



# The Superlative Knowledge in the Process of Translation

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## Abstract

In this article, the researcher studied the superlative knowledge (linguistic knowledge or technical knowledge) in the process of translation. The translators should have both linguistic knowledge and technical knowledge in a certain field for translating the texts. Since some of the translators believed that linguistic knowledge is more important than technical knowledge or vice versa, this issue of superlative knowledge was the focus of the study. Given its importance, the researcher chose to focus on the field of oil and energy. In addition, the translation in this field is poor, so the researcher wants to improve the translation. To perform this study, some of the participants took part in an interview. They discussed superlative knowledge in this field, and issues in translation of technical texts. Moreover, the other participants were given questionnaires which include 10 items. The study shows that translators should master both linguistic and technical knowledge to provide a proper translation of the text.

**Keywords:** technical translation, technical text, superlative knowledge, linguistic knowledge, technical knowledge

## 1. Introduction

Newmark (1988) has claimed that terminology accounts for at most just 5-10% of the total content of technical texts nevertheless there is an uneven amount of attention dedicated to terminology and lexical issues in technical translation.

Experts and professors with the aim of delivering technical information to a specific audience produce technical text in the domain of oil and energy.

Today, the field of oil and energy is one of the most important fields in Iran and the whole world due to the high demand for both. As most of the books in this field are in different languages, especially in English, translators should translate them to Persian.

As both linguistic knowledge and technical knowledge are involved in the process of translation, the researcher wants to find the superlative knowledge. Based on research question the following hypothesis was formulated: There is no significant difference between impact of lack of linguistic knowledge and impact of lack of oil and energy knowledge on the correct translation of oil and energy texts.

Since some of the translators believed that linguistic knowledge is more important in translating texts or the other believed technical knowledge is more important, so the researcher want study the case and specify the superlative knowledge.

## 2. The Review of Related Literature

Technical translation is the translation of technical text (owner's manuals, technical books, user guides, etc.) or more specifically texts that include a high amount of terms, that is, words or phrases used only in a particular job, or describe that profession in great detail(N/N).

Byrne (2006) stated that technical translation is all about terminology. This particular misconception is not one of its kinds to those uninvolved in technical translation. Many numbers of people involved in technical translation share this idea.

According to Lee-Jahnke (1998:83-84), there are three items that are necessary in order to learn how to study scientific and technical texts:

- know the text formation in the different languages
- know the LSP for the field
- know the subject field

Byrne (2006) announced that the challenges for the technical translator are to be able to deal with the subjects and to know expert knowledge of the way experts in a particular area write texts. The essential areas of expertise for technical translators are as follow:

- Subject knowledge
- writing skills
- Research skills
- Knowledge of genres and text style
- Pedagogical skills

Good theory is based on information achieved from practice. Good practice is based on carefully worked-out theory. The two are interdependent. (Larson 1991:1)

Savory (1957:49) who collected the following list of “rules” of translation from many kinds of “authoritative” sources on translation, which state that, a translation:

- Must give the words of the original
- Must give the ideas of the original
- Should read like an original text
- Should read like a translation
- Should reproduce the style of the original
- Should hold the style of the original
- Should read as a contemporary of the original
- Read like a contemporary of the translation
- May add to or delete from the original
- May never add to or omit from the original

Byrne (2006) stated that when it comes to specialized subject knowledge, it is obvious that you cannot master every field so it maybe best to get a good base in the more generic, transferable subject field and rely on this together with a skill to research new areas to study unfamiliar subjects. Therefore, for a technical translator, achieving a good understanding of the fundamentals of science and technology can present a good base for diverse applications in technical translation. Technical translation, like translation in general, has both benefited and endured because of the work of translation theorists. In the past 40 or so years, an overabundance of theories, models, approaches and ideas have been circulated in an attempt to describe and analyze the translation process. However, technical translation has generally been overlooked in this work.

Mainly for technical translation, is the idea presented by Toury (1995:56-7) that translation is affected by two major roles:

1. The translation is a text in a particular target language and culture.
2. The translation constructed an illustration in one language of another text existing in another language and culture. He states that the essential choice, which is made by a translator in deciding between the necessities of the two different roles, represents an initial norm.

