

**ATILIM UNIVERSITY**  
**GRADUATE SCHOOL OF SOCIAL SCIENCES**  
**DEPARTMENT OF TRANSLATION AND INTERPRETATION**  
**TRANSLATION AND INTERPRETATION THESIS MASTER PROGRAM**

**THE FUTURE OF TRANSLATION STUDIES THROUGH ARTIFICIAL  
INTELLIGENCE**

**Master's Thesis**

**Azime Deniz Bacaksız**

**Ankara – 2019**



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**Ankara – 2019**

## ACCEPTANCE AND APPROVAL

This is to certify that this thesis titled “The Future of Translation Studies through Artificial Intelligence” and prepared by Azime Deniz Bacaksız meets with the committee’s approval unanimously as Master’s Thesis in the field of Translation and Interpretation following the successful defense of the thesis conducted in June 18, 2019.

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- I prepared this thesis in accordance with Atılım University Graduate School of Social Sciences Thesis Writing Directive,
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- I cited all sources to which I made reference in my thesis,
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18.06.2019

Azime Deniz Bacaksız

## ÖZ

BACAKSIZ, Azime Deniz. Yapay Zeka ile Çevirinin Geleceği, Yüksek Lisans Tezi, Ankara, 2019.

Dünyanın hızla globalleşmesi ve teknolojideki büyük buluşlar, iletişim için yeni olanaklar ortaya koymuştur. Kilometrelerce uzak mesafelerden haber almak ve haber göndermek, geçmişe oranla hızlanmış ve kolaylaşmıştır. Fakat, dil her zaman farklı toplumlar arasında bir engel olmuştur. Daha hızlı bir iletişim süreci gerektiren bu dünyada, teknoloji ve çeviri çalışmalarının bir araya gelmesi kaçınılmazdır. Zaman içinde çevirmenlerin sorumlulukları artarken, makineler vasıtasıyla kusursuz çeviriler elde etme fikri popülerite kazanmıştır. Makineli çeviri sistemlerinin bazı alanlarda kullanışlı olması, bu fikrin güçlenmesini sağlamıştır. Fakat, basit makineli çeviri sistemlerinin mevcut halleri çeviri iş alanının ihtiyaçlarını karşılamaya yetmemiştir. Bu sorunun çözümünün, insan algısı, mantığı ve sorun çözme becerisini taklit eden Yapay Zeka'yı bilgisayar temelli çeviri yazılımlarına entegre etmek olduğu düşünülmüştür. Bu çalışmada, Yapay Zeka entegre edilmiş güncel çeviri yazılımlarından üç tanesinin çeviri performansı belli kriterlere göre değerlendirilmiştir. Sonucunda, bu yazılımlara entegre edilen Yapay Zekanın güncel altyapısının ve durumunun çeviri iş alanının gereksinimlerini profesyonel anlamda karşılamaya yeterli olmadığı ortaya koyulmuştur.

**Anahtar Sözcükler:** Çeviri, Yapay Zeka, Bilgisayar Temelli Çeviri, Çeviri ve Teknoloji, Çeviri Yazılımları.

## ABSTRACT

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The rapid globalization of the world, and the breakthroughs in technology has created new opportunities for communication. In such a world that demands a faster communication process, the association of technology and translation studies is inevitable. As the responsibilities of the translators has increased in time, the idea of obtaining perfect translations through machines has gained popularity. Nevertheless, the performance of the basic machine translation systems was not enough to meet the requirements of the translation business. It was thought that the integration of the Artificial Intelligence (AI) to computer-based translation software was the solution to this problem. In this study the translation performance three of the current AI-integrated translation softwares are evaluated according to a certain criterion (see pg. 37-39) in this study. In conclusion, it is found out that the current situation and infrastructure of AI integrated to those programs is not capable enough to meet the requirements of the translation business in professional terms.

**Keywords:** Translation, Artificial Intelligence. Computer-Based Translation, Technology and Translation, Translation Software.

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Your dear names and your invaluable memories will always be in my heart. I kindly dedicate this to you.

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## I.INTRODUCTION

One of the most significant issues of the present day is technology. It is currently related to many other fields such as industry, education and medicine. The developments in technology benefit those branches. Eventually, language is the vital part of those processes, and this poses the demand of quick and accurate translations. Directly or indirectly, this increases the responsibilities of the translators and the translation business.

Since the invention of the computer, the field of technology has been in a rapid progress. It touches upon every field of life, from a simple remote control to complex machines used in building industry or medicine. The starting point was the idea of mocking the human brain in a human-made tool. In time, the advancements in technology have progressed so rapidly that the human brain has mapped and computers have been tried to be adapted the features of human brain. Most of the aspects, the trials were successful; however, there is still a lot of way to go. Currently, there are robots that can act like humankind and there are tools controlled by artificial intelligence. Translation and interpretation business has also taken its share from the advancements in technology.

In such a time when communication is vital and business in many fields is dense between countries, the current potential in the translation business and in the individual translators fails to meet the current need. Thus, this paper aims to reveal the contributions of artificial intelligence to the current machine translation programs, which currently lack some qualities to create perfect translations.

### **1.1. Background of the Study**

Starting from the earliest days of the humankind, every individual has needed to find a way to communicate with each other, or with the other living beings. As the individuals have started to create communities, and then the communities have become the nations, this need to reach out to the others has become more and more obvious. The process that has embarked with the birth of mankind, developed, changed and adapted itself to the demands of the date. Moreover, the changing dynamics in the

societies, and the needs of the current day thereby, created a workload that is becoming more and heavier as the days pass on the translators.

In the antic period, important correspondents such as Cicero (first century B.C.) as cited in Robinson (2006) contributes to the process of translation stating in Cicero's *The Best Kind of Orator*, which he says

I did not translate as an interpreter, but as an orator, keeping the same ideas and the forms, or as one might say, the figures of thought, but in a language which conforms to our usage and in so doing, I did not hold it necessary to render word-for-word, but I expressed the general style and the force of language. For I did not think I ought to count them out to the reader like coins, but to pay them by weight, as it were. (Robinson 2006, p. 9-10)

He briefly aims to keep “the general style and the force of language” and to carry the same effect of the Source Text (ST), when it is translated into other languages. His words state the main framework of the translation during those times was rhetoric, which has one end in word-to-word translation and other in sense-for-sense translation.

As time passed, the ideas about translation have changed. Dryden (1992) as quoted in Venuti (2004) argues that word-for-word translation and imitation do not have fluency or the quality of being read easily, he supports paraphrasing or translating with ease to express the meanings (p. 17-18). He favored the idea of giving the idea, the thought in ST, as much as the translator can in the Target Text (TT) without the strict boundaries of the concept of word-for-word or imitation styles.

Between 1900s and 1930s, the main issue in translation studies is that language is constitutive, rather than being communicative in conveying ideas and reality. Benjamin (2000) states in his essay ‘The Task of the Translator’, the translator’s duty is not to present the meaning of a ST, and this creates translations of poor quality. According to him, translation is an element that goes hand in hand with the ST, but they never meet. Translation is the afterlife of a TT, becoming the ‘continued life’ of the original (p. 16). TT, in this sense stands for a new version of the original. Basically it goes around the original text, but they never intercept.

When it comes around 1940s and 1950s, the main concern about translation was “translatability”, according to Venuti (2004). Generally speaking, the main issues were formed between practicality and skepticism (p. 111). Vinay and Darbelnet (1995), support the idea that equivalence of the meanings depends on the situations, which

means reality (p.42). This means that there are more elements than just the meanings of the words, including culture, context and society. Metalinguistic differences have an important effect on the result product in translation.

The concept of “equivalence” labeled the translation studies in 1960s and 70s. This concept is mainly discussed by Eugene Nida (1964), and Werner Koller (1979a). For Koller, there are five types of equivalence; denotative, connotative, text-normative and pragmatic/communicative equivalence (p. 185). All of those elements are related to different text types, the different qualities of the texts and the receiver and the sender, and the extralinguistic content. In this sense, translation was regarded as a process of communication with the original text and context. While Koller presents five types of equivalence, Nida separates the concept of equivalence into two; **formal** and **dynamic**. Formal equivalence stands for the equivalence of the message whereas dynamic equivalence is based upon the same ‘effect’ in **ST** and **TT** (Nida, 1964, p. 159). They both searched for equivalence in several different fields in translation such as; the extra linguistic content of the text, the type of the text, the receiver of the text, and the aesthetics or form of the text.

As the time goes on, the “shifts” in translation was taken to the forefront by Catford (1965). He argues that some departures or differences at linguistic level may occur in the process of going from Source Language (**SL**) to Target Language (**TL**) (p. 73). In this concept, this happens as formal equivalence does not meet the requirements of perfect formal correspondence. In 1975, George Steiner’s *After Babel* in which he presented his opposing ideas against the modern linguistics, with a philosophical point of view hit the headlines in translation studies. According to him, the aim of language should not be to convey the meaning in the **ST**, but it should be constitutive in regenerating it in the **TT** (p. 205). In other words, the idea has become “building the meaning in the **TT** without losing its original features.

Around 1980s, the current topic in the translation studies was cross-cultural communication. With the publication of Bassnet’s (1980) book titled ‘Translation Studies’, it became obvious that translation studies is a field that intertwines with the field of linguistics. In those times, the fact that translation is a different field from literature or other fields related to language started to become obvious. For her, the most important issue is that the relative autonomy of the translated text (as quoted in

Venuti, 2004, p. 221). Gradually, the significance of the concept of equivalence diminished and the functionality in translation became an important subject in this period of time. Vermeer (2000) focused mainly on the concept of functionality. His 'skopos' theory argues that the process of translation is **ST**-based, should be negotiated and performed, should have an aim and result (p. 221). In this aspect, the translation process is shaped according to the purpose of the translation. In addition Berman (1984) has brought a distinct point of view with his concept of "ethnocentric translating" in this era. For him, assimilation of the cultural and linguistic qualities of the **ST** in the culture and language of **TT** creates bad translations (p. 17). This meant keeping the linguistic and cultural identity of the **ST** in its translation was important.

New approaches, theories and ideas appeared during 1990s and this continued until present day. This is the era that translation studies became an individual discipline itself. As Gutt (1991) states in his "relevance theory", Human communication became a new point of approach in the translation process (p. 101). For him, the main point in translation is to relieve the reader from the needless processing effort while reading the translation (p. 101-102). In other words, the translation should sound clear and natural in the **TT** in a way that the receiver of the message does not have any difficulty while reading. This era also witnessed the integration of cultural studies into the translation studies field as the language could not be regarded separately from the other elements of its language and culture and human factor itself. Simon (1996) brought about a new point of view to translation studies by embedding gender studies into this field (p.1). In addition, Venuti (1995) also made an important contribution to this era. He argued that the concept of invisibility depends on two translation methods; *domestication* and *foreignization* (p. 19-20). His concepts were mainly about emphasizing the presence of the translator and the translation itself in the **TT** or not.

As the nations develop, and the world becomes more and more globalized each day, the communication became more significant. Hence, translation became an essential part of the communication process in every part of the world. With globalization, languages and societies started to be integrated more and more, however, perfect dialogue between two sides still requires perfect translations. From daily lives to the preparation processes of important contracts, language and its smooth transition to another language created a heavy workload on translators and translation

companies. However, one of the main problems here is time and money. At this point, the developing technology presented the solution to ease the workload on the translators and the translation companies with the emergence of computer-assisted translation programs; however, those programs are not as efficient as they should be. They help save time, but they lack the cognition and perception of the human mind. This means the integration of Artificial Intelligence (**AI**) to the field of translation studies will be the solution of this problem.

Broadly speaking, artificial intelligence refers to the integration of human intelligence to the machines to obtain intelligent machines. This means “Artificial intelligence is the study of the computations that make it possible to perceive reason and act” (Winston, 1993, p. 5). In other words, artificial intelligence has roots in psychology and computer science, but it is something completely different from them as Winston (1993) states “From the perspective of this definition, artificial intelligence differs from most of psychology because of the greater emphasis on computation, and artificial intelligence differs from most of computer science because of the emphasis on perception, reasoning, and action” (p. 5). In a nutshell, it is the combination of psychology and computer science, trying to mock the human brain’s features and way of decision-making in a human-made tool.

In the present day, the concept of artificial intelligence is a significant subject in every branch that technology reaches out. It is used in various scientific fields stretching from medicine to mathematics. The main aim here is to harness the assets of technology to help humankind at its most. Since artificial intelligence depends on computer technology in general, it provides more accurate data.

