AN APPROACH TO TEACHING VOCABULARY IN ESP CLASSES THROUGH TRANSLATION[1]

> "Rather than just conveying a message or providing possibilities for communication, the role of the translation is then to stand as a proof of equality.... This could perhaps be called 'existential equivalence', i.e., all the language versions need to exist, any other features being irrelevant or at least subordinate to the symbolic function"(Koskinen, 2000: 51).

Abstract: *The article aims at emphasising the strong connection between a good level of knowledge in the field of study and a good command of English to render specialised translation (English-Romanian direction) in ESP classes in the Higher Education. It comprises a short overview of basic tenets in translation theory regarding equivalence and technical communication, followed by a practical exemplification to classifying translational equivalence of technical terms in order to easily translate them. The article concentrates on the importance of vocabulary acquisition and consolidation through translation in ESP classes.*

Key words: *specialised language, vocabulary translation, multiple equivalence*

APPROCHE DE L'ENSEIGNEMENT DU VOCABULAIRE PAR LA TRADUCTION EN CLASSE D'ESP

Résumé: *L'étude vise à mettre en évidence la forte relation entre le niveau de connaissances professionnelles du domaine de spécialité et la maîtrise de la l'anglais, pour réaliser des rétroversions pendant les cours de langue anglaise pour les étudiants non-spécialistes de la langue. Elle comprend une courte présentation des principaux dogmes de la théorie de la traduction concernant l'équivalence des termes techniques suivie d'exemples qui visent à classifier cette équivalence afin de traduire facilement les termes techniques en roumain. L'étude porte sur l'importance de l'acquisition et de la consolidation du vocabulaire par la rétroversion réalisée dans les cours de langue anglaise pour les étudiants non-spécialistes de la langue.*

Mots-clés: *langage spécialisé, rétroversion, équivalence multiple*

1. Introduction

Teaching specialised English to students in the Higher Education puts the teacher in a quandary over whether to use translation or not in the classroom. In spite of past and ongoing controversy about the use of translation in ESL classes because of its close association with the grammar translation method, currently, there are theorists who re-considered it as a reliable method (House, 2018 : 143). Researchers have claimed that translation may both improve learners' proficiency through language control and reading comprehension competence. Other theorists have recognised translation as a cognitive

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strategy in reading, and, also, as a method to assess the level of comprehension of the ST (Lee, 2013: 3). Therefore, translation is a useful tool which enhances conscious learning, connects learners' previous linguistic experience in the mother tongue or other foreign languages with the new language knowledge and helps the learners discover meaning in *alternative ways* (House, *op.cit*. : 153):

> [...] translation promotes explicit knowledge about the foreign language and awareness of similarities and differences between the native and foreign language systems as well as conventional uses of these systems in different situations, genres and text types. [...] it raises a general awareness of language and creates opportunities for reflection on differences and similarities at various linguistic levels. [...] (ibid.: 147).

Moreover, although the role of translation is not recognised, learning and teaching a foreign language is *a bilingual undertaking* through a process which assumes the co-existence of native language with foreign language in learners' minds:

> So although translation may be assigned no role in language **teaching**, it clearly plays a crucial role in language **learning**. Since this role is not overtly recognised, but is on the contrary suppressed, there is, [...] as I have pointed out elsewhere (Widdowson, 2003: ch. 11), a fundamental conflict between the continuous process of bilingual or multilingual learning and the discontinuous practice of monolingual teaching. (Widdowson, 2014: 229).

Due to today's globalization and technology progress, the use of translation in ESP classes has commenced to become an indispensable tool. Therefore translation makes connections and relationships through linguistically-oriented means and enables multilingualism and multiculturalism. A few questions need to be asked related to the use of translation in class: Why is translation useful for engineering undergraduates? What is the purpose? It is of paramount importance for them to have access to new information in the field and, also, to be able to use a good level of specialised language in international contexts.

More importantly, there are several aspects which should be taken into account with translation in ESP classes. Firstly, it is the command of English second year undergraduates have; secondly, their knowledge of the specific field of study; and thirdly, it is their wish to become aware of the importance of developing technical communication as regards using specialised language in *engineering communication* in international joint projects, contexts, workplaces. In such cases, translation may be a social practice in real-life situations (House, *op.cit*.: 154). Furthermore, two other aspects are worth mentioning: the students might be inexperienced and incurious translators; they attend a regular undergraduate engineering programme and it is the first time they might be in the position of translating. In addition, they do not know theoretical concepts on translation and they might not have any specialised translation practice or experience though some of them might work or be in internship at international companies. The other aspect highlights students' level of English, i.e. proficient command of TL is necessary, though: "[...] technical translation requires more than writing down the dictionary equivalents of words. [...] facility with the source language is important, but facility with the target language is crucial" (Herman, 1993: 19).

