In this respect, the analysis of sentence syntax is important. For foreign language training (learning), the information on syntactic nature of technical texts is interesting, especially with regard to comparison with the mother-tongue, but with other foreign languages as well. In French agrarian economic texts, the understanding of syntactic phenomena is a concern, because they contribute to syntactic condensation of the technical text; that means f. i. subordination, pronominalization and first of all, relative and participial constructions as well as infinitive constructions (*pour, afin, de* etc.).

CONCLUSIONS

The technical text analysis results in the integration of all important marks of language levels and it leads to a thorough understanding of communication

phenomena, processes and relations in the given sector. For didactic means, especially in compiling lexical minima, it is important to classify the vocabulary of technical texts into three stratas. In the initial stage of the didactic process, as well as in both stages of the intermediate level, students should get acquainted with lexical units of the general science stratum. In the more advanced stage, we concentrate mainly on mastering technical terms and terminologic systems in order to enrich further the vocabulary strata. The irreplaceable teacher's role must be found in the didactically correct interpretation of language signs of technical texts that are relevant for technical communication, to the detriment of the phenomena subjected to language reduction.

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Výzkumná a lingvodidaktická analýza odborného textu.

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Při výzkumné analýze odborného cizojazyčného textu je třeba se zaměřit na terminologii určitého oboru, v tomto případě agrární ekonomiky, a zkoumat charakteristické jevy jak v plánu lexikálním, tak syntaktickém. Cílem našeho výzkumu je zpracovávání cizojazyčných oborových slovníků k problematice výzkumného záměru **Efektivní integrace českého agrárního sektoru v rámci evropských struktur – předpoklad trvale udržitelného rozvoje.**

Výzkumnou analýzou, a to formou excerpce příslušných odborných textů, jejich posouzením a vyvozením závěrů, lze dosáhnout určité jazykové harmonizace ekonomické terminologie agrárního sektoru, který významným způsobem ovlivňuje tržní situaci. K tomu, aby se zabránilo jakémukoli nedorozumění v chápání nejzávažnějších ekonomických pojmů, bude užitečné vypracovávat oborové slovníky v přísluš-

ných jazycích, které by respektovaly i jejich závaznou jednotnost v rámci Evropské unie.

Lingvodidaktická analýza odborného textu se odehrává v četných rovinách, i když je jí třeba chápat komplexně a jednotlivé aspekty není možné zkoumat nezávisle na sobě.

Odborný jazyk a styl z hlediska obecného komunikativně funkčního modelu jazyka je podroben těmto kritériím:

- Odvozenost odborného jazyka a stylu a jejich relativní autonomie v rámci jazyka neoborného.
- Relativní stabilita a variabilita jazyka neoborného a jazyka odborného vyjadřování.
- Metodologické implikace a důsledky existence dynamického fungování odborného jazyka.
- Role odborné terminologie ve vědecko-technické komunikaci z hlediska výuky odborného vyjadřování v cizím jazyce.

V oblasti morfologické je třeba mít na zřeteli typologický charakter jednotlivých jazyků. V agrárně ekonomické francouzštině jde o silnou redukci některých gramatických jevů, takže se při vyučování nemusí věnovat stejná pozornost celým paradigmům a více místa a času zabírá nácvik těch gramatických jevů, které jsou pro odborné vyjadřování odpovídající. Jde tedy o funkční výběr gramatických prostředků.

Z hlediska lexikálně-sémantického jsou charakterizovány vrstvy slovní zásoby, zkoumá se frekvence jednotlivých termínů a stanovují se nejdůležitější slovtvorné postupy a prostředky.

Z hlediska syntaxe se soustřeďujeme na ty syntaktické struktury, které jsou v odborných textech upřednostňovány, a proč tomu tak je.

Výsledkem analýzy odborného textu je integrace všech důležitých znaků jazykových rovin, která vede k důkladnému porozumění komunikace o jevech, procesech a vztazích daného oboru. Nezastupitelná úloha učitele spočívá v didakticky správné interpretaci jazykových znaků odborných textů. Znamená to věnovat při vyučování zvýšenou pozornost těm jazykovým jevům, které jsou pro odbornou komunikaci relevantní, na úkor jevů podléhajících jazykové redukci.

lingvodidaktická analýza; harmonizace ekonomické terminologie; oblast morfologická; hledisko lexikálně-sémantické; hledisko syntaktické

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