The field of medicine has benefited quite a lot from the developments in medical technology so far. Starting from the early ages, each and every item and technique related to the field of medicine has evolved according to current technology. While the surgeries were once performed with ancient tools made from bones and glass, state of the art technology devices are currently used in the present day. In this case, the use of the artificial intelligence in the field of medicine is inevitable. When all the required data is provided, **AI** works best and presents the user with the most accurate results. For example, there are some cases when the human eye is not sharp enough to identify, such as the slight changes in the cancer tissues. In addition, devices

with **AI** help recognizing cancer in the early stages more effectively than well-trained physicians from time to time. Moreover, an EKG device with **AI** can notice an unusual heartbeat, and decide that there is a problem. As it makes the decision instead of a human being, this helps the physicians to save time and make a quicker decision before choosing which treatment to apply.

In the other hand, **AI** makes an excellent tracking and screening tool. This feature is used in a wide range, from security to wildlife. Gonzalez (2016) states, existing monitoring techniques such as tagging, remote photography or scat detection dogs, are not enough to track wildlife (p. 1). Since they depend on human effort, they are limited and insufficient to get precise data. However, **AI**-integrated unmanned aerial vehicles are used more effectively in tracking wildlife. Compared to conventional tools, it presents more accurate data through its improved capabilities (p. 2). Thanks to **AI**, it can monitor the slightest changes in remote areas. It is also helpful in detecting the species, the changes in their population and behavior. In this sense, wildlife experts can stem more accurate and effective data about different species. Especially for tracking the endangered species, getting accurate data is quite significant to protect them in the long term.

As well as scientific fields, **AI** is quite effective in daily life. Many popular social media applications use **AI** to make things easier for the user. As stated in the webpage Medium.com, in the article titled '16 Examples of Artificial Intelligence (AI) in Your Everyday Life', LinkedIn provides its users with suitable job offers according to the user profile. It can even predict who would be hired among others who apply for the same job. Facebook evaluates the user behavior, and scan posts, in order to detect suicidal thinking patterns. In this case, an **AI**-integrated program sends mental health resources to the user, and sometimes to his contacts. Furthermore, many e-mail services use **AI** to filter mails according to their categories Gmail evaluates the mails and decides which category to put them in, according to their importance order. Moreover, those e-mails can be replied through a smart reply tool, which presents the user with pre-made messages. Those smart replies are created automatically according to the content of mails. These features the **AI** provide help the user save time and effort, and make communication easier. As Turovsky (2016) states, Google translate currently supports more than 100, thanks to **AI**. Instead of a statistical system, integrating **AI**

into translation allowed it to produce more efficient and accurate translations. This creates better **TT**'s as it arranges the words to be more natural-sounding sentences.

As it brings significant solutions to such areas, it is expected to find a solution for perfect translations; however, there is much progress to be made. As Winston (1993) states "Artificial intelligence can help us to solve difficult, real-world problems, creating new opportunities in business, engineering, and many other application areas" (p. 14). Currently, tools using artificial intelligence, presents an outstanding performance, if there are clear cut rules, such as it is in a chess game. Yet, human cognition and cultural differences in languages create a significant obstacle that should be overcome in the field of translation.

Human cognition is the essential feature of perceiving the world around us. It is a process of obtaining knowledge which takes place in the brain through senses, practice and thought. This leads to problem solving, reasoning, decision making and language production. As it is a complex field, it is related to branches such as linguistics, anthropology, psychology and philosophy. Broadly, it scrutinizes the cognition, in the aspects of nature, tasks and functions. Farther, cognitive science examines behavior and intelligence, with taking into consideration how information is represented, processed and transformed by nervous systems. Since the word "translation" does not mean finding the exact equivalent in the target language of the source language, and the meaning can be different according to the context, the present computer-assisted translation tools are inadequate.

Considering 'Artificial Intelligence' as a fashionable topic in many areas in today's world, it is also quite important for translation studies field. Yet, the main concern here is if the artificial intelligence is capable of taking the place of human cognition efficiently and speed up the translation studies. Up to now, the machines or tools using artificial intelligence such as SDL Trados (Software and Documentation Localization Trados) or CAT (computer assisted translation) removed a significant amount of workload off of the translators but it is limited to special fields as Nagao (1989) states Canada's TAUM METEO (Traduction Automatique de l'Université de Montreal) translates weather reports between French and English using standard phrases and relatively short sentences within carefully defined topics (p. 31) and most

of those programs are limited with saving the translator's sentences in order to remove the necessity of translating the same words and sentences.

## **1.2. Statement of the Problem**

Even though the current situation in machine translation helps to save time and energy to some extent, this may cause target texts to be monotonous and those software programs are not suitable for the translation of every text type, especially in literary texts. In addition, as those programs are limited with similar sentence structures and they lack the complexity of human cognition, there may be problems with the post-translation period when it takes as long as translating the text manually. Since the translation studies field becomes more and more professional, the aim for excellence emphasizes a great responsibility for the translators. At this point, it is widely believed that, artificial intelligence could be a solution for this problem.

Hence artificial intelligence is a concept that can be improved and developed, if human cognition could be integrated into artificial intelligence more deeply, it will become more efficient. Afterwards, when the artificial intelligence is integrated into the computer-assisted translation tools, it should be capable of evaluating the ST in the aspects of its original context and culture, and after the translation, the TT should reflect the original qualities, as a native speaker of the source language would understand it as it is in the original text.

## **1.3. Purpose of the Study**

In broad sense, Artificial Intelligence has a couple of main components such as; reasoning, learning, perception, problem-solving and language understanding. These are also the main qualities of human intelligence. With the use of these components, humankind perceive the world, make decisions, and act accordingly to those decisions. In theory, artificial intelligence should equal human intelligence; however, the requirements for this perfect equivalence change from field to field. Currently, the present computer-assisted translation programs do not have the effectiveness of the translations done by educated translators. They are limited with

similar sentence structures or with the words that are used by the translator himself regularly or they are limited to the translations in specific fields such as technical translations. Briefly, they lack the components of artificial intelligence. As those computer-assisted translation creates the beginning point of artificial intelligence-assisted translation, they should be capable of imitating thinking, reasoning, perception, problem-solving and language understanding of the human mind. The purpose of this study is to find out if those qualities could be integrated into the computer-assisted translation programs. This will enable the translation business to obtain higher quality translations than the ones made with ordinary computer-assisted translation programs.

#### **1.4. Hypotheses**

Present computer-assisted translation programs lack the qualities of human mind carried by artificial intelligence such as perception, reasoning, learning, problem-solving and language understanding. In this study, it is hypothesized that when required linguistic, scientific and cognitive infrastructures are made available for artificial intelligence the solution to create more correct and proper translations will take place when compared with the current computer-assisted translation programs. As a result, this will allow the translators to overcome the large-scale tasks and works that cannot be done previously because of the time limitations.

#### **1.5. Scope of the Study**

The scope of this study is limited with the relationship between translation studies and artificial intelligence. The role and development of the artificial intelligence in the other business fields such as production, industry, internet and marketing will not be taken into consideration.

## **1.6. Assumptions and Limitations**

In this study, it is assumed that, translations will be more efficient and the translation speed will be accelerated when the elements that compose artificial intelligence are applied to the computer-assisted translation technology. As a result, this study is only limited to translation, the linguistic and technological features of the computer-assisted translation technology and their relation to artificial intelligence.

## **1.7. Duration of the Study**

JUNE 2018: Introduction and background information on translation studies, cognitive science and artificial intelligence.

JULY 2018: Introduction and background information on translation studies, cognitive science and artificial intelligence will be studied in detail.

AUGUST 2018: The primary resources and secondary resources about translation studies, cognitive science and artificial intelligence will be read in detail.

SEPTEMBER 2018: The primary resources and secondary resources about translation studies, cognitive science and artificial intelligence will be read in detail.

OCTOBER 2018: The primary resources and secondary resources about translation studies, cognitive science and artificial intelligence will be inserted into the thesis.

NOVEMBER 2018: The connection between artificial intelligence, cognitive science and translation studies will be studied in detail.

DECEMBER 2018: The data gathered from the whole analysis will be put in order and the main shape of the thesis will be given.

JANUARY 2019: With the use of resources on artificial intelligence, cognitive science and translation studies as well as those resources that provide background information on translation business, technology and cognitive sciences, the situation will be analyzed.

FEBRUARY 2019: After the analysis of the resources on artificial intelligence, cognitive science and translation studies as well as those resources that provide background information on translation business, technology and cognitive sciences, the results will be inserted into the thesis.

MARCH 2019: Conclusion and last views on the future of translation studies with artificial intelligence.

APRIL 2019: References will be prepared in the APA format and presented in the thesis.

MAY 2019: Correcting the mistakes in the thesis will be concluded and the thesis will be concluded and the thesis will be handed in on the agreed date.

JUNE 2019: Jury.

### **1.8. Importance of the Study**

In the present day, technology is one of the fastest developing science fields. This development goes hand in hand with many industrial sectors. They eventually link with language itself in some part of those industries. This creates a huge demand for translation in every part of life, and eventually, this puts a great responsibility on the shoulders of the translation business and the individual translators. The translators should be very experienced in order to catch up with the current trends in the world and language use, and their training also takes a long time.

In the present day that socio-cultural and trade exchange reach their peak; the current translator and translation potential do not meet the demand for correct

translation. Even though it does, quality control processes take a long time. Hence, to highlight the applicability of the artificial intelligence and its components designed for the production industry to translation field and to create a guideline with contributing to this field are the main aim of this study.

### **1.9. Definition of Specific Terms**

*Artificial Intelligence:* Artificial Intelligence (AI) is usually defined as the science and engineering of imitating, extending and augmenting human intelligence through artificial means and techniques to make intelligent machines (Shi, 2011, p. 1).

*Cognition:* Cognition is generally referred to as the process of knowing or understanding relative to affection, motivation or volition.

*Natural Language Processing:* It is the application of computational techniques to the analysis and synthesis of natural language and speech.

*Artificial Neural Networks:* An artificial neuron network (ANN) is a computational model based on the structure and functions of biological neural networks. Information that flows through the network affects the structure of the ANN because a neural network changes - or learns, in a sense - based on that input and output. ("What does Artificial Neural Network (ANN) mean? - Definition from Techopedia", n.d.)

*Parsing:* Parsing, which comes from the Latin expression "pars orationis" (part of speech) is a process which combines separate symbols in a phrase into larger symbolic groupings, until a structure is established (Coughlin, 1990, p. 561).

*Google Brain:* is a deep learning artificial intelligence research team at Google. It is established in the early 2010s. It works on combining open-ended machine learning research with systems engineering and Google-scale computing resources.

*Convolutional Neural Network:* A convolutional neural network (**CNN**) is a specific type of artificial neural network that uses perceptrons, a machine learning unit algorithm, for supervised learning, to analyze data. CNNs apply to image processing, natural language processing and other kinds of cognitive tasks. A convolutional neural network is also known as a ConvNet ("What is a Convolutional Neural Network (CNN)? - Definition from Techopedia", n.d.).

*Example-Based Machine Translation:* Example-based machine translation is a method of machine translation often characterized by its use of a bilingual corpus with parallel texts as its main knowledge base at run-time. It is essentially a translation by analogy and can be viewed as an implementation of a case-based reasoning approach to machine learning (Example-based machine translation, n.d.).

*Interlingual Machine Translation:* Interlingual machine translation is one of the classic approaches to machine translation. In this approach, the source language, i.e. the text to be translated is transformed into an interlingua, i.e., an abstract language-independent representation. The target language is then generated from the interlingua (Interlingual machine translation, n.d.).



## II. REVIEW OF LITERATURE

As technology has developed, it also has flourished a variety of fields, such as education, medicine and business. Technology has allowed the world to become smaller, easier and more understandable, while it provides a network of sharing, development and improvement in many fields. Especially in language learning, the use of technology became an inseparable part of the process after the invention of first computers. The audio-visual sources needed in language learning, have become easier to use thanks to the invention of computers. Computers changed everything after they emerged, they affected the way individuals live, enjoy and learn.

Computer-based communication and more importantly a computer-based world marked the end of the 20<sup>th</sup> century. As well as many other fields, computers became a very essential tool in language learning. Even though it is a human-dependent mechanism, its contributions to language learning are undeniable. The emergence of CALL (Computer-Assisted Language Learning) brought about a new perspective to language learning. Starting from this point, computers became a new window for communication and learning. As Gündüz (2005) states, computers start to play a helping role in a learning environment for the teacher (p. 194). Since they lack human cognition and understanding, they just stand for an important aid for a teacher in a classroom or a laboratory.