The proficient level of language is a warranty that the outcome in TL is clear, concise and correct. Otherwise, difficulty may be encountered to understand texts designed in technical language and find the corresponding equivalent in SL. More significantly, technical translation involves a strict selection of the correct alternative in context (Hann, 1992 : 7).

2. Technical communication in ESL

Theorists in the field of communication have stated the definition of technical communication as the *exchange of information* that people are able to use whilst interacting with technology, advancing workplace goals, and solving complex problems; for engineers, particularly, the access to " the correct specifications for designing a bridge or configuring a software application" (Gurak, Lannon, 2012: 3;12) and the competence to draw required work-related documents (such as memos, emails, letters, instructions, procedures, manuals, brochures, proposals, reports), in specialised language, are crucial.

Technical communication therefore is the linchpin skill for all professionals in their field of work or research which helps them to communicate with peers, more effectively and more efficiently (Merkel, 2014: 3), and to implement discoveries, innovations and solutions (Irish, Weiss, 2013: 3). The general objectives of ESP classes aim at offering a curriculum which includes the most significant aspects of engineering in English: terminology proper to the field, specific grammar and structures to follow in written and oral communication. In addition, technical writing and broadly speaking technical communication is "a means to an end rather than as an end in itself" and has "utilitarian, specialized focus" (White, 1996: 12).

Besides, the differences between natural language and technical communication which is precise and unambiguous should make students aware of the challenge of specialised vocabulary acquisition. Learning a technical language, for instance the specialist language of electrical and mechanical engineering, is, in many ways, similar to acquiring the linguistic competence for a foreign language. In engineering texts, terminology is new and grammar rules may change. Sometimes, it is essential to resort to native speakers or even native speakers expert in the respective field of study, if possible, to resolve the linguistic issue:

> Technical translation involves native speakers in a considerable amount of problem-solving regarding terminology and semantics, but the difficulties of non-native speakers are even more acute as they lack the same general awareness of prepositions, adverbs, adjectives and their relationships with specific nouns and verbs. (Hann, 2004 : 156).

3. Aim and impact of the topic

The aim of the article is to raise awareness about the considerable advantage of using translation to teaching vocabulary in ESP classes for Electrical and Mechanical engineering undergraduates (English-Romanian direction). The article is not an exhaustive and comprehensive treatment of the area which is rather broad and complex, it only offers a general overview and illustrative examples discovered during teaching practice. Although the controversies over translation use in classroom are well-known, the outcome has proved to have long-term advantages for ESP students. This article will concentrate on the translational equivalence in teaching ESP vocabulary.

4. Method and material

The method used to obtain data for analysis was that of translating specialised texts during ESP classes for the Electrical and Mechanical Engineering undergraduates. The terms from the technical vocabulary were categorised following the translational equivalence categories in Hann (2004). Therefore, the following types of equivalence will be identified in translation: one-to-one equivalence, dual equivalence and multiple equivalence. In addition, Nida's *dynamic equivalence*, Vinay and Darbelnet's translation procedures and Pym's *natural equivalence* have been used to produce the most natural TTs in class. General and technical dictionaries and thesauruses, and parallel texts were used whilst investigating the meaning in technical context. During the translation process, on the other hand, students became aware of the significance of the multiple technical meanings typical of other specialised text.

The source texts consist of Units 4-11, from the Student's book *Oxford English for Electrical and Mechanical Engineering*. The translated text is primarily meant to serve as guidelines for *engineering communication*.

5. Theoretical view on equivalence

There have been many theories on translation and many definitions of equivalence, and it would be tedious to go through them all here and unnecessary for the purpose of the article. A short overview of the most relevant theories to the topic of discussion will be presented. The following are the prominent twentieth-century theorists of translation who consider translation "as primarily or exclusively an operation performed on language": J. C. Catford, Kornei Chukovskii, Valentín García Yebra, Eugene A. Nida, Jean-Paul Vinay and Jean Darbelnet, Peter Newmark, Juliane House, Basil Hatim and Ian Mason (Robinson, 2012: 124-125).