Larson (1987:69) offer some extra insight when she states, “the goal of most translators is to produce translations which are acceptable for the audiences for whom the translations are produced”. She states, “The translator has a set of criteria which will guide him [sic] as he works and by which he can measure his final product”.

Pinchuck (1977:205) states that what both the client and translator want are a satisfactory translation, which is gained with a minimum spending of time and effort. However, Pinchuck does not make a difference between acceptability and adequacy. Pinchuck (1977:207) says an adequate translation is always cooperation between conflicting demands. There is a trend to admit fidelity to the necessities of intelligibility.

O’Neill (1998:72) claims that “there is no substitute for a thorough knowledge of the target language”. Translators need to produce texts which are the same as those produced by technical writers working in the target language (Fishbach 1998:2).

Nord (1997:29) explains that the Skopos of a particular translation project might require either “a free or a faithful translation, or anything in between... depending on the purpose of the translation”. Texts are written to correspond to information and translations are no exception. Therefore, Skopos theory would appear to provide a more flexible structure which make certain that the strategies and techniques of translation can be used acceptably wherever the translator believes it to be suitable (Byrne, 2006). In addition, Byrne (2006) says, “We simply select the appropriate strategies depending on the Skopos for the project and the text”. As Nord maintains, “the translation purpose justifies the translation procedures” (1997:124). Based on Byrne’s (2006) view, the Skopos theory is the only approach that in fact acknowledges the professional reality of translating and the demands, expectations and requirements of translators.

### 3. Methodology

This study is a Qualitative/Quantitative one. The main goal of which is to determine the superlative knowledge in the process of translation. This research studies several aspects of technical translation but in this article, the researcher only mentioned study of linguistic and technical knowledge.

#### 3.1 participants

1. Experts in the field of oil and energy translation. These experts are those experienced and skillful translators who have theoretical knowledge in translation of oil and energy texts. They can criticize the work of technical translation in this domain. The samples are **three experts** in the field of Oil and Energy translation.
2. Technical translators in the field of oil and energy. Technical translators are those translators who have proficiency in both language and field of oil and energy. They know the terminologies of oil and energy, so they can translate these types of text from English to Persian. The samples are **thirty technical translators** in the field of Oil and Energy.

3. Technical translated text readers in the field of oil and energy (oil and energy experts). The members of this group of participants can be select from among students, engineers and professors in this field as the users of translated texts. The samples are **thirty technical text readers** in the field of Oil and Energy.

### 3.2 Instrumentations

#### 1: Note Cards

The first stage of this research was gathered accepted theoretical information about technical translation errors, required extent of information load and impact of technical reviewer on the quality of translation. The present researcher was written down all of this theoretical information on note cards and used them after collecting all the required information.

#### 2: Original and Translated Technical Books

The next stage of the research was interviewed with Three Experts in the Field of Oil and Energy translation. The experts was asked to study a few selected parts of the original books and the related translated texts and got their ideas about some of the problems of technical translation of these texts.

#### 3: Questionnaires

In the next stage due to the nature of this research, the ideas of experts about technical translation were gathered via questionnaire. Technical translators, technical readers and technical reviewers got one questionnaire, which included questions about the difficulties of technical translation in the field of Oil and Energy. These questions were about the problems in finding technical equivalence when translating Oil and Energy texts from English to Persian.

### 3.4 Procedure

In total, there are 3 ways through which the researcher used to gather the required data:

1. **Field Study:** The Oil and Energy translation experts studied and analyzed the technical translation errors. The references for this field study were selected from those printed and available translated books in Iran. The problems that were analyzed by the experts include the equivalent finding methods for technical terms in translation.
2. **Interview:** At this stage, experts of technical translation talk about their ideas via interview. The experts in the field of technical translation were asked to explain their ideas about the problematic errors in technical translation of technical terms which they may find in the sample books, and also their experiences about information load in technical translation, descriptive term, technical term etc.
3. **Questionnaire:** Technical translators and technical readers in the field of Oil and Energy were given the same questionnaire which include questions about: the most frequent problematic errors in technical translation, information load in technical translation etc. The responses can help the researcher about the ideas of technical translators and their practical experiences about the problems of Oil and Energy translation. The ideas of technical readers can be important because technical translators always try to make useful technical texts in target language which finally these texts studied by technical text readers. Technical text readers' ideas in this field can help the researcher to find shortcomings and detailed necessities of technical translation.

