

Didactic discourse – an act of translation

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Résumé : Globalement, le mot traduction fait référence à une activité cognitive consistant à passer d'un énoncé à un autre énoncé considéré équivalent. Parmi les trois types de traduction figure la reformulation ou la traduction dans la même langue. Si certains chercheurs considèrent que cette communication est toujours partielle, avec un certain pourcentage de pertes, le discours didactique est une traduction, une activité de transmission de connaissances, de sens. Expliqué et interprété à l'aide de certains signes appropriés au niveau sémio-cognitif de l'étudiant-destinataire, le discours scientifique est ainsi reformulé à travers des opérations et des opérateurs spécifiques, conduisant à diverses formes discursives, spécifiques au discours didactique: analogie, exemple, définition, répétition, etc. Tenant compte de ces aspects, nous proposons une investigation linguistique et pragmatique de séquences de corpus et/ou de sous-corpus de textes-discours didactiques visant à mettre en évidence le degré de manifestation de ces caractéristiques discursives. Par conséquent, la transposition du discours scientifique en discours didactique est une nécessité pour que le message lui-même ait un sens et ait un effet sur l'élève qui le reçoit.

Mots-clés : *discours scientifique, traduction, reformulation, discours didactique.*

I. Conceptual preliminaries

Communication of any kind involves translation, reformulation of meaning with the help of certain semiotic systems. Overall, the word *translation* refers to a cognitive activity of moving from one statement to another, considered equivalent. Despite the fact that some researchers consider that this type of communication is always partial, with a certain percentage of loss, the didactic discourse can be regarded as an act of translation, transmission of knowledge, meaning being explained and interpreted with the help of certain signs appropriate to the semio-cognitive level of the recipient-student. Thus, the scientific discourse is rephrased by means of specific operations and operators, through which new discursive forms are created, such as *analogy, example, definition, repetition*, etc., specific to the didactic discourse. The linguistic investigation we propose concerns the

comparative discourse analysis of samples of (sub-) corpus of scientific text-discourse extracted from the *Basic Grammar of the Romanian Language* (*Gramatica de bază a limbii române* - GBLR), by the Institute of Linguistics in Bucharest, under the aegis of the Romanian Academy, and of samples of (sub-) corpus of didactic text-speech extracted from Romanian language textbooks for the secondary cycle. This paper aims to point out that the transposition of scientific discourse into didactic discourse is a necessity for the message itself to have meaning and effect on the student-recipient.

In order to see if the above statements can be supported it is necessary to turn our attention to the didactic discourse. According to the explanations offered by Professor Ioan Oprea, who evokes the point of view expressed by P. Charaudeau and D. Maingueneau in *Dictionnaire d'analyse de discours*, the term *didacticism* refers to the characteristic that some forms of discourse may have, “other than those intended to train, to transmit knowledge, within an institutionalized context”. Thus, the author argues, it is possible to speak of a didactic tendency when in certain types of discourse (from the media discourse or literature, to the everyday discourse) there appear certain discursive structures such as “generalization, explanatory mode, scientific information, definitions, examples, etc. to which the locutor resorts with the intention of transmitting knowledge meant to modify the status of the recipient regarding beliefs, attitudes, behavior, actions” (Nagy, 2015: 123). On the other hand, many authors, including N. Vințanu, define didactic communication as “the set of activities implied by the transmission and reception of messages whose content is aimed at learning, training and developing knowledge and skills in the process of school education” (Vințanu, 2008: 220). We regard the didactic discourse as an educational, pedagogical discourse, in other words, as an approach with double value - cognitive and affective -, because the teacher acts on the student in the amplitude of his / her personality. This didactic approach is staged with the help of discursive strategies.

Since the vision of the didactic discourse is established according to certain situational, functional and formal parameters, we will turn our attention to the importance of the concept of *context*. According to researchers, the context of an entity is everything that surrounds that element. This concept has been massively investigated by authors in the field of linguistics, such as Hymes, Charaudeau, Maingueneau, van Dijk, and stirring controversy. According to D. Roventă-Frumușani, “the notion of *context* is extremely ambiguous; it designates both the *co-text* (the verbal context) and the *referential, situational context* (the space and moment of enunciation, the social roles of the protagonists, the relations of forces), the *acting context* (of the discursive fragments as acts of language) and the *psychological context* (regarding the intentions, the beliefs, the wishes of the interlocutors)” (Roventă-Frumușani, 1995: 246).