It is certain that the most famous theories are those stated by Catford and Nida. Before going through equivalence with Catford and Nida, it is important to mention that there are two methods of translating (direct and oblique) and seven translation procedures, (borrowing, calque, literal) and oblique (transposition, modulation, equivalence, adaptation) (Vinay, Darbelnet, 1995: 30-40) and that the *equivalence* prevails in the translation of technical, specialised texts. In addition, the translation procedures generally operate at three levels: vocabulary, syntactic structure and message (Munday, 2016:93), each type of equivalence retaining and adding to the features of the preceding level (Fawcett, 2003: 61).

For Catford (1965), meaning is not transferred from ST to the translated text. Under the condition that there is "relevant substance" (1965: 53), and that "the TL text must be relatable to at least some of the situational features to which the SL text is relatable" (1965: 49) the meaning is replaced by some rather equivalent, similar meaning in the translated text rendered through equivalent, adapted linguistic elements. The ST and the translated outcome can function in a comparable way. Moreover, Catford identifies two distinct types of equivalence. One indicates a sort of rule such as "translation rule is thus an extrapolation of the probability values of textual translation equivalents" (1965 : 31); the other one states that "SL and TL texts or items are translation equivalents when they are *interchangeable in a given situation*" (1965 : 49). In other words, translation equivalence is possible if "the TL text or item shares at least some of the same features of the situation and context of the SL text or item" (Williams, 2013: 33). Four years after Catford's theory, a new functional-linguistic theory on translation appeared. It is Eugene Nida's (1964) and then Nida and Taber's view (1969) which is different than Catford's. For the two theorists, "Translating consists in reproducing in the receptor language the closest natural equivalent of the source-language message, first in terms of meaning and secondly in terms of style" (1982: 12). In addition, the ST undergoes analysis, de-coding, transfer and restructure, remodelling, re-coding in the process of translation (1982: 484). Nida's well-known types of equivalence are *formal* and *dynamic equivalence*: "formal equivalence focuses attention on the message itself, in both form and content", i.e. the translator's principal concern being that the message in the TL renders as faithfully as possible the meaning of the elements in the SL (Nida, 1964 : 159); dynamic equivalence is based on "the principle of equivalent effect", which states that the relationship between receptor and message "should be substantially the same as that which existed between the original receptors and the message" (idem). The linchpin requirement for a correct translation, in Nida's view, is to aim at identifying "the closest natural equivalent to the source-language message" (Nida, 1964: 166, Nida and Taber, 1982: 12). Nida claims that there are several acceptable degrees of translation between the strict formal equivalence and the completely dynamic one, the emphasis being on using more the dynamic equivalence (Nida, 1964: 160).

Another approach underlines that a particular feature of the equivalence is that of involving the syntagmatic level, and, therefore, the message is fully affected (Vinay, Darbelnet, 1995: 38). A classical example of equivalence is given by the authors expressing the reaction of a person after he hit his fingers with a hammer: "if he were French his cry of pain would be transcribed as, “Aïe!”, but if he were English this would be interpreted as, “Ouch!”" (*ibid*.: 38). Moreover, in the process of translating, whilst attempting to establish relationships between "specific manifestations of two linguistic systems, one which has already been expressed and is therefore given, and the other which is still potential and adaptable" (*ibid*. : 30), translators take a few steps: identify the units of translation; examine and evaluate the SL text and its constituent unit of translation which might be descriptive, affective or intellectual; reconstruct in TL, the situation which produced the message in the SL; assess the stylistic effects (idem): "Once translators understand the mood of this text, the quality of the translation depends less on the literal rendering of each word than on an equivalent effect, even if the words which create it do not correspond to each other" (ibid. : 45).

In the late 1970s, a new era of translation theory began. The functional-oriented translation / skopos school in Germany proposed by Katharina Reiss, Hans J. Vermeer, Justa Holz - Mänttäri, Christiane Nord and some others and the translation studies school in the Benelux countries and Israel founded by Itamar Even - Zohar, Gideon Toury, André Lefevere, James S. Holmes, Theo Hermans and others have conceived the theory about the theory of translation as *social communication* (Robinson, 2012 : 155). In *Skopostheorie,* the equivalence is seen as *functional equivalence* on the text level, Reiss referring to it as *communicative translation* (Nord, 2018: 35). Skopos theory claims that the translation needs to be done "consciously and consistently, in accordance with some principle respecting the target text" (Vermeer, 1989: 182). In other words, functional equivalence assumes that the ST and the TT have the same function, but it "is not the *normal* Skopos of a translation, but only one of a number of potential Skopoi and one in which a value of zero is assigned to the *change of functions* factor" (Nord,1991: 23).