After the establishment of language laboratories and their usage in language learning, CALL emerged as a support tool for learners in 1970s. David Crystal (1988) records on this program as “Micro computers used as word processors complement the audio facilities, enabling the interactive teaching of all four language skills reading, listening, speaking and writing” (p. 377). In other words, it holds for an aid for the teachers and instructors and a source of further study for learners. As language teaching and learning depends on cognition and human understanding, a mechanical tool cannot replace the instructor himself, at this point.

CALL (Computer-Assisted Language Learning) is a special term, which stands for the use of computer in a language learning environment by the learners and by the instructors in a language learning period (Hardisty & Windeatt, 1989). In the broad sense, it helps the learners to answer some prefabricated questions, tasks and work on rules and examples. Afterwards, it can be used to test the learner with preconditioned

questions, allowing the learner to grasp a feedback, and the instructor to examine the condition of the learner, by saving the results of the tests and tasks. The control here is on the language instructor, as the mechanism itself cannot produce essential tools, tasks and data, as it lacks the human cognition. The instructor decides what is required, when to be used, and how to be used. In this aspect, CALL presents a flexible device, to support and enhance the language learning process effectively. This use of CALL is summarized by Jones and Fortescue (1987) as it is an adjustable language learning tool which can be used in many ways and for many purposes by the instructors and learners.

As well as education, computers are used in many fields of life such as health industry, production and communication. The way the goods are produced, the way the news reach to the farther parts of the world, and the way people get treatments have changed very quickly and in a beneficial sense. The development and evaluation of the technology helped humankind to do tasks and meet responsibilities in an easier way and in a shorter time. In our day, a variety of surgical operations are done with remote-controlled micro robots thanks to the current developments of the technology. The touch of technology upon medicine has become a touchstone, however; there is no option to replace a 'live' surgeon, yet. The industry has received its share from this development boom in technology; the goods are produced faster and more efficiently today. However, those machines are still in control of human kind, they do not operate on their own. The way people communicate all over the world is now a matter of seconds thanks to technology. Every individual can reach knowledge, information and news from different parts of the world easily and quickly. Nevertheless, they still should manage the process of reaching those, on their own. Again, there is no such tool that has human cognition and understanding which does everything instead of individuals themselves.

### **2.1. Use of Computers in Translation Studies**

The developing and changing world has brought about many changes and advancements in many fields. As the knowledge and information has started to travel around the globe faster, the technology has started to mingle in this process, eventually. The libraries, the news sources and the communication have slowly turned into online

sources; this required an effective use of technology and computers in those fields. Since the individuals from all over the world does not share the same language and culture, translation studies has become an essential part of this process. As well as becoming online, those information sources have needed to be translated into different languages for different individuals. This emerged a new requirement; the use of computers in translation studies.

The field of literature has required to be globalized, to share knowledge as many individuals as possible. The hard copies and in print sources have required to be shared with the world. The access to those limited in-print books became easier in this way, and this created a thicker environment of knowledge. Internet use throughout the globe became denser, and more frequent. Machines such as television started to carry the information and communication to the farthest places on earth internationally, from one culture to another. The language barrier here had to be broken by translations between different languages, which put a great responsibility on the shoulders of the translator, in terms of quality and time.

In such an atmosphere, a new question emerged; how will the information be shared with other cultures and languages, while the translators are unable to meet the current requirements in the aspects of time and quality? As translation studies is the medium of the information transmission between languages, the contributions of technology to this field carry an undeniable signification. It is such an essential topic that, it is discussed at the European Union and NATO, as it is closely related to globalization and international policies between the countries. Correspondingly, language and translation emerges as a subject that presents a tool to reach societies and holds different obstacles to be solved when it is tried to be done through computers.

SYSTRAN:

The needs on agenda, paved the way for computer-based translations in 1950s and 1960s. as stated in the webpage SYSTRAN, the article titled ‘SYSTRAN – A Machine Translation Pioneer’ the language barrier between the opponents of the Cold War created the required environment for the cooperation between SYSTRAN and US Air Force, to work on the first computer software program which would allow the

computer to translate from Russian to English. Even though an ALPAC (Automatic Language Processing Advisory Committee) reports stated that machine translation takes much time without being effective, and more expensive than human translation due to post-editing procedures despite to the efforts of the programmers (Arthern, 1979, p. 77) this is the first step of machine translation journey, which will continue in the future. From this point on, a variety of studies and researches has held on this topic. The aim here was to find out the words that frequently used in the messages and orders of the opponent, and quickly translate them into English, with the aid of machine translation. However, as the topic progressed, a variety of new challenges appeared. As those current programs do not have human cognition and perception, they could not create efficient translations, if the sentence structures become more complex and complicated than predictable ones.

#### TAUM METEO:

With the emergence of TAUM METEO, machine translation has entered into daily lives a step further. It was created to save time and effort while presenting the weather reports in different languages. According to Nagao (1989), TAUM METEO (Traduction Automatique de l'Université de Montreal) is efficient in translating standard phrases and short sentences within specific topics in weather reports (p. 31). This means it could be used statistically. It had the ability of translating the most used statements and standard phrases in weather reports and was not enough to present the abstract meanings in everyday language like SYSTRAN. This made it impossible to use it in another field since it didn't have a feature imitating human cognition and perception. This made it inevitable to use TAUM METEO more efficiently.

#### EUROTRA:

Following, the current trend has become to overcome the post-editing problems. As Schairer (1996) states in her article, "Input language that is sufficiently limited to permit computer-aided translation is unacceptably restrictive to the authors, and the post editing of even pre-edited material takes almost as long as manual

translation (p. 96).” This meant the meanings needed to be translated word-to-word, as a result of the lack of human cognition. In addition, the time spent on the post-editing procedure was more than expected, due to the flexibility of the meanings, according to the different contexts. This caused a setback on the translators themselves, who was working on the post-editing. Correction of poorly produced translations, and reduction of the translation to the comprehension reduced the inner strength of the translators to work (Elliston, 1979, p. 152). This resulted in the creation of EUROTRA, with the contributions of a couple of European Community (EC) nations. Their aim was to improve the current situation of the computer-aided translation programs, with clearing away some of these obstacles.

The needs of the European Community were far different from TAUM METEO or SYSTRAN. As the political and economic issues occupy the agenda of the EC, the language barrier is necessitated to be overcome by the most effective solution: finding an efficient and reasonable way to transmit the messages to the members of a multilingual setting. EUROTRA was designed with a different language translation system, instead of saving the most used words and placing them in their correct places. Correspondingly, “... the architecture of a multilingual MT system of this type has to be different from that of a system designed for translation between pairs of languages” (Durand & Bennet et.al., 1991, p. 104). In this aspect, the abstract meanings of the words and sentences become crucial as the languages are never identical in each detail. This meant “That is, the general EUROTRA methodology contains a move from transfer method towards an interlingual method” (Maegaard & Perschke, 1991, p. 76). In other words, the source languages were decomposed and composed again with the most suitable meanings in the TL. On the whole, this was a step towards more efficient and meaningful translations, yet, was not perfect.

All of those three programs were mainly depended on a word-to-word translation technique. Doesn't matter if they statistically find the most used words, or re-create the sentences in the TL, they lack human cognition and perception. This results in crucial deficiencies in meaning, as there are no identical language pairs. In addition, the unique cultures and lifestyles of each language should be integrated into this process, to create the most accurate translation. As well as language itself, culture is an essential part of translation, which carries unique signs and meanings that must

be conveyed into the **TL**. With the integration of human cognition into **AI** in translation studies, it will be a quite efficient tool to make precise translations.

## **2.2. The Incompetencies of Computers in Translation**

The invention of the computer has changed the world in a way that the invention of the wheel did in the ancient times. The humanity started to progress faster than ever before with the invention of computer. It catered for different requirements of life from basic tasks such as remote controls to more complex ones like medical tools, in time. In other words, the computer allowed the humankind to perform tasks faster and more efficiently. It flourished every field of life as well as touching upon translation and interpretation. Nonetheless, it never has the equal qualities of human brain and cognition, even though there have been studies and researches to adapt those features of human brain to computers and computer software.

Mainly, a correct translation needs a correct perception of the situation, context and the text itself. In addition, the software and the hardware of the computers should be improved enough to mock human cognition and perception in the translation process. This creates three main issues at this point.

### *Lack of Human Cognition*

Evaluating and understanding **ST** is the first step of accurate translations. The translation process starts with understanding the text and the culture it belongs to. The signs, symbols and the underlying meanings should be conveyed into the **TT** correctly. This is done through ‘human cognition’. Cognition is generally referred to as the process of knowing or understanding relative to affection, motivation or volition. Definitions of cognition can be briefly summarized into 5 main categories according to American psychologist Houston etc:

- (1) Cognition is the process of information processing;
- (2) Cognition involves symbol processing in psychology;
- (3) Cognition deals with problem solving;
- (4) Cognition studies mind and intelligence;

(5) Cognition consists of a series of activities, such as perception, memory, thinking, judgment, reasoning, problem solving, learning, imagination, concept forming, language using, etc. (Shi, 2011, p. 5)

To create effective and precise translations, the human cognition should be adapted to the translation software to reflect the way of understanding and grasp of the environment of the human brain. As the languages and the culture they exist in are unique, the way the individuals of those cultures grasp their environment are unique, too. This emphasizes the significance of human cognition in the translation process. Since there are no identical cultures and languages in the world, cognition helps sending and receiving the message in the correct way.

So far, the trials of machine translation lacked human cognition. With the introduction of artificial intelligence to the different fields than computation, the integration of human cognition into such tools has become possible. Yet, the process is still under construction, as the human cognition still could not be mapped as it is in the brain. Computer-aided translation tools such as TAUM METEO or SYSTRAN were basically depended upon recording the frequently used words and sentence structures in different language pairs, leaving the cultural codes aside. This caused significant deficiencies in the meaning as languages cannot be thought apart from their cultures and codes.

Human cognition gains importance at this point for it can evaluate the texts, the contexts and situations correctly. Thanks to this feature of the human brain, a professional translator can understand what is implied between the lines and convey the messages correctly after deciphering contextual and cultural items in a text. In order to convey the message accurately, as it was produced in the **TT**, the translator should find the “equivalent meaning” in the **TL**. Human cognition is the vital element to help the translator to transmit the message from a language to another in the translation process. As **AI** aims to mock human cognition and its ability to evaluate the texts, concepts and contexts correctly, it is expected to perform as the human brain does. During the translation process **AI** should be able to find the equal meaning of the contexts, concepts and the text itself and to create the correct sentence structure as the human brain naturally does. It should create “cognitive equivalence” to produce effective translations.

### *Lack of Logical Reasoning*

Currently, the computer technology is far more developed than expected 50 years ago. However, there is still no computer that can imitate human brain and its perception completely. One of the most important factors in human cognition is the culture one grows up in. According to the New World Encyclopedia, “The word culture, from the Latin root *colere* (to inhabit, to cultivate, or to honor), generally refers to patterns of human activity and the symbolic structures that give such activity significance. Different definitions of "culture" reflect different theoretical orientations for understanding, or criteria for valuing, human activity.” (“Culture - New World Encyclopedia”, n.d.). In this sense, culture changes from society to society. It shapes the belief system, the mindset, and the moral and ethical aspects of its society.

A society is a grouping of individuals, which is characterized by common interest and may have distinctive culture and institutions. A "society" may refer to a particular ethnic group, such as the Nuer, to a nation state, such as Switzerland, or to a broader cultural group, such as Western society. An organized group of people associated together for religious, benevolent, cultural, scientific, political, patriotic, or other purposes may also be considered a society. (“Society - New World Encyclopedia”, n.d.)

It has its own signs and symbols which carries important meanings. When one makes a hand sign, the other people from the same culture more or less understands what the person wants to say. Logical reasoning is the feature of human brain that allows the individuals to understand correctly.

Since language is an inseparable part of culture, they should be evaluated together. As well as words, sentences, statements and phrases, meaning is carried by signs and symbols. Logical reasoning becomes an inevitable part of the translation process at this point. Evaluating the **ST** together with its cultural signs is the first step of creating an accurate translation. The second step is to carry the meaning to the **TL** without losing anything and reflecting it at its best in the **TT**. Nevertheless, the lack of logical reasoning in current computers and translation programs is a big obstacle to create precise translations.