	Questions
1	To what extent are you satisfied with the current methods of Oil and Energy translations?
2	To what extent does the lack of Oil and Energy knowledge affect correct translation of Oil and Energy texts?
3	To what extent does the lack of linguistic knowledge affect correct translation of Oil and Energy texts when translated by Oil and Energy experts?
4	To what extent is it necessary to be close to the source text style in translating Oil and Energy texts?
5	To what extent is it helpful to rely on the suggestion of Oil and Energy experts for equivalent finding?
6	To what extent is it helpful to use technical reviewers and technical editors in the process of Oil and Energy translation?
7	To what extent is it necessary to transfer the key terms and abbreviations of Oil and Energy text directly into Persian and foreignize the texts?
8	To what extent is it necessary to domesticate or reproduce the key terms of Oil and Energy text in Persian?
9	To what extent is it necessary to transfer new words directly in Oil and Energy translation?
10	To what extent is it necessary to expand or explain new technical terms in Oil and Energy translation?

The questions 2 and 3 answered the main research question and the researcher find out the superlative knowledge through analyzing of data by SPSS software. As the researcher stated, other questions in the questionnaire related to other aspect of technical texts and their problems but in this article, the researcher focused on question 2 and 3.

### 3.5 Design

This study is based on qualitative and quantitative research principles. To perform the study, accepted theoretical information about technical translation errors and equivalent finding methods were gathered by the researcher. Next, experts in technical translation, experienced technical translators, technical reviewers and readers as participants of the study helped to know the superlative knowledge in the process of translation. Some of the participants were given a few sample original books with their translated texts and take part in an interview and the others have given questionnaires.

### 1.6 Data Analysis

To analyze the data gathered from questionnaire, all the test items were codified and then all the codified data were transferred to SPSS software. Statistical operation was performed descriptively and inferentially. As the researcher mentioned before, this questionnaire cover several aspect of this field, but in this article based on our hypothesis. Thus, the researcher needs to analyze question number 2 and 3.

## 4. Results and Discussions

In this stage the analysis were performed on the data achieved from interview and questionnaire. As it was explained in Methodology, three important groups can effectively help finding the superlative knowledge (linguistic knowledge or technical knowledge) in oil and energy translation in Iran. The first and the most important group are oil and energy experts, engineers and students (named as oil and energy experts in this research) who are the real users of translated technical texts and their ideas can help the researcher to find the research question.

The second group is technical translators because their ideas and attitudes about superlative knowledge in the process of oil and energy translation can be compared to what the oil and energy experts believe to be superlative knowledge for oil and energy translation. These two groups were given a questionnaire.

The third group includes experts of oil and energy translation whose ideas may clarify the problems and shortcomings and also specify the superlative knowledge in the process of translation in this field because they have sufficient knowledge in both oil and energy branches and the English language. These experts were interviewed.

### 4.1 First Stage: Questionnaire

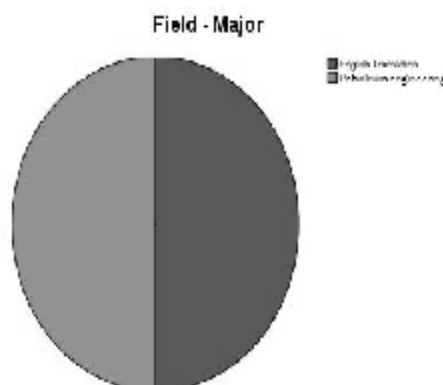
As the first stage, the data analysis, which was performed on the data gathered from questionnaire, was explained. In order to find the research question, the questions number 2 and 3 analyzed.

#### 4.1.1 Descriptive Statistics

In the present article, some variables such as participants' demography and the answered items were analyzed via tables and visual representations by the use of descriptive statistics.