Another important contribution to the theory of equivalence belongs to A. Pym. In his *Exploring Translation Theories*, he identifies and describes two new types of equivalence: *natural equivalence* and *directional equivalence* (2014: 6-42). Natural equivalence is about the same value of the meaning in ST and TT, the relation being "natural and reciprocal" (*ibid*.: 39). By way of contrast, the directional equivalence covers two polarities in translation, i.e. free translation and literary translation; therefore, it is more about symmetry and asymmetry and the personal choice of the translator for a particular text (idem) than rigorously applying theories and strategies.

6. Vocabulary issues

The article will present a practical approach to translational equivalence utilised in teaching technical vocabulary in ESP classes for electrical and mechanical engineering. Each discipline such as engineering or hospitality industry has its own, specialised vocabulary, frequently referred to as jargon (White, 1996: 191; Mancuso, 1990: 186). In technical fields, communication is objective, accurate and unambiguous. Specialised vocabulary is fixed, thus, creativity, synonyms and ambiguities are not allowed (Trippel, 2012: 122). More importantly, vocabulary as well as grammar differs from discipline to discipline in the technical and scientific fields. Specialised vocabulary taught and learnt in ESP classes is not part of native speakers' everyday repertoire (Tudor, 1997). Therefore it can be acquired only through specialised studies or practical experience in the respective field:

> Vocabulary in ESP is important for several reasons. First of all, teachers and learners need to know that precious classroom time is directly related to their language needs. They should be reading material that contains key ideas and the language of their field and writing using those ideas and language. Secondly, understanding and using this special purposes vocabulary shows that these learners belong to a particular group (Coxhead, 2013: 116).

Moreover, the command of the special purposes vocabulary shows that the students, future specialists in their field of study, belong to a particular group, i.e. they speak the *same language* as their peers, being connected through disciplinary knowledge in the same professional context. (Woodward - Kron, 2008: 246).

Another important point to make is that technical vocabulary keeps growing whilst the field of study progresses. Theorists who counted terms in technical vocabularies state that they may range between 1,000 and 5,000 terms (Nation, 2008: 10). Hence, it is not easy to learn and use such a large number of words in order to integrate in a professional community. Specialists developed lists of words easy to use by teachers and learners of ESP. For instance, Ward (1999) examined foundation-level engineering texts and determined the number of words students need to know (2,000 word families covering up to 95 percent from his textbook corpus). Later on, in 2009, Ward developed an English word list of basic engineering for low - level language undergraduates which covered multifarious disciplines of engineering and contained 299 word types covering up to 16.4 percent of a corpus of engineering textbooks: 188 of them are also in A General Service List of English Words (GSL) 1000 list, 28 are in the GSL 2000, and 78 are in the Academic Word List. The first ten words in Ward's list are: *system, shown, equation, example, value, design, used, section, flow, given.* As far as electrical engineering field is concerned, it is worth mentioning that "this is such a vast field that not even specialists themselves are familiar with the full range of associated terminology" (Hann, *op.cit.* : 141).

7. Categories of equivalence in translation

The research conducted into specialised vocabulary has demonstrated the importance of understanding this type of vocabulary. There are numerous examples, but the approach will be restricted to the most illustrative encountered in translated texts in class. Indeed, equivalence in the translated texts is *dynamic* or is not pure in the sense that other translation procedures might apply (transposition, modulation, calque) to render a fully meaningful and accurate translation.

It is well-known that many technical words in Electrical and Mechanical Engineering vocabulary have been adapted from Physics. Also, it is obvious that these words come from two different major branches of Physics, i.e. Mechanics and Electricity (*ibid:* 10). Besides this, because simple words might occur in various technical texts, Hann's *Collocation Dictionary* may be a useful tool to identify the *polysemous nature* of such words. In addition, some words such as common adjectives, verbs, prepositions and certain nouns prove to be false friends and cause confusion whilst translating them (Hann, 1992: 12). Homonyms, on the other hand, are rather frequent adding supplementary difficulty to translation. Hann illustrates this by the translation of the *elektrische Spannung* as *electrical tension,* explaining that this equivalence uses obsolete terminological equivalents which are wrong in the respective technical context: *electrical voltage*, *mechanical tension* for *elektrische* / *mechanische Spannung*. Moreover, Hann emphasises that there is a second meaning of *mechanische Spannung* which might be unknown to the translator, i.e. *stress.* Such a simple word might be encountered within the same text with both meanings and equivalents: *tension* and *stress* (idem).