### *Lack of Hardware and Software*

Current technology in computers has the ability of perceiving and storing the data; however, this stage of technology does not allow the computers to evaluate and comment on the data with the features of its hardware only. In order to get accurate translations, the hardware should have the features of human brain, in other words, the hardware of a computer should be capable of evaluating the data as the human brain does. At this point, different software programs support hardware to get closer to human brain in those aspects.

Without human cognition and perception, conveying the correct meanings in the **ST** to the **TT** is impossible. The human brain evaluates the specific situation in its specific context. In other words, human brain perceives the situation with all of the elements of the context. When this is applied to the translation process, the **ST** should be handled with its unique culture, and the signs and symbols that belong to it. Without those elements, the translated material remains insufficient and does not meet the expectations. As language cannot be separated from its culture, the meaning will be deficient. Hence, the software of the computers should complement the lack of the hardware in this aspect.

Since **AI** aims to imitate the human cognition, perception and logical reasoning, it will be the solution to this deficiency. As human brain does, it can learn and evaluate, preparing the basis for a true understanding of the texts and their original contexts. Through neural networks it has, it will fulfill the gap of perception and reasoning in the traditional computer-aided translation programs, after a correct programming. In this way, the translations made through the **AI**-integrated software will be more effective and accurate than the traditional computer-aided translation methods. The **AI** has the capacity of understanding the **TT** as a live translator does, and it can produce accurate translations, thanks to its ability of perceiving and reasoning.

### **2.3. The Incompetencies in Sentence Structure**

Human interaction depends on communication and communication includes many elements such as body language to help exchanging messages. A conversation

between two individuals consists of different messages between the sender and the receiver in a defined context. The most significant aim of conversation is conveying the message of the sender to the receiver correctly. In this sense, the context consists of the culture, the society and the language itself. The signs and symbols of culture support the true transmission of the message. However, the differences between linguistic families and language pairs create a quite significant problem in the translation process. Bell (1991) argues that translation is “the expression in another language...of what has been expressed in [the] source language, preserving semantic and stylistic equivalencies,” (p. 5). Nevertheless, translation process is more than finding the exact equivalences in the TL. To reflect the correct message in a correct sentence structure includes more than substituting the words of a language.

Since the beginning of communication between languages and cultures, translation has been the most important medium of this communication process. Nevertheless, the problem of equivalence in a language pair during a translation process have always been a problematic issue according to many translation studies scholars such as Baker (1992). Many ways and theories have been presented by different scholars of this field to overcome this difficulty. One of the qualities of human mind is to produce unlimited numbers and combinations with a limited linguistic input. This originates from the creative feature of human mind. For instance, the human mind can produce a defined number of sentences or structures from 10-15 words whereas the computer-based translation software does not have this capability since it cannot measure the numerous possible sentences or structures. Nevertheless, the artificial intelligence can produce those sentences or structures in the possible grammatical structures correctly, taking their morphological, syntactical and stylistic features into account. In addition, it can evaluate the issue of ‘meaning’ from the aspects of semantics and pragmatics.

#### **2.4. The Emergence of Artificial Intelligence in Computer-Based Translation**

The globalized world brought about the need of a faster communication, thus computers have rapidly taken their place in daily lives of the individuals. As the news starts to spread around the world in seconds, the requirement to reach every culture

and part of the world emerged. At this point, the responsibilities of the translators have increased. Thanks to the assets of technology, the computer-based translation programs have started to be used for a quicker translation process. Nevertheless, the basis of the first computer-based translation programs was simply substituting the words and the sentences in the **TL**. This created inconsistencies in the translated product, and the post-translation process started to be more costly than a traditional translation process. At this point, the idea of merging **AI** and computer-based translation programs have come to light.

The first computer-based translation programs such as SYSTRAN lacked human cognition, perception and logical reasoning. These are the basic but the most essential elements of language processing, hence, the translation process. A correct translation product requires a correct and effective understanding of the **ST**, then a correct reflection of the ideas and the messages of it into the **TT**. This deficiency in the computer-translation programs would be fulfilled with **AI**, as its aim is to imitate the human cognition and intelligence to create intelligent machines and software programs that can mock human thinking and reasoning.

The basic system of the computer-based translation programs depends more on finding the equivalents in the **TL** than giving the meaning in the most accurate way. As the meaning changes according to the context, giving the same meaning in the **TL** is far more than substituting the words with their closest equivalents. According to Nirenburg (1987),

The task of MT can be defined very simply: the computer must be able to obtain as input a text in one language (SL, for source language) and produce as output a text in another language (TL, for target language), so that the meaning of the TL text is the same as that of the SL text. (p.2)

As it can be understood from Nirenburg's statement, the input and the output should be equivalent, however, this equivalence should be more than substitution of words in a language pair. This approach should lie in the basis, nevertheless, the correct evaluation of the context and the correct reflection of the meaning in the **TL** is the key point in a true computer-based translation process. The existence and possibility of the contextual, cultural and linguistic ambiguities should be embodied in. This means, the

simple, statistical translation approach in the first attempts of computer-based translation programs such as TAUM METEO, ignore those elements. Even though it helps save time in translating simple and uncomplicated sentence structures, this approach is quite inadequate in translating complex ones.

Since **AI** aims to mock human thinking, perception and logical reasoning, it is the element that would meet the need of the true understanding of the context and sentence structures. The sufficient evaluation of the **ST** and its related context gain significance in the process of creating a correct translation product. Thanks to the neural networks it has, the **AI** fulfills this deficiency in the first attempts of computer-based translation programs. A human translator evaluates not only the text itself, but also the elements of culture and society itself in the text in question. Kay et al. (1994) also state that there are certain elements that have to be carried into the **TT** during translation process;

It is clear that a translation is some transformation of the source sentence into the target language which preserves certain properties. What exactly must be preserved is difficult to say. Many of the examples we have discussed that is not the meaning, in any but the loosest sense of that word. What we will prefer to say is that a good translation is one that preserves to the extent possible, the *intention* of the original. In other words, it preserves the intended effect on the recipient. (p.27)

Naturally, the human perception and logical reasoning tend to read the cultural and contextual elements between the lines and words, beyond the first meanings of the sentence structures in a text. Thanks to its ability of mocking human perception and logical reasoning, the **AI** aims to present those in the translation product, thus to create more adequate translations than the first attempts of computer-based translation programs. The translation process should be a matter of communication in the most effective way, rather than just carrying the same meaning from a language to the another one. Therefore, evaluation of the text itself and its contextual, cultural and linguistic elements become a quite significant step in the translation process.

## 2.5. AI-Integrated Translation Programs

Since the first attempts of computer-based translation programs such as SYSTRAN and TAUM METEO, numerous achievements have been done in this field. Thanks to the increase in the access of the computers and World Wide Web, the communication need also become greater. This has brought about a faster communication requirement. At this point, the integration of Artificial Intelligence to the computer-based translation programs has created a revolution. As the human mind thinks through language medium rather than concepts, it creates a connection between concepts and words. This is the most unique and significant feature of human mind in translating process. Thanks to this feature, the translators can correctly evaluate and understand the **ST** itself and carry the same meaning to the **TT**. Through the neural networks, and the ability to learn, Artificial Intelligence in computer-based translation programs aim to do the same. It would provide the system that would evaluate the context, the cultural symbols and signs, and the sentence structures of different language families.

Instead of a statistical approach, translating through human reasoning presented by **AI** is the key to more appropriate and effective translations. As Adalı (2012) states, the aim here is one speaks or writes in a defined language while the other listens to it in his own language (p. 2). The sender of the **ST** aims to transmit the message correctly while the receiver of the **TT** aims to get the message appropriately in the way it sounds the most natural. In the globalized world in which the knowledge transmission between the cultures and nations has increased significantly, carrying the information between languages correctly and effectively quickly has become an obligation.

In order to carry the messages fluently and correctly between two languages, receiving the input is vital. Coughlin (1990) states “Natural Language Processing (NLP) strategies include syntactic and semantic parsing, and knowledge-based approaches including the consultation of expert systems” (p. 561). This is provided by Artificial Neural Network Systems of **AI** which mocks the human perception and logic. Today, the computer-based translation programs are improved with such developments to create effective and truer translations. In the ideal framework, the

systems should have the ability to learn, evaluate and reflect the message correctly from one language into the other. According to Uğur and Kınacı (2006) artificial neural networks has the ability to learn like human brain does, and have the capacity of learning and discovering, and producing new knowledge through learning and this discovering process (p. 345). This would present the basis for truer and more appropriate translations when AI and ANN are integrated into computer-based translation programs.

#### GOOGLE TRANSLATE:

Google Translate is a popular computer-based translation program of the day. The accessibility, the practicality and its frequently improved system makes it the first choice of the users. It is a project that has developed under Google Brain, which is a research collaboration between Google Fellow Jeff Dean, Google Researcher Greg Corrado and Stanford University Professor Andrew Ng. It simply works on artificial intelligence, deep learning and artificial neural networks. The research Google Brain does also contributed to Google Translate, allowing it to create better and more competent translations through improving its ability of understanding the context and the sentence structures like human brain does.

The first steps of Google Translate were not related to artificial intelligence and its learning ability. When it is first launched in 2006, it used a statistical framework. Turovsky (2016) also states, Google Translation has begun with a statistical approach which translates the texts using statistical models and is improved in time to reach at the stage of using a neural system which is capable of deep learning. This helped the system to improve the quality of the translations. The integration of ANN to Google Translate should be appreciated since it presents an approach more like human brain does, including the elements such as the context of the text itself. According to Turovsky (2016);

At a high level, the Neural system translates whole sentences at a time, rather than just piece by piece. It uses this broader context to help it figure out the most relevant translation, which it then rearranges and adjusts to be more like a human speaking with proper grammar. Since it's easier to understand each sentence, translated paragraphs and articles are a lot smoother and easier to

read. And this is all possible because of end-to-end learning system built on Neural Machine Translation, which basically means that the system learns over time to create better, more natural translations.

The neural system allows Google Translate to produce more effective and truer translations. Like Quach (2016) states “An NMT is a large single neural network that learns to translate by being trained on a pair of languages. Google Translate has been around for ten years, and before an NMT was used, it often provided a clumsy attempt at translation.” As the true translation needs to sound as natural as possible in the **TL**, the way Google Translate translates through neural system helps the **ST** to be native in the **TT** as if it was produced in the **TL** at the first place.

As well as having the capability to produce more effective translations, Google Translate has the ability to learn thanks to the neural network system it has. Through translating, it learns and saves the information to be used in the next translations even though the system does not have that language yet. According to Quach (2016);

Interestingly, the researchers found evidence that the network was learning “some sort of shared representation,” where sentences with similar meaning were represented in similar ways regardless of language.

Training the model across multiple languages can enhance the performance of translating into individual languages, and the system can even cope better with sentences that are written in a mixture of languages.

The ability of learning helps the system to understand and evaluate the contexts and cultural signs and symbols in a **ST**. This learning process makes the translations more competent, fluent and adequate. It helps to make the translations closer to the way the humans speak and write in their native language by keeping the information of similar structures and meanings between languages.

DEEPL:

DeepL which was launched in 2017 is a more recent machine translation tool than Google Translate. It is a deep learning company that works on **AI** systems for languages and translations. In the beginning, the company was established as Linguee,

which created the first internet search engine for translations. It was a tool that would allow the users to see how the others translated the same sentence. The many years of experience of Linguee has led to the birth of DeepL translator. Its system is based on Linguee database, which is an extensive online dictionary for numerous languages. The framework differs from the ordinary online dictionaries. As mentioned in Wikipedia;

Linguee uses specialized web crawlers to search the Internet for appropriate bilingual texts and to divide them into parallel sentences. The paired sentences identified undergo automatic quality evaluation by a human-trained machine learning algorithm that estimates the quality of translation. The user can set the number of pairs using a fuzzy search, access, and the ranking of search results with the previous quality assurance and compliance is influenced by the search term. Users can also rate translations manually, so that the machine learning system is trained continuously. (Linguee, n.d.)

Thanks to its software, the translations and the definitions becomes closer to human speaking at a defined context and culture. The artificial learning system it has allows Linguee to develop and improve itself continuously. This allows the translation products to be more and more efficient in time. DeepL is founded upon such a fund of knowledge. The aim of the system is to create translations that sounds human-like, as if one speaks in his own language. As stated in Wikipedia, “The service uses convolutional neural networks built on the Linguee database with a proprietary approach which is not made public or published but reported that it uses some sort of attention mechanism. It is reported that company uses a 5 Petaflops machine(DeepL Translator, n.d.).” The CNN in its software system allows DeepL Translator to learn and improvise its capabilities as a translation tool continuously. It mocks cognitive tasks such as natural language processing and thanks to this continual development, its translation products become closer to natural.