Although most scientists initially neglected the importance of the context, considering that the analysis of linguistic units must be done independently from updating them in context, it has been found over time that discourse cannot be the subject of a purely linguistic approach. The mathematical formula proposed by Ph. Lane, “Speech = Text + context” (Lane, 2007: 35) upholds the definition of speech as a “statement with textual properties, but also with contextual data of a speech act performed in a given situation (participants, institution, place, time)” (*Idem*), even more as we speak of the didactic discourse.

In the context of the Romanian language and literature class, the instructional-educational process involves the efficient combination of the different processes and means, so that the student can acquire the competences concerned. The basic tool used by both teacher and student is the school textbook. And the Romanian language and literature

textbook contains a whole time-adapted context. This is the reason why our analysis is directed to a corpus of school textbooks that sum up a collection of linguistic data representative of the phenomenon studied. Researchers such as Cordier-Gauthier, Verdelhan-Bourgade, Melancon, Puech Choppin, have conducted extensive studies on the structure and functions of the textbook as a didactic text-discourse. “The school textbook is another type of didactic discourse, a text-discourse in which all the discursive-text types meet: the narrative, the description, the dialogue, the conversation, the predictive, the injunctive, the argumentative, and the explanatory. [...] Beyond its role as a socialization tool, the handbook is the material support of the cognitive and axiological contents. [...] Seen as a process, the textbook sets out and transmits the linguistic knowledge that contributes to the formation of competences and values, and the contents are stored on the product dimension of the textbook” (Domunco, 2014: 212-213).

As a result of the aspects mentioned above, we consider that investigating the text-discourse of the textbook requires deepening the notion of *scientific specialized discourse*. According to D. Roventă-Frumușani, the specialized discourse is addressed to the specialists in the field in question and implies the existence of an “insider”, holder of the same “background knowledge” that must be developed, re-analyzed, while in the didactic discourse there is an “outsider” receiver to whom it is assigned. It transmits a corpus of knowledge, depending on the recipient’s cognitive performance. If the specialized discourse is based on complex hypothetical-deductive structures, most often controversial, the didactic discourse aims to construct a descriptive, definitional, reliable image (cf. Roventă-Frumușani, 1995).

In other words, discourse of all kinds represents “an institutionalized practice, a *production* determined by a series of competences (ideological, encyclopedic, psycho-social) and differentially updated in the communication context” (Roventă-Frumușani, 2012: 181), as the author Peter Strawson, in his work *Etudes de logique et de linguistique* (1973), states: “We cannot hope that we will understand language if we do not understand discourse. We cannot aspire to understand the discourse if we do not consider the purpose of the communication and if we do not try to determine how the context of the statement affects what it says” (Roventă-Frumușani, 2012: 181-182). These statements underline the importance of context when talking about the didactic discourse.

Following the statements presented above, we cannot but refer to the concept of *translation*. As we stated at the beginning of the study, the general meaning of this word is “cognitive activity of passing from one statement to another, considered equivalent” (Nagy, 2015: 380). And the term *enunciation* can be extended to *discourse*. “In a 1966 study, Roman Jakobson distinguished three types of translations: 1) translation within the same language or reformulation, 2) translation itself or transposition from one language into another, and 3) inter-semiotic translation or transmutation” (Idem). Although in the ordinary use the term *translation* refers mainly to the transposition from one language to another, in the case of the transfer to which we refer in this paper, it is the first type of translation, within the same language, regarded as a way to interpret the signs with the help of other signs of the same language. Due to the fact that for some categories of speakers, such as the student-recipient, the specialized scientific discourse can be considered to be written in a “foreign language”, we could say that the authors of the textbooks resort to its translation, the reformulation into a didactic discourse that uses an accessible semiotic system, placed in a context appropriate to the cognitive level, the background that is supposed to be held by the “outsider”, the recipient-student, in order to achieve the main objective of the text-discourse textbook - the transmission of knowledge.

II. The didactic discourse - translation, transposition, reformulation

As we stated before, to convey a sense means to explain, to interpret, to translate by transposing it into certain signs, depending on the level and background of the student-recipient. In the volume entitled *Semiotică și discurs didactic*, the researcher Vasile Dospinescu mentions: “Knowledge is presented as unknown, foreign objects, which, in order to be understood, require (re) expression, (re) formulation, in other words, translation into the recipient’s idiolect” (Dospinescu, 1998: 305). The teaching discourse produces texts, documents, school textbooks in which the translation of the scientific discourse can be distinguished, and the teachers and publicists are in the position of interpreters and translators of the scientific, technical, and cultural knowledge in general. In this way, the specialized scientific discourse, accessible only to qualified persons, becomes transferable, transmissible, and intelligible to the auditor, the student-recipient in our case. Scientific research institutions produce, through research, scientific knowledge which, through didactic transposition, through intra-lingual translation, are then made available to the School for teaching-learning.