More importantly, learners need to know the correct alternative of equivalents in the specific technical context and, for this, they appeal to their speciality knowledge. As stated above, the three categories of equivalents in technical translation will be identified following Hann's view on technical equivalence (*ibid*.: 27-29).

7.1. One-to-One Equivalence

This first category comprises words or phrases which have the closest equivalent in both ST and TT: for each English term there is one equivalent in the TT and vice versa. It is important to notice that the number of elements in the equivalent might vary, but the meaning is as natural as possible. Nevertheless, it might happen that occasionally, a term extends its meaning (for example, *winkel* - *angle* is also equivalent to *protractor* (HANN, 2004: 27). Such examples are the following, the Romanian (henceforth Ro) equivalents accompanying them: *thermostat* (Unit 8 - henceforth U8) - *termostat*; *heat exchanger* (U8) - *schimbător de căldură*; *aluminium* (U3) - *aluminiu*; *epoxy resin* (U3) - *rășină epoxidică*; *mild steel* (U3) - *oțel cu conținut mic de carbon*, *oțel moale*; *gravity force* (U5) - *forța de gravitație*; *shock absorber* (U11) - *amortizor de șoc*, *dispozitiv antișoc*; *spoked wheel* (U12) *roată cu spițe*; *piston* (U4) - *piston*; *electric motor* (U6) - *motor electric*, *electromotor*; *valves* (U4) - *valve*; *combustion engine* (U4) - *motor cu ardere*, *cu combustie internă*; *spot welding* (U13) - *sudare electrică prin puncte*[1].

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7.2. Dual Equivalence

The ST terms from this category can have two different equivalents in the TT. This category corresponds to ST terms which may have several equivalents in TT and may form compounds. Such an example is *coil arrangement* (U8), its equivalent being *serpentină, spirală* in the context. However, *coil* is frequently translated by *bobină* and *bobinaj electric*.

Another example is *buoyancy* (U5), which is equivalent to *forță ascensională*, in the following context: "[...] we must look at the forces on the ship. [...] The *buoyancy* force, B, acts upwards". The same term, in other technical texts, might be equivalent to *forță arhimedică* or *forță portantă* in Physics. However, in Ships, the result of the action of the respective force might be equivalent to: *flotabilitate, plutire*; *emersiune*; *volum de carenă*.

7.3. Multiple Equivalence

Terms in ST which may have several corresponding TT equivalents, in different contexts and /or engineering fields fall into this category. Such a term is *loop*, which is used as a general technical term and in several fields of engineering such as Information and Communications Technology, Aeronautics, Electronics, Physics, Electrical Engineering, Image Technology, Textiles, Pharmacology and Nuclear Engineering. In the following examples, *loop* appears in texts about the central heating (U8), the electric motor (U6) and the washing machine (U11) belonging to Electronics and Electrical Engineering fields.

e.g.: a. "If an electric current flows around a *loop* of wire with a bar of iron through it, the iron becomes magnetized". (U6)

Dacă/Când un curent electric circulă printr-o bobină înfășurată în jurul unui / în jurul unei sârme înfășurate pe un /miez de fier / conductor, miezul de fier / conductorul se magnetizează (datorită inducției magnetice) (Ro).

Several terms cause confusion such as *a loop of wire* and, also, *a bar of iron*. The translational equivalent is closer to the meaning of *a small block of something solid* for a *bar of iron* (*miez de fier*) and for the *loop of wire*, although there are multiple equivalents, in this context, the most accurate being *bobină* and *sârmă*. (Ro) (see the dictionary for further reference)

"In a simple electric motor [...] a piece of iron with *loops* of wire round it, called an armature, is placed between the north and south poles of a stationary magnet, known as the field magnet". (U6)

Într-un motor electric [...] un ax de fier / miez magnetic ce conține mai multe bobine, denumit rotor, se așază în interiorul polilor magnetici de excitație ai unui magnet permanent denumit stator. (Ro)

The terms which cause confusion are *a piece of iron*, *loops of wire*, *armature*, *field magnet*. In this particular case, the closest equivalent for *a piece of iron* is *ax de fier/miez magnetic* (by contrast with *a bar of iron* in the example above, here, the equivalent goes for *one of a particular type of thing*). *Loops of wire* corresponds to *bobine*. To fully render the more complex meaning in the English text, there is only one solution, that of adding *mai multe* (*bobine*) and to re-construct the message of the ST sentence by modulation. Besides this, *armature* is also a false friend because the urge is to simply translate it by *armătură*. Again, the meaning is not complete because the context, i.e. describing an electric motor demands a more specific term, a technical term. Thus, the term *rotor* renders the exact type or *armature* offering a correct equivalence. By far the most difficult to translate is *field magnet*, which corresponds to *pol magnetic de excitație*. The same term might have several equivalents such as *inductor* / *electromagnet* / *întrefier* in other technical texts.