The aim of the company is to overcome the coldness of the machine in the translations done by DeepL Translator. As Gereon Frahling the founder and CEO of the company states; “By arranging the neurons and their connections differently, we have enabled our networks to map natural language more comprehensively than any other neural network to date.” (DeepL Translator, 2017) In this sense, the machine would create better translation products while being natural as a human translator does.

The network system of DeepL examines numerous translations during training and learns itself how to produce translations with correct grammar and sentence structure of a specific language. The system aims to perceive the multiple possibilities of a sentence and reflect it correctly in the translated product. Thanks to its software supported by **AI**, it mocks human perception and logic in a multitude of situations to decide which translation is correct in which context.

#### MICROSOFT TRANSLATOR:

Microsoft Translator is a computer-based translation tool developed by Microsoft Corporation between 1999 and 2000. During its early stages, its system was based on semantic-predicate argument structures. In time, the basis of the system was changed into a data-driven strategy. Like other computer-based translation tools of the day, the **AI** system integrated in its software is trained to understand similar texts and sentence structures in order to provide user with a translation that sounds natural as much as possible. As stated in Wikipedia, it was made available for many Microsoft Translator tools through a cloud-based **API** (Application Programming Interface) to reach more customers in 2011 and with an update in 2018 the translation method of the tool was changed with the integration of neural machine translation. (Microsoft Translator, n.d.) The aim of Microsoft Translator developers while moving from a statistical-based approach to a neural network system that has the capability of learning was to give the system the ability to provide its users with more adequate translations.

According to Microsoft, the statistical machine translation was limited and works well with short sentences and basic structures. Nevertheless, in longer and complex sentence structures the quality of the translated product varied. To prevent the translations sound machine-generated, the **AI** and neural networks with learning abilities were integrated into its system. The target was to overcome the problems created by the statistical-based approach (What is a neural machine translation (NMT)?, n.d.). This new approach helps the translated product to sound more natural and is an attempt to overcome the foreignness problem in a translated text.

The artificial neural network approach in computer-based translation programs has brought about a new point of view to the translated products of computer-based translation programs. While the statistical-based system was mainly looking for the

best choice in the meaning with evaluating the statistical data of the translations, the ANN pursues a two-stage translation process as follows;

A first stage models the word that needs to be translated based on the context of this word (and its possible translations) within the full sentence, whether the sentence is 5 words or 20 words long. A second stage then translates this word model (not the word itself but the model the neural network has built of it), within the context of the sentence, into the other language. (What is a neural machine translation (NMT)?, n.d.)

As this approach in computer-based translation software of Microsoft Translator evaluates the sentence as a whole, instead of breaking it down into smaller structures, the translated product comes out at a higher level of quality. This approach also allows the ANN to act more like human brain; the variations and changes in the meaning are considered, and the best option is chosen according to the whole text. Moreover, it also has the capability of learning through the translation process, the variations and changes in the meanings according to the different contexts and cultural situations are kept in the memory and used in the future translations.

### III.METHOD

In this study, a qualitative method will be applied. The aim is to reveal the contributions and weaknesses of the integration of the **AI** to current computer-based translation software through the examination of a number of texts chosen from different fields with different qualities, according to some defined criterion (see pg. 37-39).

#### **3.1. An Overview of Google Translate, DeepL and Microsoft Translator**

The integration of technology into daily lives has brought about much advancement in the various fields of life. One of the most important fields that has affected positively by the current technology is “communication”. Since the main medium of communication process is language, the research to transmit the messages from one society to another in a quick pace has being done for a while. “Correct translation” is the key point here. Before such advancements in technology, the translators were the ones who were relied on to transfer the messages from one language to another, however, the globalization of the world increased the responsibilities of them and increased the need of translation at the same time. These factors brought the integration of technology into translation to the fore.

While the computer-based translation programs were relied mainly on a statistical approach, the current advancements in technology supported the idea of bringing **AI** and these software programs together, to reach more human-like translation products. Companies such as Microsoft, Google and DeepL have been working on this issue for a long time and have accomplished quite significant steps so far. They searched for ways to integrate **AI** technology into computer-based translation programs, and the current situation of their software mostly meets the users’ needs in a globalized world.

### 3.1.1. Google Translate

Like many other computer-based translation programs, Google Translate has also stepped into the arena with a statistical approach to translations. As stated in Wikipedia,

It is a “rule-based” translation method that utilizes predictive algorithms to guess ways to translate texts in foreign languages. It aims to translate whole phrases rather than single words then gather overlapping phrases for translation. Moreover, it also analyzes bilingual text corpora to generate statistical model that translates texts from one language to another. (Google Translate, n.d.)

This approach succeeds in creating appropriate translation products, nevertheless, it is not effective in translating complex sentence structures and cultural and contextual elements in a text, as it keeps the translations statistically in the memory and tends to use the results of statistics in a sentence structure. Basically, the statistical approach benefits from the best translation data gathered statistically to be used in the translation product.

To improvise its software system, the basis of the Google Translate was switched from a statistical approach to the Google Neural Machine Translation system in 2016, thanks to the recent developments in the use of **AI**. The aim was to increase the accuracy and fluency in the translation products. In other words, the translation products were expected to sound more human-like, narrowing the gap between the human translation and the machine translation. This new system in Google Translate has depended on an end-to-end artificial neural network, which has the ability of learning. As the users benefit from the services of Google Translate, the neural network system keeps learning from the **ST** and **TT**. This helps the system to improve the quality, the accuracy and the fluency of the translated text.

The learning process of the neural network system in Google depends on a system called “example-based machine translation (**EBMT**).” This new approach allows the neural network to learn from the texts the users translate through Google Translate. The inputs of the users, in this sense, become examples for the system and this provides a background for the future translations. Moreover, the new neural network system in Google Translate handles the sentence structures as a whole at a

time; it does not break the structures down into pieces. To reach the most accurate and efficient translation, it depends on contexts as a whole and tailor the translation product closer to human-speaking at the related context. Thanks to its ability to learn, the system evaluates and improvises itself to produce more natural-sounding and efficient translations. In addition, as the system does not memorize the phase-to-phase translations, instead, it keeps the semantics of the sentences in the memory thanks to its capability of interlingual machine translations (Google Translate, 2019). This allows the translations to be closer to natural, as if it is produced in their original context. The common elements which are explored by the neural network system of Google Translate between different languages also help the system to produce more human-like translations.

### **3.1.2. DeepL**

After the companies such as Google and Microsoft start to work on integrating AI to their computer-based translation software, DeepL was launched in 2017, based on Linguee. As stated in Wikipedia, Linguee is an online dictionary which provides service in a numerous of languages, and acts as a translation memory and works together with a search engine that can access to innumerable bilingual sentence pairs (Linguee, n.d.). The search engine plays a significant role to improve the translation memory of Linguee, which keeps the information to create better and more natural translation products.

Unlike the other online dictionaries, Linguee uses a special system to reach the bilingual texts and sentences on the internet. As stated in Wikipedia;

Linguee uses specialized web crawlers to search the Internet for appropriate bilingual texts and to divide them into parallel sentences. The paired sentences identified undergo automatic quality evaluation by a human-trained machine learning algorithm that estimates the quality of translation. The user can set the number of pairs using a fuzzy search, access, and the ranking of search results with the previous quality assurance and compliance is influenced by the search term. Users can also rate translations manually, so that the machine learning system is trained continuously. (Linguee, n.d.)

This system has the capability of learning and evaluating, which contributes to the results of translations. Thanks to the learning ability, Linguee can learn as the users

translate and benefit from its services. In addition, the sources such as European Union laws and the EU Parliament protocols are translated by Linguee, and contribute to its translation memory (Linguee, n.d.). These provide a quite significant background support for Linguee, as they are texts that are produced carefully and checked a numerous times before being published.

DeepL is a computer-based translation software that is based on such a rich online dictionary service, Linguee. As a result, it can produce more accurate and fluent translations. Its system depends on Convolutional Neural Networks, integrated into Linguee's database. Linguee provides the sufficient background for DeepL, to produce fluent, human-like translations. The CNN in DeepL's system maps the language in detail to make the translation products sound more natural. The system that provides such a service needs enough power to feed it continuously. "Apparently, the translator employs a 5.1-petaflop supercomputer of unknown make and model, for both training and production. The company states that the system, which was built and installed at a facility in Iceland, would be ranked number 23 on the TOP500 list" (Feldman, 2017). This supercomputer provides background for the system to produce more efficient and natural translations. Nevertheless, the company follows a proprietary approach about the technological features of DeepL. Much of the information about this subject is not available for public access.

### **3.1.3. Microsoft Translator**

Between the years 1999 and 2000, Microsoft Research launched the first version of Microsoft Translator. As stated in Wikipedia, "This system was based on semantic predicate-argument structures known as logical forms (LF), and was spun from the grammar correction feature developed for Microsoft Word" (Microsoft Translator, n.d.). The first steps of the system were quite simple, however, the approach of Microsoft to machine translation changed quite seriously in time. To acquire more accurate and fluent translations, Microsoft developed a data-driven approach to machine translation. "Rather than relying on writing explicit rules to translate natural language, algorithms are trained to understand and interpret translated parallel texts, allowing them to automatically learn how to translate new natural language text" (Microsoft Translator, n.d.). This new approach gives the

system the ability to learn continuously, and this allows the system to obtain more natural-sounding translations.

Before the integration of **AI** into Microsoft Translator, the texts were translated through a statistical-based approach like other major computer-based translation programs. This statistical-based approach mainly depended on an advanced statistical analysis to obtain the best translation of a structure, in a defined context. Evaluating the possibilities, it helped to reach the best translation of the structure.

Statistical modeling techniques and efficient algorithms help the computer address the problem of decipherment (detecting the correspondences between source and target language in the training data) and decoding (finding the best translation of a new input sentence). Microsoft Translator unites the power of statistical methods with linguistic information to produce models that generalize better and lead to more comprehensible translations. (Statistical machine translation, n.d.)

The system worked well with basic and simple sentence structures. However, the statistical-based approach was not capable enough to handle more complex and longer sentence structures.

The advancements in technology allowed the Microsoft Team to integrate **AI** into their service, Microsoft Translator. The new improvement in the system was better and the learning ability of the **AI** allowed the system to cope with longer and more complex sentence structures since the statistical-based approach was not enough alone to create efficient translations of such structures. The target here was to prevent the translated text to sound machine-translated. The integration of Artificial Neural Network approach has brought about a new two-step technique to translate a given text;

A first stage models the word that needs to be translated based on the context of this word (and its possible translations) within the full sentence, whether the sentence is 5 words or 20 words long.

A second stage then translates this word model (not the word itself but the model the neural network has built of it), within the context of the sentence, into the other language. ("What is a neural machine translation (NMT)?", n.d.)

This two-step technique increases the translation quality and produces better results. The system not just has the capability of evaluating the text and its features together, but it can learn through the translation process itself, to improve its future translation quality. The variations, the cultural signs, symbols and elements are kept in memory to be used in future. This continuous learning process helps the translated products to sound more human in time. The statistical-based approach and the artificial neural network approach have some similarities.

1. Both require large amounts of pre-human translated content (up to millions of translated sentences) to train the systems.

2. Neither act as bilingual dictionaries, translating words based on a list of potential translations, but translate based on the context of the word that is used in a sentence. (What is machine translation?, n.d.)

For statistical-based approach, the human-translated content is needed for producing the best translation of a structure whereas the artificial neural network learns from the human-translated content to produce more natural-sounding translations. However, the ANN approach is better than the statistical-based approach as it;

- Takes into account the full sentence, not only a few consecutive words

- Can handle the infinite variations of language through brain-like pattern recognition

- Learns subtleties of languages based on each language's characteristics such as genders, formality, etc... (What is a neural machine translation (NMT)?, n.d.)

The ANN system allows the translated product to be better than the translations of statistical-based approach. In addition, as it has the ability of mimicking human brain, the translations of the ANN sound more efficient and natural, as if a human translator produced the translation right at the moment.