One of the logical-discursive operations studied by J.-G. Grize, namely *operation 0*, is one of “pure designation”, according to the scheme:

0: Name of element → Name of the same element

Grize distinguishes three embodiments of operation 0: 01 introduces the genus name or a synonym; 02 introduces a name that, although it designates the same object, brings additional information; 03 introduces a name, a nominal phrase, which, besides the chorus, carries a judgment of value, an explanatory comment.

The author V. Dospinescu considers this *logical-discursive operation* “defining for the didactic discourse. It triggers the intra-lingual *semiotization* in which any reformulation of a signifier, notion, concept, phenomenon results and, in its three variants - 01, 02, 03 - the operation illustrates the learning process (signs, meanings, relationships), which proceeds through successive pairings, approximations and semi-cognitive associations, making synonymy, informational complement and explanatory commentary (value judgment) intervene in turn” (Dospinescu, 1998: 311-313). Therefore, the operations 0, regarding the manner of designating the objects, allow throughout the discourse the correction, the adaptation of a schematic design of the discourse object, becoming memorable.

If we presented reformulation operations, it is necessary to refer to reformulation operators, which, according to V. Dospinescu, have two functions: a “linguistic and meta-linguistic function to signal the (re) structuring of a notion” and a “pragmatic function to mark and install the dialogical relationship, in its interpretative-explanatory dimension” (Dospinescu, 1998: 314). Having these two functions, the reformulation operators can be considered as *signs of didactics* in Romanian language, for example: the connector “adică” and its equivalents, such as the verb “a spune”.

The discursive analysis by which we highlight the way in which the transposition of the specialized scientific discourse into the didactic discourse accessible to the level of knowledge of the student-recipient is carried out is based on a concrete approach of rigorous selection of appropriate sub-corpus samples, extracted from the specialized scientific text-discourse of the *Basic Grammar of the Romanian Language* (GBLR), compared to the text-discourse of the Romanian language textbook, which plays a fundamental role in establishing a concrete image on the use of a conceptual analysis tool in well-defined

contexts. The homogeneity and functionality of discursive investigations in contexts where the means of transposition of knowledge are reflected according to the recipient, “insider” or “outsider”, participate in the creation of concrete perspectives that are meant to highlight the way in which the translation of the scientific specialized discourse in teaching-learning object is performed.

Firstly, we start from the text-discourse of GBLR (2010), “a basic grammar, restored to the essential data for understanding the structure and overall functioning of the grammar of the Romanian language” (Dindelegan, 2010: VII). Although it has a didactic purpose, processing the detailed description of *Gramatica limbii române* (GALR), this writing is not the same as a “school grammar”, “it is not a school textbook and not a university textbook, but a piece of work” which is kept “at a high theoretical level, corresponding to the current scientific moment” (Idem).

Secondly, we carry out a comparative analysis with samples of didactic text-discourse extracted from Romanian language textbooks published in 2010-2013, effective working tools, designed to develop the personality and imagination of the students, to teach them to think and to learn, to express themselves. In order to highlight the way in which the reformulation operations and operators facilitate the translation of the scientific discourse into didactic discourse, we opted for the contents related to the notion of *conjunction* (*conjunție*).

[1a] „Conjunțiile alcătuiesc o clasă de forme invariabile (fără flexiune), cu rol funcțional.”

[1b] „Din punct de vedere semantic, conjunțiile nu au un sens plin, ci unul abstract, „procedural” (indică o „regulă de folosire”, o anumită combinare a sensurilor elementelor pe care le leagă).”

[1c] „Din punct de vedere morfologic, conjunțiile sunt invariabile. Structura lor internă poate fi netransparentă (conjunții simple: și, dar, că etc.) sau li se pot identifica elementele componente (conjunții compuse: ca să, ci și etc.).”