Table 4.1. Inclusion, Distribution and Dispersion Percent of Participants based on Major – Field

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	English Translation	30	50.0	50.0	50.0
	Petroleum engineering	30	50.0	50.0	100.0
	Total	60	100.0	100.0	

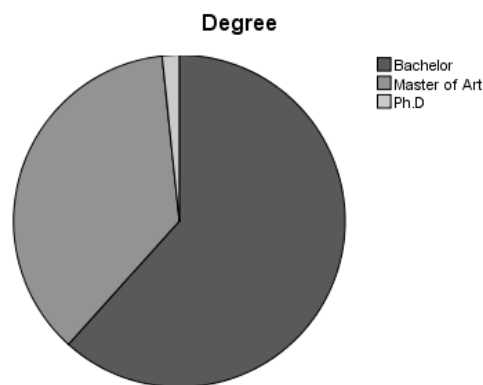


Graph 4.1. Inclusion, Distribution and of Participants based on Major- Field

As it can be seen, the total frequency is 60 participants that 50% (30 persons) of participants have English translation specialty and 50% (30 persons) of participants have petroleum engineering (experts in the field of oil and energy).

Table 4.2. Inclusion, Distribution and Dispersion Percent of Participants based on Degree

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Bachelor	37	61.7	61.7	61.7
	M.A	22	36.7	36.7	98.3
	Ph.D.	1	1.7	1.7	100.0
	Total	60	100.0	100.0	



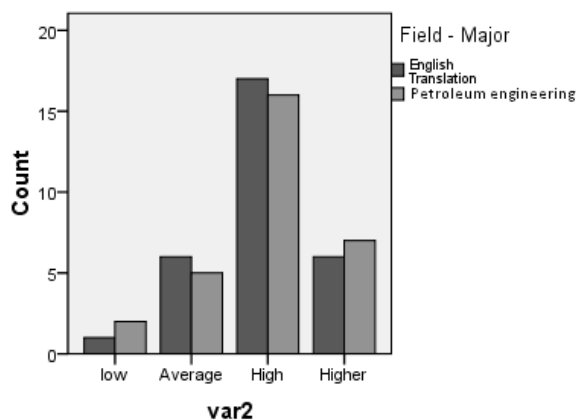
Graph 4.2. Inclusion, Distribution and of Participants based on Degree

As it can be seen 61.7% (37 persons) of participants are bachelor and in post graduation level: 36.7% (22 persons) Master of Arts and 1.7% (1 person) Ph.D

**Second Item:** To what extent does the lack of Oil and Energy knowledge affect correct translation of Oil and Energy texts?

Table 4.3. Inclusion, Distribution and Dispersion Percent of item 2

		var2				Total	
		low	Average	High	Higher		
Field - Major	English Translation	Count	1	6	17	6	30
		% within var2	33.3%	54.5%	51.5%	46.2%	50.0%
	Petroleum engineering	Count	2	5	16	7	30
		% within var2	66.7%	45.5%	48.5%	53.8%	50.0%
Total		Count	3	11	33	13	60
		% within var2	100.0%	100.0%	100.0%	100.0%	100.0%



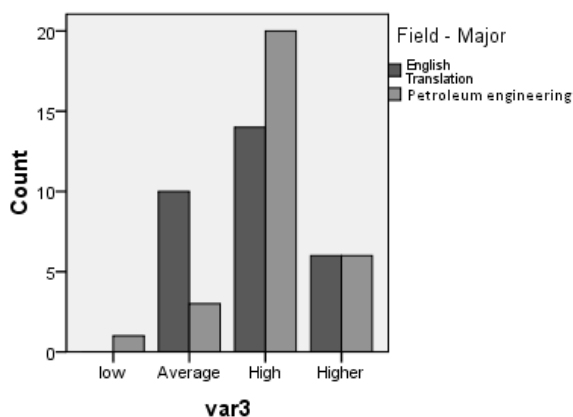
Graph 4.3 Inclusion and Distribution of item 2

The choice "low" was answered by 1 translators and 2 petroleum engineers. The choice "average" was answered by 6 translators and 5 petroleum engineers. The choice "high" was answered by 17 translators and 16 petroleum engineers. The choice "higher" was answered by 6 translators and 7 petroleum engineers. As it can be seen from the table, the choice "lower" was not answered by participants. The choice "high" is the most frequent choice selected by most of the translators and petroleum engineers. Totally, 46 participants selected the choice "high" and "higher".