### 3.2. Instruments

In this part, Google Translate, DeepL and Microsoft Translator will be evaluated and discussed according to a certain criterion (see pg. 37-39). The aim of the criterion is to reveal 'THE STRONG' and 'WEAK' sides of those AI- integrated

computer-based translation software and to bring their contributions and frailties to translation studies into light.

### 3.2.1. Strengths

Today's globalized world creates a great responsibility on translators, which can be a burden and cannot be met with the working pace of a human being. The integration of **AI** to the current computer-based translation software has become a breakthrough in the field of translation studies. It helps to save time, meet the needs of the market and to create better translation products.

**Accuracy:** Selection of lexical items is a significant action to avoid wrong word usages in the course of translation. Moreover, a successful ordering in syntactic structures help to shape flow both in and among the paragraphs.

**Efficiency in Turnaround Time:** Success in the completion of work in a certain amount of time provide the translators with the opportunity to process more work as they concentrate on translation.

**Success in Reflecting Semantic Aspects of Meaning:** Direct meaning that the sentences convey can easily and accurately be reflected during the translation process so that the audience can easily achieve the meaning reflected at the surface level.

### 3.2.2. Weaknesses

As well as having strong sides, the integration of **AI** into those computer-based software has some weak sides. Since the current technology is not effective enough to reflect the human perception, logical reasoning and cognition, the integration of **AI** into those programs can be inefficient from time to time in a couple of defined situations. Those generally result in spending time and money in post-translation process.

**Incognition of Context:** Inability to detect discourse features that would cause the lack of perception in acquiring the value of cultural elements.

***Inability to Diagnose Complicated Stylistic Features:*** Inability to detect text types and insufficiency in taking a proper action for translation would fall to reflect the intentionality value of the text determined by a plan and goal.

***Insufficiency in Reflecting Pragmatic Dimension of Context:*** Unable to diagnose the extra-linguistic environment shaped through pragmatic parameters which could not be obtained only with a semantic analysis.

### 3.2.3. Texts for Translation

In this study, four different types of texts will be used.

#### 3.2.3.1. Text A: Title: ‘Yashar Kemal’s Memed, My Hawk’

This text is chosen for this study since it is a literary text, composed with different figures of speech, and dialectic terms.

#### ***Turkish:***

Toros dağlarının etekleri ta Akdenizden başlar. Kıyıları döven ak köpüklerden sonra doruklara doğru yavaş yavaş yükselir. Akdenizin üstünde daima, top top ak bulutlar salınır. Kıyıları dümdüz, cilalanmış gibi düz killi topraklardır. Killi toprak et gibidir. Bu kıyıları saatlarca içe kadar deniz kokar, tuz kokar. Tuz keskindir. Düz, killi, sürülmüş topraklardan sonra Çukurovanın bükleri başlar. Örülmüşçesine sık çalılar, kamışlar, böğürtlenler, yaban asmaları, sazlarla kaplı, koyu yeşil, ucu bucağı belirsiz alanlardır bunlar. Karanlık bir ormandan daha yabani, daha karanlık!

Biraz daha içeri, bir taraftan Anavarzaya, bir taraftan Osmaniyeyi geçip İslahiyyeye gidilecek olursa geniş bataklıklara varılır. Bataklıklar yaz aylarında fıkır fıkır kaynar. Kirli, pistir. Kokudan yanına yanaşılmaz. Çürümüş saz, çürümüş ot, ağaç, kamış, çürümüş toprak kokar. Kışınsa duru, pırıl pırıl, taşkın bi sudur. Yazın otlardan, sazlardan suyun yüzü gözükmeyiz. Kışınsa çarşaf gibi açılır. Bataklıklar geçildikten sonra, tekrar sürülmüş tarlalara gelinir. Toprak yağlı, ıslık ıslıdır. Bire kırk, bire elli vermeye hazırlanmıştır. Sıcacık, yumuşaktır.

Üstleri ağır kokulu mersin ağaçlarıyla kaplı tepeler geçildikten sonradır ki, kayalar birdenbire başlar. İnsan birden ürker. Kayalarla birlikte çam ağaçları da başlar.

Çamların birer billur parıltısındaki sakızları burada toprağa sızar. İlk çamlar geçildikten sonra, gene düzlüklere varılır. Bu düzlükler boz topraktır. Verimsiz, kıraç... Buralardan Torosun karlı dorukları yanındaymış, elini uzatsan tutacakmışın gibi gözüdür. (Kemal, 2019, p. 9-10).

***English:***

The slopes of the Taurus Mountains rise from the shores of the Eastern Mediterranean, on the southern coast of Turkey, in a steady ascent from the white, foam-fringed rocks to the peaks. They then spread inland, at a tangent to the curve of the coast. Clouds in white masses always float over the sea. The coastal plains between the mountains and the shore are of clay, quite smooth, as if polished. Here, the soil is rich. For miles inland the plain holds the tang of the sea, its air still salt and sharp. Beyond this smooth ploughed land the scrub of the Chukurova begins. Thickly covered with a tangle of brushwood, reeds, blackberry brambles, wild vines and rushes, its deep green expanse seems boundless, wilder and darker than a forest.

A little farther inland, beyond Anavarza on one side and Osmaniya on the other, on the way towards Islahiye, begin the broad marshes. In the summer months they bubble with the heat. Filthy, unapproachable because of their stench, they reek of rotting reeds and rushes, rotting grass and timber, rotting earth. The surface of the water is then hidden by the decomposing vegetation. In winter, the whole area is covered by the sheen of stagnant flood-water, unrolling like a carpet. Beyond the marshes there are more ploughed fields. The earth is oily, shining, warm and soft ready to repay forty-fold, fifty-fold, the seed that it receives.

Only beyond the low hill-tops crowned with heavy-scented myrtle do the rocks suddenly begin to appear, and with them the pine trees. The crystal-bright drops of resin ooze from the trunks and trickle down to the ground. Beyond the pines are plateaux where the soil is grey and arid. From here, it looks as if the snow-capped peaks of the Taurus are very close, almost within arm's reach (Kemal, 2016, p. 5).

***German:***

Die Hänge des Taurusgebirges steigen von der weiß schäumenden Mittelmeerküste ganz allmählich bis zu den Höhen der Taurusgipfel an. Über dem

Mittelmeer kann man immer weiße Wolken sehen, die, aufeinandergetürmt, dahintreiben. Das Küstenland ist so glatt und ebenmäßig, daß man glauben könnte, es sei mit einer Glanzschicht überzogen. Sein Lehm Boden läßt einen an Fleisch denken. Auf Stunden ins Landesinnere hinein riecht es hier nach Meer, nach der Schärfe des Salzes. Hinter den flachen Äckern mit ihrem von Furchen durchzogenen Lehm beginnt das Röhricht der Çukurova, bedeckt mit unentwirrbar ineinander verfilztem Gestrüpp, mit Brombeeren, Wildreben und Schilf — eine dunkelgrüne Hölle, ohne Anfang und Ende, dunkler und wilder noch als Urwald.

Ein Stück weiter landeinwärts, zur Rechten Anavarza, zur Linken Osmaniye, auf dem Weg nach Islahije, kommt man in eine weite Sumpflandschaft. Hier brodeln es im Sommer ringsumher, wenn die Sümpfe kochen und der widerwärtige Geruch von verfaultem Schilf, Kraut und Holz, der Fäulnisgestank des Bodens jedermann fernhält. Das klare Wasser, das im Sommer von den Sumpfpflanzen und vom Schilf verborgen wird, glänzt und glitzert im Winter wie ein Spiegel. Jenseits der Sumpfgebiete gelangt man wieder auf bebauten Land, auf fetten, warmen Boden. Ein Land, das vor Fruchtbarkeit glänzt, das für seine Saat vierzig- bis fünfzigfachen Ertrag zurückgibt.

Aber wenn man die sanften, myrtenduftenden Hügel hinter sich zurückgelassen hat, schrickt man jäh vor den Felsen zusammen, die sich plötzlich vor einem auftürmen. Mit den Felsen beginnt das Reich der Kiefern, deren Harz in kristallinen Tropfen an den Stämmen entlang zur Erde sickert. Die Ebenen, die sich hinter den Kiefern erstrecken, haben kargen Boden, der nichts trägt... Von hier aus sind die Taurushöhen mit ihren Schneegipfeln zum Greifen nahe (Kemal, 1955, p. 5).

### **3.2.3.2. Text B: Title: ‘Mustafa Kemal Atatürk’s Address to Turkish Youth’**

This text is chosen for this study since it is a rhetoric text. In the text, Atatürk addresses to Turkish youth using different figures of speech.

#### ***Turkish:***

Ey Türk Gençliği! Birinci vazifen, Türk istiklâlini, Türk Cumhuriyetini, ilelebet, muhafaza ve müdafaa etmektir. Mevcudiyetinin ve istikbalinin yegâne temeli budur. Bu temel, senin, en kıymetli hazinedir. İstikbalde dahi, seni bu hazineden

mahrum etmek isteyecek, dâhilî ve haricî bedhahların olacaktır. Bir gün, İstiklâl ve Cumhuriyeti müdafaa mecburiyetine düşersen, vazifeye atılmak için, içinde bulunacağın vaziyetin imkân ve şerâitini düşünmeyeceksin! Bu imkân ve şerâit, çok namüsaid bir mahiyette tezahür edebilir. İstiklâl ve Cumhuriyetine kastedecek düşmanlar, bütün dünyada emsali görülmemiş bir galibiyetin mümessili olabilirler. Cebren ve hile ile aziz vatanın, bütün kaleleri zapt edilmiş, bütün tersanelerine girilmiş, bütün orduları dağıtılmış ve memleketin her köşesi bilfiil işgal edilmiş olabilir. Bütün bu şerâitten daha elim ve daha vahim olmak üzere, memleketin dahilinde, iktidara sahip olanlar gaflet ve dalâlet ve hatta hıyanet içinde bulunabilirler. Hatta bu iktidar sahipleri şahsî menfaatlerini, müstevlilerin siyasi emelleriyle tevhit edebilirler. Millet, fakr ü zaruret içinde harap ve bîtap düşmüş olabilir.

Ey Türk istikbalinin evlâdı! İşte, bu ahval ve şerâit içinde dahi, vazifen; Türk İstiklâl ve Cumhuriyetini kurtarmaktır!

Muhtaç olduğun kudret, damarlarındaki asil kanda mevcuttur (Ataturk, M. K. (1927)!

Mustafa Kemal Atatürk  
20 Ekim 1927

**English:**

Declaration by Atatürk to the Turkish Youth

Turkish Youth!

Your first duty is forever to preserve and to defend the Turkish Independence and the Turkish Republic.

This is the very foundation of your existence and your future. This foundation is your most precious treasure. In the future, too, there may be malevolent people at home and abroad who will wish to deprive you of this treasure. If some day you are compelled to defend your independence and your republic, you must not tarry to weigh the possibilities and circumstances of the situation before taking up your duty. These possibilities and circumstances may turn out to be extremely unfavourable. The enemies conspiring against your independence and your republic, may have behind

them a victory unprecedented in the annals of the world. It may be that, by violence and ruse, all the fortresses of your beloved fatherland may be captured, all its shipyards occupied, all its armies dispersed and every part of the country invaded. And sadder and graver than all these circumstances, those who hold power within the country may be in error, misguided and may even be traitors. Furthermore, they may identify their personal interests with the political designs of the invaders. The country may be impoverished, ruined and exhausted.

Youth of Turkey's future,

Even in such circumstances it is your duty to save the Turkish Independence and Republic.

You will find the strength you need in your noble blood (Ataturk, M.K. (n.d.).

Mustafa Kemal Atatürk  
20 October 1927

***German:***

Rede an die Türkische Jugend

Türkische Jugend!

Deine erste Pflicht ist, die nationale Unabhängigkeit, die türkische Republik immerdar zu wahren und zu verteidigen.