[1d] „Din punct de vedere sintactic, conjunția marchează relații de coordonare și de subordonare. În relațiile de coordonare, conjunțiile leagă propoziții nesubordonate (principale) sau constituenți sintactici (inclusiv propoziții subordonate) dependenți de același centru și ocupând, în raport cu centrul, aceeași poziție ierarhică; în cele de subordonare, leagă doar propoziții subordonate de regentul lor.” (GBLR, 2010: 331)

As noted, texts [1a-d] constitute samples of scientific text-discourse and refer to some general characteristics of the conjunction. The text [1a] speaks of „conjunții” that make up „o clasă de forme”, while in texts [2], [3a], [4] and [5] (see below) „conjunția” is mentioned as „partea de vorbire”. In these cases, the transposition is performed by the *reformulation operation* θ : „conjunții” \rightarrow „conjunția”. The purpose is to draw the attention of the student-recipient to the concept he/she is studying. In the same discursive structures we also notice the *reformulation operation* $\theta 1$: „o clasă de forme” \rightarrow „partea de vorbire”. Thus, by designation, a content that is difficult to understand for sixth or seventh grade students is transposed into a synonymous group in which the noun in the center is articulated with a definite article, which is in accordance with the first identified reformulation operation.

Further we cannot but refer to the verb used by the authors. The verb „a alcătui” in [a1] is translated as „a fi” with copulative value in texts [2], [3a], [4] and [5], in order to adapt the content to be taught to the semio-linguistic universe of the beneficiary. Another discursive structure that is reformulated under the action of specific operations is

„invariabile (fără flexiune)” → „neflexibilă”, encountered in [2] and [4], an operation of the θ_2 form, but which, instead of bringing more information, we think it represents a minus that, in this case, makes the discourse ambiguous. This is the reason why we prefer the formulation provided by text [3a], which does not refer to this detail, given that the secondary school textbook, especially in the low classes, must have a very clear content, specific to the semiotic level of the student-recipient at this comprehension stage.

[2] „Conjuncția este partea de vorbire neflexibilă cu rol de cuvânt ajutător care marchează raporturi de coordonare în cadrul propoziției, precum și raporturi de coordonare și de subordonare în cadrul frazei.” (Vasilescu, 2012: 211)

Another reformulation operation, schematically represented “ ω : statement (s) → object class”, is constituted as follows: ω : [1b] → „cu rol de cuvânt ajutător” [2] (see above). The explanation is that a plurality of terms outside the semio-cognitive sphere of the student-recipient is manipulated, reduced to a minimal discursive structure, a nomination, which fulfills the conditions of a didactic discourse.

[3a] „Conjuncția este partea de vorbire care leagă, în frază, două propoziții (de același fel sau diferite) sau, în propoziție, două părți de propoziție de același fel (subiecte, nume predicative, atribute, complemente).” (Crișan, 2012: 190)

The scientific content of text [1d] is considered essential and is transposed into texts [2], [3a] (see above) and [4] (see below), reformulated in different manners, according to the vision of each author, through several reformulation operations and operators. In the text [2] we can distinguish the *operation* θ_1 (name of the element → name of the same element), for example the terms „relații” [1d] → „raporturi” [2] or the terms referring to the coordination relation between sentences: „propoziții nesubordonate (principale) sau constituenți sintactici” [1d] → „în cadrul propoziției [...] în cadrul frazei” [2].

The same reference text [1d] is also the source of the information transmitted by [3a]. In this case, it is observed that, as it refers to the coordination report, it is resorted to reformulation through *operation* θ_1 , for example: „leagă propoziții nesubordonate sau [...] propoziții subordonate” [1d] → „leagă, în frază, două propoziții (de același fel sau diferite)” [3a]. In this case the operation of introducing a synonym is graphically marked through brackets. Also, we notice the reformulation *operation* θ_3 : „constituenți sintactici [...] dependenți de același centru” [1d] → „două părți de propoziție de același fel (subiecte, nume predicative, atribute, complemente)” [3a], by which the author of the textbook introduces a name, a noun group, which, in addition to the reference, contains an explanatory comment. This time the brackets take the place of the „adică” reformulation operator, with the help of which the requirements of inter-comprehension and taking into account the semi-cognitive status of the recipient are satisfied.

Similar to text [3a], but less explanatory, less interpreted, in text [4] (see below) we note that the scientific discourse is reformulated with the help of the θ_1 *operation*, as in the examples „leagă propoziții nesubordonate sau [...] propoziții subordonate” [1d] → „leagă [...] în frază două propoziții” [4] and „constituenți sintactici [...] dependenți de același centru” [1d] → „leagă în propoziție două părți de propoziție de același fel” [4]. In addition, the author of the textbook translates the scientific discourse with the help of another reformulation operation, ω : statement (s) → object class, respectively ω : [1b] → „este un instrument gramatical”. As in the previous report, we observe the adaptation of the didactic discourse for teaching-learning to the background of the sixth-grade student.