> "Most control systems are closed *loops*". / "quite a complex closed *loop* system" (U11)
>
> Cele mai multe sisteme de reglare sunt în buclă închisă[1]. (Ro)
>
> "[...] water circulates around either of the two loops of pipework, which act as heat exchangers" (U8).
>
> [...] apa circulă printr-una din cele două bucle formate din conducte care au rolul de schimbătoare de căldură.(Ro)

b. Other examples illustrate both the dynamic, natural equivalence and elements which might cause confusion:

> "A spring balance can be calibrated in newtons, the unit of force. [...] The weigh on the balance pulls the spring down" (U5).

O balanță / Un cântar cu arc / resort poate să fie gradat în newtoni, unitate de măsurare a forței. Masa care este pusă la cântărit trage arcul / resortul în jos.

In this case, *spring* is a homonym both in ST and TT. The following equivalents might be more familiar to the students than that of *arc, a* se *îndoi elastic, a se arcui* (Ro): primăvară; izvor, sursă // a sări; a izvorî.

"Heavier disc wheels also act like a flywheel and so conserve the *momentum*" (U12).
Momentum is a specific word in Mechanical Engineering, corresponding to *pulse* in Electronics (Hann, 2004:10). Equivalent for *momentum* (U12) might be the following in various engineering fields: *moment mecanic, cantitate de mișcare, energie cinetică, energie a unui mobil în mișcare, impuls*. In the above context, the equivalent for *momentum* is *energie în mișcare*.

c. Identifying the homonyms and the false friends represents a normal step on the way to equivalence. Homonyms: *brush* (U6) (*perie, a peria, pensulă*), the technical equivalent being, in the context, that of *cărbune* (*carbon block*) or in another technical text that of *fascicul de scântei electrice*; *a feed* (U8) frequently known as the verb *feed* is equivalent to *alimentare/ orificiu prin care se face alimentarea, se leagă la sursa de alimentare*; *flue* [flu:] (U8) sounds the same as *flu* [flu:] but the spelling is different and its equivalent is *coș*

[1] The definition for *loop* in English, in this context, is that of *feedback control system*. Again, *loops*, this time has, as equivalent in Romanian, *buclă închisă*.

de fum; *die* [dai] (U13) *a muri, vopsea* /a *vopsi dye* [dai] - *matriță*, *cuplă*, *nicovală de ocheți*. The false friends cause misunderstanding for students because they resemble other words in the TT, but have a different meaning: *acrylic* (U3) - *acril* (not *acrilic*); *momentum* (U12) - *energie în mișcare* (not *moment*); *operate* (U4) - *a acționa (not* a opera*)*; (*piston*) *reciprocating* / *reciprocrate* (U4) - (*pistonul*) *efectuează cursa activă*/ *cursa motoare* (not *este reciproc)*.

8. Conclusion

The present study is not comprehensive enough to draw significant conclusions, but the translations indicate that *dynamic equivalence* and *natural equivalence* need to be utilised together with other translation procedures, either direct or oblique, because technical terms have multifarious meanings and, sometimes, an ambiguous character. Although modulation is prevalent in translated texts, there is no alteration of the two messages (of the meaning). In addition, modulation emphasises the contrast between the two languages and the different modes of thinking. The approach suggests that multiple translational equivalence is prominent in electrical and mechanical engineering texts.

More significantly, the translation should respond to the receiver's needs, i.e. *engineering communication* in English. The types of translational equivalence (one-to-one, dual and multiple) offered strong evidence of the difficulty to understand technical language in English and to identify correct equivalents in Romanian. Moreover, not only particular terms are a hindrance to translation, but also the re-structuring of the meaning in TL cause difficulties for inexperienced students.

To conclude, teaching vocabulary through translation should become general practice in ESP classes. Firstly, utilizing the translation in ESP classes for Electrical and Mechanical Engineering undergraduates is a good practice exercise of vocabulary improvement and consolidation. Secondly, teachers and students too, ought to be aware of the range of theories and strategies which might be of assistance in the translation practice itself. Thirdly, whether it is perfect or not, the translation in classroom aims at providing new information and knowledge and offers the students the opportunity to acquire accurate specialised terminology to develop engineering communication.

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