**Third Item:** To what extent does the lack of linguistic knowledge affect correct translation of Oil and Energy texts when translated by Oil and Energy experts?

Table 4.4. Inclusion, Distribution and Dispersion Percent of item 3

			var3				
			low	Average	High	Higher	Total
Field - Major	English Translation	Count	0	10	14	6	30
		% within var3	.0%	76.9%	41.2%	50.0%	50.0%
Petroleum engineering	Count	Count	1	3	20	6	30
		% within var3	100.0%	23.1%	58.8%	50.0%	50.0%
Total	Count	Count	1	13	34	12	60
		% within var3	100.0%	100.0%	100.0%	100.0%	100.0%



Graph 4.4. Inclusion and Distribution of item 3

The choice "low" was answered by none of translators and 1 petroleum engineers. The choice "average" was answered by 10 translators and 3 petroleum engineers. The choice "high" was answered by 14 translators and 20 petroleum engineers. The choice "higher" was answered by 6 translators and 6 petroleum engineers. As it can be seen from the table, the choice "lower" was not answered by participants. The choice "high" was answered by 34 participants, it is the most frequent choice selected by participants. Totally, 46 participants selected the choice "high" and "higher".

4.2 Inferential Statistics

Research Question:

Between the lack of oil and energy knowledge and lack of linguistic knowledge, which one is the superlative knowledge (main knowledge) in the domain of oil and energy translation?

Table 4.5. Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	var2	3.9333	60	.77824	.10047
	var3	3.9500	60	.69927	.09028

Table 4.6. Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	var2 & var3	60	.243	.061

The Table 4.14 is related to second question. With regards to Means (table 4.14), almost there is no difference between Mean of lack of oil and energy knowledge (M=3.93) and Mean of lack of linguistic knowledge (M=3.95); Both of these Means were approximately 4; Based on this, participants believed that both of the variables (lack of oil and energy knowledge and lack of linguistic knowledge) greatly impact on correct translation of oil and energy texts.

Table 4.7. Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	var2 - var3	-.01667	.91117	.11763	-.25205	.21871	-.142	59	.888

According to the second question of the research, the following hypothesis was formulated: “there is no significant difference between impact of lack of linguistic knowledge and impact of lack of oil and energy knowledge on the correct translation of oil and energy texts”. The table 4.14.2 is results of test of this hypothesis. According to result of Paired Samples Test, difference between Mean of the two variables (lack of oil and energy knowledge and lack of linguistic knowledge) is 0.016 . This difference, based on [significance level= 0.88] is not meaningful; So, the hypothesis is confirmed.

#### 4.3 Second Stage: Interview

As the second stage, experts of oil and energy translation were interviewed. These experts are experienced and skillful oil and energy translators and have theoretical knowledge in this field. They could criticize the work of technical translation in this domain. In this interview, the researcher deal with to several questions and aspect in technical translation but in this article, the researcher only paid to the subject of technical translation in the case of linguistic knowledge and technical knowledge.

Experts in oil and energy translation who were interviewed were as follows:

- A. Kamel Ahmadi. He has Master of Science (M.Sc.) in Petroleum Engineering. His specialty is in the field of Exploration and Drilling Engineering. He has translated numerous texts and technical books in the field of oil and energy. He is supervisor in PARS Oil and Gas Company. He is also editor of technical texts in this field.
- B. Mohammad Reza Adel Zadeh. He has Ph.D. in Petroleum Engineering. He is known as one of the oil experts in Iran. He is one of the most famous translators in this domain and he has numerous translations.
- C. Mehdi Bagher Poor. He has Master of Science (M.Sc.) in Petroleum Engineering. His specialty is in the field of Production Engineering. He has many translations in this field. He is supervisor of production operation. He has translated numerous books and papers in the domain of oil and energy.

All the above-mentioned experts were interviewed and replied to the questions. Their ideas and suggestions about technical translation and oil and energy translations were as follows:

- 1) What is your suggestion as to which knowledge (linguistic knowledge and technical knowledge) is the superlative (main) knowledge in the process of translation?