[4] „Conjunctia este partea neflexibilă de vorbire care leagă în propoziție două părți de propoziție de același fel (raport de coordonare), iar în frază două propoziții (raport de coordonare sau de subordonare). Este un instrument gramatical fără funcție sintactică.” (Șerban, 2012: 211)

Regarding text [5] (see below), we mention that it is a replay of text [4], at another semio-cognitive level, since it is a sample of didactic text-discourse extracted from seventh grade textbook, with the same authors, the same translators of the scientific discourse. The elliptical constructions mark those key concepts discussed previously, and the statement is required to be completed by activating the discursive memory of the student-recipient, which is a stage of updating the knowledge.

[5] „Definiți conjuncția:
Conjuncția este partea de vorbire care exprimă un raport de
în și raporturi de și în ” (Șerban, 2011: 142)

The didactic discourse of the textbook from which we selected the texts [3] continues the explanations regarding the conjunction in [3b] (see below), transposing the scientific discourse from [1c] with the help of the *reformulation operation* 02, which implies the introduction of a name which, although it designates the same object, it brings additional information, as in the example: „structura lor internă poate fi netransparentă (conjuncții simple: și, dar, că etc.) sau li se pot identifica elementele componente” [1c] → „iar, să, căci, dacă” [3b]. This supplement of information, this information complement only supports the transmission of the scientific content, approximated in a way that it becomes accessible to the “outsider”, the student-recipient. In text [3b] we can notice a punctuation mark, „:”, with the role of reformulation operator, by which the author aims to introduce the examples meant to illustrate the two types of conjunctions.

[3b] „Conjuncțiile sunt:
- simple: și, iar, dar, că, să, căci, dacă etc.
- compuse: ca să, ci și etc.” (Crișan, 2012: 190)

In this paper we analyzed nine samples of sub-corpus of text-discourse - four sub-corpora representing specialized scientific text-discourse samples taken from the *Basic Grammar of the Romanian Language* (2010) and five sub-corpora representing samples of didactic text-discourse taken from the textbooks of the Romanian language of the sixth and seventh grades, published between 2010-2013 – which aims at the same learning content, namely the *conjunction*. The semio-linguistic investigation undertaken as a parallelization of the two types of discourse constitutes a stage that confirms that the text-discourse of the textbook abounds in structures that emphasize that the didactic discourse represents a translation, a reformulation of the specialized scientific discourse.

During the investigation we noticed that the authors of the textbooks prefer to highlight certain information, considered essential in the teaching-learning activity. The texts [1a-d] are reformulated, explained and interpreted in the texts [2-5], the authors transpose the scientific discourse by using reformulation operations and operators. The analysis constituted reflects the importance of the information in the text [1d], content that has been translated by intra-discursive reformulation in each of the texts [2-4]. This aspect reveals that the sequences include those elements that distinguish between this object of learning, the

conjunction, and the other syntactic connectors of the Romanian language. In addition, the authors of textbooks have opted for short and concise formulations, intended for students in the situation of initiation in the study of this teaching-learning content – the conjunction.

III. Conclusions

The investigation undertaken on the different (sub-) corpora belonging to the two types of discourse – the specialized scientific discourse and the didactic discourse – which highlights manifestations of the intra-lingual translation, of the reformulation of discourse is, for our research, as a whole, an element that confirms that the scientific discourse is metamorphosed, the result being the didactic discourse.

Ultimately, the text-discourse of the school textbook is distinguished by the way it reformulates, interprets, and explains certain discursive sequences produced by the scientific research institutions, so as to obtain a positive effect on the “outsider”, through the educational institution. The present study highlights that, although the scientific source is the same, the authors of the school textbooks resort to various reformulation operations and operators in order to transmit the knowledge. Thus, the vocabulary, the structuring and the integration of notions, considered as premises of the didactic discourse, represent aspects by which the text-discourse of the presented textbooks is differentiated.

Our research has revealed a discursive reality that can be generalized insofar as the study is in-depth considering several reformulation operations and operators, for example the operation α , which inaugurates a class-object, the operations γ , which refers to classes, genres, species, or operations ρ , all of which ensure the accessibility of the didactic discourse. On the other hand, we found some significant differences regarding the content of school textbooks published during the reference period, which also leads us to a new investigation, related to the correlation of co (n) text and didactic discourse.

In conclusion, we can vehemently affirm that didactic discourse represents a translation of specialized scientific discourse by resorting to different textual processes and discursive structures. The manner in which transposition, explanation, interpretation, intra-lingual explanation translates specialized scientific discourse into didactic discourse, taking into account both the semio-cognitive level of the student-recipient and the linguistic / extra-linguistic context, it is decisive for a proper reception of the knowledge, so that the educational purpose is reached.

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