Das ist die einzige Basis Deiner Existenz und Deiner Zukunft. Diese Basis enthält Deinen kostbarsten Schatz. Auch in der Zukunft wird es im Lande selbst wie im Ausland Missgunst geben, die Dir diesen Schatz entreißen will. Wenn Du eines Tages dazu gedrängt bist, die Unabhängigkeit und die Republik verteidigen zu müssen, dann wirst Du, um Deine Pflicht zu erfüllen, von den Möglichkeiten und Bedingungen der Lage absehen müssen, in der Du Dich befinden könntest. Es kann sein, dass diese Bedingungen und diese Möglichkeiten durchaus ungünstig sind. Es ist möglich, dass die Feinde, die Deine Unabhängigkeit und Deine Republik vernichten wollen, die siegreichste Macht vorstellen, die die Erde jemals gesehen hat; dass man sich durch List oder Gewalt aller Festungen und aller Zeughäuser des Vaterlandes bemächtigt hat;

dass alle seine Armeen zerstreut sind und das Land tatsächlich und völlig besetzt ist. Nimm an, um eine noch düstere Möglichkeit ins Auge zu fassen, dass diejenigen, die die Regierungsgewalt im Lande innehaben, in Irrtum verfallen sind, dass sie Dummköpfe oder Verräter sein könnten, ja, dass diese leitenden Leute ihre persönlichen Interessen mit den politischen Zielen der Feinde zusammenfallen lassen. Es könnte kommen, dass die Nation in völlige Entbehrung, in ungesehene Not gerät; dass sie sich im Zustand des Zusammenbruchs und völliger Erschöpfung befindet.

Selbst unter diesen Umständen und unter diesen Bedingungen, oh türkisches Kind zukünftiger Jahrhunderte, ist es Deine Pflicht, die Unabhängigkeit, die türkische Republik zu retten.

Die Kraft, die Du hierzu brauchst, ist mächtig in dem edlen Blute, das in Deinem Adern fließt (Ataturk, M.K. (n.d.).

Mustafa Kemal Atatürk

20 Oktober 1927

### 3.2.3.3. Text C: Title: ‘BRUSSELS EUROPEAN COUNCIL-PRESIDENCY CONCLUSIONS 15/16 JUNE 2006’

This text is chosen for this study since it is a legal document produced by European Union. There are a variety of different legal terms, which need to be translated very carefully, since a mistake in translation can cause some political problems. The 54th article of the conclusions is chosen to be used in the study.

#### ***Turkish:***

Türkiye

54. AB Konseyi müktesebat taramasında kaydedilen ilerlemeyi gözden geçirmiştir ve Türkiye ile fiili katılım müzakerelerinin başlamasını memnuniyetle karşılamaktadır. Türkiye’den antlaşmalarda ortaya koyulan değerler, hedefler ve hukuki düzeni paylaşması beklenmektedir. Birlik, Türkiye’nin Birliğin standartları ve Kopenhag kriterleri dahil üyelik yükümlülüklerini yerine getirme yönündeki gayretlerini desteklemek konusunda kararlıdır. AB Konseyi, daha önceki sonuç bildirgelerine paralel olarak, müzakerelerin her bir ülkenin kendi performansına göre işleyeceğini ve

hızının her bir ülkenin Müzakere Çerçevesi'nde ortaya koyulan yükümlülükleri yerine getirmede kaydettiği ilerlemeye bağlı olacağını hatırlatmaktadır. Bu, Ortaklık Anlaşması ve Avrupa Topluluğu ile Üye Ülkelerinin 21 Eylül 2005 tarihli Deklarasyonunda üzerinde mutabakat sağlandığı üzere, tam olarak uygulanması 2006 yılında denetlenecek olan Ek Protokol çerçevesindeki yükümlülüklerinin yerine getirilmesinin yanı sıra, gözden geçirilmiş Katılım Ortaklığının uygulanmasını da içermektedir. AB Konseyi, yukarıda belirtilen Deklarasyonda yer alan tüm ilgili hususlarda kaydedilen ilerlemenin Konsey tarafından 2006 yılı boyunca izlenmesinin sağlanacağını hatırlatmaktadır. AB Konseyi, reform sürecini hızlandırma ve reformları tümüyle ve etkili bir şekilde ülke genelinde uygulama yönünde Türkiye'ye çağrıda bulunmaktadır. Böylece reform sürecinin geri dönülmezliği ve sürdürülebilirliğinin sağlanmasının yanı sıra, iyi komşuluk ilişkileri taahhüdü de dahil olmak üzere Kopenhag siyasi kriterlerinin tamamen yerine getirilmesinde de ilerleme kaydedilecektir. Bu çerçevede, sorunların barışçı yollarla çözümünü olumsuz etkileyecek tüm faaliyetlerden kaçınılması gerekmektedir (Türkiye Cumhuriyeti Dışişleri Bakanlığı, n.d.).

***English:***

Turkey

54. The European Council reviewed progress made in the acquis screening and welcomes the start of substantive accession negotiations with Turkey. Turkey is expected to share the values, objectives and the legal order set out in the treaties. The Union is committed to support Turkey in its efforts to comply with the Unions standards and membership obligations, including the Copenhagen criteria. The European Council recalls, in line with previous conclusions, that the current negotiations are based on each country's own merits and that their pace will depend on each country's progress in preparing for accession measured against the requirements set out in the Negotiating Framework. This includes the fulfilment of Turkey's obligations under the Association Agreement and under its Additional Protocol, full implementation of which will be evaluated in 2006 as agreed in the Declaration of the European Community and its Member States of 21 September 2005, as well as the implementation of the revised Accession Partnership. The European Council recalls

that the Council will ensure, in the course of 2006, a follow-up on the progress made on all the relevant issues included in the above mentioned Declaration. The European Council calls on Turkey to intensify the reform process and to implement it fully and effectively, so as to ensure its irreversibility and sustainability as well as to progress towards the complete fulfilment of the Copenhagen political criteria, including the commitment to good neighbourly relations. In this context, any action which could negatively affect the process of peaceful settlement of disputes should be avoided (Brussels European Council – Presidency Conclusions, 2006).

***German:***

Türkei

54. Der Europäische Rat hat eine Bilanz der Fortschritte bei der analytischen Prüfung des gemeinschaftlichen Besitzstands gezogen und begrüßt die Aufnahme von Beitrittsverhandlungen mit der Türkei über inhaltliche Fragen. Von der Türkei wird erwartet, dass sie die in den Verträgen niedergelegten Werte und Ziele sowie die darin verankerte Rechtsordnung teilt. Die Union wird die Türkei bei ihren Bemühungen um die Einhaltung der Unionsnormen und der mit der Mitgliedschaft verbundenen Verpflichtungen, einschließlich der Kopenhagener Kriterien, unterstützen. Im Einklang mit früheren Schlussfolgerungen erinnert der Europäische Rat daran, dass bei den laufenden Verhandlungen die individuellen Leistungen eines jeden Beitrittslands zugrunde gelegt werden und dass das Tempo der Verhandlungen davon abhängt, wie die einzelnen Länder bei ihren Beitrittsvorbereitungen gemessen an den im Verhandlungsrahmen niedergelegten Anforderungen vorankommen. Zu diesen Anforderungen gehört, dass die Türkei ihre Verpflichtungen aufgrund des Assoziierungsabkommens und seines Zusatzprotokolls erfüllt und die Bestimmungen der überarbeiteten Beitrittspartnerschaft anwendet; ob diese Verpflichtungen in vollem Umfang erfüllt sind, wird, wie in der Erklärung der Europäischen Gemeinschaft und ihrer Mitgliedstaaten vom 21. September 2005 vereinbart, im Jahr 2006 einer Bewertung unterzogen. Der Europäische Rat erinnert daran, dass der Rat im Laufe des Jahres 2006 die Fortschritte in allen einschlägigen Themenbereichen, die in der Erklärung aufgeführt sind, überprüfen wird. Der Europäische Rat ruft die Türkei auf, den Reformprozess zu intensivieren und ihn in vollem Umfang wirksam

durchzuführen, so dass die Unumkehrbarkeit und die Dauerhaftigkeit der Reformen gewährleistet sind und auf dem Weg zur vollständigen Erfüllung der politischen Kriterien von Kopenhagen, einschließlich der Verpflichtung zu gutnachbarlichen Beziehungen, weitere Fortschritte erzielt werden. In diesem Zusammenhang sollten alle Maßnahmen vermieden werden, die den Prozess der friedlichen Beilegung von Streitigkeiten beeinträchtigen könnten (Europäischer Rat (Brüssel - Schlussfolgerungen Des Vorsitzes, 2006).

### **3.2.3.4. Text D: Title: ‘Evaluation of the Causes Of Perianal Abscess In Childhood’**

This text is chosen for study since it is a text from medical field. It is composed with special terms, specific for a disease and needs to be studied beforehand to translate it correctly and effectively.

#### ***Turkish:***

### **Çocukluklarda Perianal Apse Nedenlerinin Değerlendirilmesi**

#### **1. Giriş**

Perianal apse, sadece erişkinlerde değil, çocukluk çağında da yaygın olarak karşılaşılan bir anorektal hastalıktır. Hastalar genellikle anal bölgede şişlik, hassasiyet, ve ateş şikayetleriyle başvurumaktadırlar. Anal kript ve bezlerin obstrüksiyonu sonucu gelişen perianal apseler sıklıkla bir yaş altında ve erkek çocuklarda görülmektedir (1-4). Androjen fazlalığının veya androjen östrojen arasındaki dengesizliğin perianal apse gelişimine neden olduğu öne sürülmüştür (5,6). Perianal apselerin %30 ila %50'sinde inflamatuvar odağın yüzeye açılması sonucu anal kanal ile perianal deri arasında fistül gelişebilir. Büyük çocuklarda immun yetmezlik veya inflamatuvar barsak hastalıkları, bir yaşından küçük çocuklarda ise anal fistül gibi konjenital bir anomali perianal apse gelişimine hazırlayıcı neden olabilir (6,7). Perianal apse tedavisinde öncelikle konservativ tedavi yönetimleri tercih edilmekle birlikte semptomatik hastalarda cerrahi girişim gerekebilir (8). Çocukluk çağında perianal apse yönetimindeki veriler kısıtlıdır ve çoğunlukla cerrahi raporlara ve klinik deneyimlere dayanmaktadır. Bu

amaçla çalışmamızda kliniğimizde perianal apse nedeniyle yatırılarak tedavi edilmiş hastaların klinik ve laboratuvar bulgularının, hazırlayıcı nedenlerinin, tedavi tercihlerinin ve klinik sonuçlarının sunulması amaçlanmıştır.

## **2. Gereç ve Yöntem**

### **2.1.Çalışma planlaması**

İstanbul Üniversitesi Cerrahpaşa Tıp Fakültesi Çocuk Enfeksiyon Servisi'nde Aralık 2009-Aralık 2017 tarihleri arasında yatırılarak perianal apse tanısı konulan tüm hastaların verileri geriye dönük olarak hasta dosyaları ve elektronik kayıt sistemleri üzerinden incelendi. Çalışmamız için fakültemiz lokal kurulundan (21.05.2018-29430533) ve tüm hastalarımızın ebeveynlerinden onay alınmıştır (Aygün & Akçakaya, 2019, p.21).

#### ***English:***

### **Evaluation the Causes of Perianal Abscess In Childhood**

#### **1. Introduction**

Perianal abscess is an anorectal disease seen very commonly not only in adulthood but also in childhood. Patients generally refer to hospitals with complaints such as swelling in the anal region, tenderness and fever. Perianal abscess forming as a result of obstruction of the anal crypts and glands are frequently seen in male children under the age of 1 (1-4). It has been suggested that androgen excess or the imbalance between androgen and estrogen causes the formation of perianal abscess (5,6). In 30-50% of perianal abscesses, fistula can develop between the perianal skin and anal canal due to the surfacing of the inflammation. Immunodeficiency or inflammatory bowel diseases (IBD) in older children and a congenital anomaly like anal fistula in children under the age of 1 can be predisposing conditions to the formation of perianal abscess (6,7). Along with the preference of conservative treatment methods in perianal abscess treatment, surgical intervention may be necessary in symptomatic patients (8). Data on the management of perianal abscess in childhood are limited and are based mostly on surgical reports and clinical experience. To that end, this study aimed to report the

predisposing conditions, treatment preferences, outcomes and clinical and laboratory findings of the patients hospitalized in our clinic for perianal abscess.

## **2. Material and Methods**

### **2.1. Study plan**

Data of all patients hospitalized with the diagnosis of perianal abscess between December 2009 and December 2017 in the Pediatric Infection Disease Department of Istanbul University Cerrahpasa Medical Faculty were retrospectively reviewed from patient files and electronic record system. Consent from all parents of our patients and approval from the local ethics committee of our faculty (21.05.2018-29430533) were received for the study.