**A:** In the field of oil and energy, the translators should know both linguistic knowledge and technical knowledge with together, and then they can translate the texts properly.

**B:** Without linguistic knowledge or without technical knowledge, the translators cannot translate the texts correctly. Linguistic knowledge and technical knowledge are complementing each other and they are incomplete without each other; so, a good translation need both of them.

**C:** If the translators have linguistic knowledge but they do not know the subject of the field (technical knowledge), the translation is not proper and the reader cannot understand the translation. In the other hand, If the translators know technical knowledge but do not have linguistic knowledge, again the translation is not good because the readers cannot understand a poor linguistic texts.

**Results:** They suggest both linguistic knowledge and technical knowledge with together.

## 5. Conclusions

The research question can be answered by the gathered data from library study, questionnaire and interview.

1. Between the lack of oil and energy knowledge and lack of linguistic knowledge, which one is the superlative (main) knowledge in the domain of oil and energy translation?

As it revealed from the inferential and descriptive analysis performed on items 2 and 3 of the questionnaire, based on table 4.4 , 4.5 and 4.14 most of the translators and readers believed that lack of linguistic knowledge and lack of oil and energy knowledge impacts on the translation.

Based on the data, almost there is no difference between the lack of linguistic knowledge and lack of oil and energy knowledge; the degrees of their impact on the quality of translation are equal.

As result show, both variables (lack of linguistic knowledge and lack of oil and energy knowledge) highly affect quality of translation and both of them are the main knowledge in the domain of oil and energy. It means that translator who does not have linguistic knowledge or oil and energy knowledge usually produce more distorted texts.

The results data gathered from interview as follows:

They respondents believe that both linguistic knowledge and technical knowledge are essential for a proper translation. They state that these two variables (linguistic knowledge and technical knowledge) complement each other and both of them are central to the process of translation. So, the research hypothesis:” There is no significant difference between impact of lack of linguistic knowledge and impact of lack of oil and energy knowledge on the correct translation of oil and energy texts” is confirmed.

Both participants and expert believe the two variables (linguistic knowledge and technical knowledge) are necessary in the process of translation.

This study shows the result for translation of oil and energy text from English to Persian; for any other fields and languages, a study like this research should be done.

## References

- Byrne, J. (2006) *Technical Translation: Usability Strategies for Translating Technical Documentation*. Netherlands: Springer
- Larson, M. (1987) *Establishing project-specific criteria for acceptability of translations*. In: Marilyn Gaddis Rose (ed.), *Translation excellence: assessment, achievement, maintenance*. American Translators Association Scholarly Monographs, pp. 69-76. NY: University Center, State University of New York.
- Larson, M. (ed.) (1991) *Translation: theory and practice, tension and interdependence*. Series American Translators Association Scholarly Monograph Series; Vol. 5.N.Y.: State University of New York at Binghamton
- Lee-Jahnke, H. (1998) *Training in Medical Translation with Emphasis on German*. In: F.Massardier-Kenney and H. Fishbach (eds.) *Translation and Medicine*, American Translators Association Series, Vol. X, pp. 1-12
- Newmark, P. (1990) *About Translation*. Clevedon: Multilingual Matters
- Newmark, P. (1993) *Paragraphs on Translation*. Clevedon: Multilingual Matters
- Nord, C. (1991) *Scopos, Loyalty and Translational Conventions*. In: *Target* 3(1), pp. 91- 109
- O'Neill, M. (1998) *Who Makes a Better Medical translator: The Medically Knowledgeable Linguist or the Linguistically Knowledgeable Medical Professional? A Physician's Perspective*. In: F. Massardier-Kenney and H. Fishbach (eds.) *Translation and Medicine*, American Translators Association Series, Vol. X, pp.
- Pinchuck, I. (1955) *Scientific and Technical Translation*. London: Andre Deutsch
- Savory, T.H (1957) *The Art of Translation*. London: Jonathan Cape Schatzman, E.L. and F. Praderie (1993) *The Stars* (Translated by A.R. King). Berlin: Springer-Verlag
- Toury, G. (1995) *Descriptive Translation Studies and Beyond*. Amsterdam & Philadelphia: Benjamins