### ***German***

## **Bewertung der Ursachen des perianalen Abszesses im Kindesalter**

### **1. Einführung**

Beim Perianalabszess handelt es sich um eine anorektale Beschwerde, die nicht nur Erwachsene betrifft, sondern auch unter Kindern weit verbreitet ist. Die Patienten beschwerten sich im Allgemeinen über Schwellungen, Schmerzempfindlichkeit im anorektalen Bereich und Fieber. Perianalabszesse, die aufgrund von Analkrypten und Obstruktion von Drüsen entstehen, werden sehr oft bei männlichen Kindern unter einem Jahr beobachtet (1 – 4). Es wurde vorgetragen, dass ein Überschuss an Androgenen oder ein Ungleichgewicht zwischen Androgenen und Östrogenen zur Entwicklung eines Perianalabszesses führten (5,6). Bei 30 % bis 50 % der Perianalabszesse kann aufgrund der Öffnung der entzündlichen Herde an die Oberfläche eine Fistel zwischen dem Analkanal und der perianalen Haut zustande kommen. Auch eine Immunschwäche oder entzündliche Darmerkrankungen bei älteren Kindern bzw. eine kongenitale Anomalie, wie eine Analfistel bei Kindern unter 1 Jahr, können die Voraussetzungen der Entwicklung eines Perianalabszesses gewährleisten (6,7). Bei der Behandlung der Perianalabszesse werden vorrangig konservative Behandlungsmethoden angewandt, wobei bei symptomatischen

Patienten auch ein chirurgischer Eingriff vonnöten sein kann (8). Daten über Perianalabszesse im Kindesalter sind nur eingeschränkt vorhanden und lehnen sich zumeist an chirurgische Berichte und klinische Tests an. Aus diesem Grund wird mittels dieser Arbeit bezweckt, anhand von Patienten, die aufgrund eines Perianalabszesses in unserer Klinik stationär behandelt werden, die klinischen und labortechnischen Befunde, die Feststellung der wegbereitenden Ursachen, die Wahl der Art der Behandlung und der klinischen Ergebnisse vorzustellen.

## **2. Mittel und Methode**

### **2.1 Durchführungsplanung**

Die Daten der in der pädiatrischen Abteilung für Infektionen der medizinischen Fakultät der Universität Istanbul im Zeitraum Dezember 2009 – Dezember 2017 stationär behandelten Patienten, bei denen Perianalabszesse diagnostiziert wurden, sind zeitlich rückwirkend mittels der Patientenakten und der elektronisch vorliegenden Datensätze geprüft worden. Für diese Durchführung wurden die Genehmigung des lokalen Ethikausschusses unserer Fakultät (21.05.2018-29430533) und die Zustimmung der Eltern aller unserer Patienten eingeholt.

GCIS

## IV. ANALYSIS & DISCUSSION

In this part of the study, the texts chosen for the AI-integrated translation software; Google Translate, DeepL and Microsoft translator. In the following sections, the strengths and the weaknesses of the programs will be discussed over the translations of the software programs.

### 4.1. Google Translate

Google Translate is a system that depended on the statistical approach in the beginning. To obtain more effective and accurate translations, the artificial neural translation system was integrated into the system. The aim was here to close the gap between the translations made by machine and a live translator. Moreover, this new feature of the system is capable of learning while the users benefit from the system. This learning ability is beneficial for future translations since it improves the quality of the translations in time.

#### 4.1.1. Text A: ‘Yashar Kemal’s Memed, My Hawk’

##### 4.1.1.1. Original Version

Toros dağlarının etekleri ta Akdenizden başlar. Kıyıları döven ak köpüklerden sonra doruklara doğru yavaş yavaş yükselir. Akdenizin üstünde daima, top top ak bulutlar salınır. Kıyıları dümdüz, cilalanmış gibi düz killi topraklardır. Killi toprak et gibidir. Bu kıyıları saatlarca içe kadar deniz kokar, tuz kokar. Tuz keskin dir. Düz, killi, sürülmüş topraklardan sonra Çukurovanın bükleri başlar. Örülmüşçesine sık çalılar, kamışlar, böğürtlenler, yaban asmaları, sazlarla kaplı, koyu yeşil, ucu bucağı belirsiz alanlardır bunlar. Karanlık bir ormandan daha yabani, daha karanlık!

Biraz daha içeri, bir taraftan Anavarzaya, bir taraftan Osmaniye'yi geçip İslahiye'ye gidilecek olursa geniş bataklıklara varılır. Bataklıklar yaz aylarında fıkır fıkır kaynar. Kirli, pistir. Kokudan yanına yanaşılmaz. Çürümüş saz, çürümüş ot, ağaç, kamış, çürümüş toprak kokar. Kışınsa duru, pırıl pırıl, taşkın bi sudur. Yazın otlardan,

sazlardan suyun yüzü gözükmeyiz. Kışınsa çarşaf gibi açılır. Bataklıklar geçildikten sonra, tekrar sürülmüş tarlalara gelinir. Toprak yağlı, ışıltılıdır. Bire kırk, bire elli vermeye hazırlanmıştır. Sıcacık, yumuşaktır.

Üstleri ağır kokulu mersin ağaçlarıyla kaplı tepeler geçildikten sonradır ki, kayalar birdenbire başlar. İnsan birden ürker. Kayalarla birlikte çam ağaçları da başlar. Çamların birer billur parıltısındaki sakızları burada toprağa sızar. İlk çamlar geçildikten sonra, gene düzlüklere varılır. Bu düzlükler boz topraktır. Verimsiz, kıraç... Buralardan Torosun karlı dorukları yanındaymış, elini uzatsan tutacaktım gibi gözüktür (Kemal, 2019, p. 9-10).

#### 4.1.1.2. Ideal Translation

The slopes of the Taurus Mountains rise from the shores of the Eastern Mediterranean, on the southern coast of Turkey, in a steady ascent from the white, foam-fringed rocks to the peaks. They then spread inland, at a tangent to the curve of the coast. Clouds in white masses always float over the sea. The coastal plains between the mountains and the shore are of clay, quite smooth, as if polished. Here, the soil is rich. For miles inland the plain holds the tang of the sea, its air still salt and sharp. Beyond this smooth ploughed land the scrub of the Chukurova begins. Thickly covered with a tangle of brushwood, reeds, blackberry brambles, wild vines and rushes, its deep green expanse seems boundless, wilder and darker than a forest.

A little farther inland, beyond Anavarza on one side and Osmaniya on the other, on the way towards Islahiye, begin the broad marshes. In the summer months they bubble with the heat. Filthy, unapproachable because of their stench, they reek of rotting reeds and rushes, rotting grass and timber, rotting earth. The surface of the water is then hidden by the decomposing vegetation. In winter, the whole area is covered by the sheen of stagnant flood-water, unrolling like a carpet. Beyond the marshes there are more ploughed fields. The earth is oily, shining, warm and soft ready to repay forty-fold, fifty-fold, the seed that it receives.

Only beyond the low hill-tops crowned with heavy-scented myrtle do the rocks suddenly begin to appear, and with them the pine trees. The crystal-bright drops of resin ooze from the trunks and trickle down to the ground. Beyond the pines are

plateaux where the soil is grey and arid. From here, it looks as if the snow-capped peaks of the Taurus are very close, almost within arm's reach (Kemal, 2016, p.5).

#### **4.1.1.3. Translation of Google Translate**

The foothills of the Taurus Mountains begin in the Mediterranean. After the foams that beat the coast, they slowly rise to the peaks. Always on top of the Mediterranean, the ball ball is released from the clouds. The coasts are flat clayey soils as flat, polished. Clay earth is like meat. This coast smells of salt, the sea smells for hours. The salt is sharp. After the flat, clayey, plowed lumps, the bends of Çukurovan begin. They are often bushy shrubs, reeds, blackberries, wild vines, reeds covered with dark green, endless areas. Wilder, darker than a dark forest!

A little more inside, on the one hand Anavarzaya, on the one hand if you cross the Osmaniye and go to Islahiyesa wide marshes. The marshes are boiling in the summer. Dirty, runway. Smoke from the side. Rotten grass, decayed grass, tree, reed, rotten earth. In winter, the water is clear, sparkling and flood water. In summer, the face of the water from the grass, reeds. In winter, like bed sheets. After passing through the marshes, the fields are re-plowed. Soil is oily, shiny. One to forty, one to fifty. Warm, soft.

After passing through the hills covered with heavy scented myrtle trees, the rocks start to suddenly. The human suddenly breeds. The pine trees start with the rocks. The gums in the crystal clear glow of the pines leak into the soil. After passing the first pines, again the plains are reached. These plains are rough earth. Inefficient, arid s From here you can see the snowy peaks of Taurus near you, you can hold your hand as if you are holding.

#### **4.1.1.4. Discussion**

Since this is a literary text, the context and the dialectical vocabulary should be evaluated carefully and must be reflected in the translated product. Nevertheless, the translator or the software should be trained to perceive those, in order to transmit the message correctly from one language to the other language.

□ **Syntactic Mistakes:** As Google Translate does not have the ability of mocking the human perception and cognition completely, even though it can learn and use the learnt knowledge in future translations, it makes syntactical mistakes such as breaking the structure down unnecessarily, adding extra words or deleting words from the structure.

### *Sample 1*

- **Ideal Translation:** The slopes of the Taurus Mountains rise from the shores of the Eastern Mediterranean, on the southern coast of Turkey, in a steady ascent from the white, foam-fringed rocks to the peaks.
- **Google Translate:** The foothills of the Taurus Mountains begin in the Mediterranean. After the foams that beat the coast, they slowly rise to the peaks. Here, the sentence is broken down into two by Google Translate.

### *Sample 2*

- **Ideal Translation:** Clouds in white masses always float over the sea.
- **Google Translate:** Always on top of the Mediterranean, the ball ball is released from the clouds. Even though the sentences produced by Google Translate looks like a complete one, the software adds an extra word which is not needed in the sentence.

### *Sample 3*

- **Ideal Translation:** Filthy, unapproachable because of their stench, they reek of rotting reeds and rushes, rotting grass and timber, rotting earth.
- **Google Translate:** Dirty runway. Smoke from the side. Rotten grass, decayed grass, tree, reed rotten earth. The software breaks the sentence down into pieces, and the pieces does not give the intended meaning efficiently.
  - **Wrong Word Choice:** While Google Translate is practical in translating simple sentences correctly and efficiently, it fails giving the intended meaning in special text types such as literary texts.

### *Sample 1*

- **Ideal Translation:** Beyond the marshes, there are more ploughed fields.
- **Google Translate:** After passing through the marshes, the fields are re-plowed.

The intention here is to explain the reader that there are many more ploughed fields, while the translation by Google Translate gives the meaning of plowing the fields one more time.

### **Sample 2**

- **Ideal Translation:** From here, it looks as if the snow-capped peaks of the Taurus are very close, almost within arm's reach.
- **Google Translate:** Inefficient, arid s From here you can see the snowy peaks of Taurus near you, you can hold your hand as if you are holding.

While the intention of the text producer here is to explain the reader that the mountains seem quite close, the translation by Google Translate changes the meaning by its word selection.

- **Semantic and / or Pragmatic Mistakes:** The words in languages do not consist of one meaning, they can have multiple meanings according to the contexts. In translation, using the correct semantic structure is essential. This depends on human perception and correct analysis of the texts by the translator.

### **Sample 1**

- **Ideal Translation:** The coastal plains between the mountains and the shore of clay, quite smooth, as polished.
- **Google Translate:** The coasts are flat, clayey soil as flat, polished.

While the ideal translation aims to explain the state of the plains and the soil in the coast, the translation by Google Translate fails to transmit the meaning.

### **Sample 2**

- **Ideal Translation:** Here the soil is rich.
- **Google Translate:** Clayy earth is like meat.

The intention here is to transmit the message that explains the state of the soil. However, Google Translate changes the meaning completely.

### **Sample 3**

- **Ideal Translation:** Thickly covered with a tangle of brushwood, reeds, blackberry, brambles, wild vines and rushes, its deep green expanse seems boundless, wilder and darker than a forest.

- **Google Translate:** They are often brushy shrubs, reeds, blackberries, wild vines, reeds covered with dark green, endless areas. Wilder, darker than a dark forest!

The ideal translation describes a green area with different species of plants and trees, nevertheless; Google Translation has produced a translation which is more close to a definition, rather than describing the scenery.

- **Deletion Mistakes:** In order to produce a correct translation, each and every sentence in the **ST** should be evaluated carefully, and should not be deleted as long as possible. In such cases, the decision is up to the translator, nevertheless; the translation software does not have the authority to delete sentences from the text while translating.

### **Sample 1**

- **Ideal Translation:** They then spread inland, at a tangent to the curve of the coast.
- **Google Translate:** (-)  
Google Translate could not translate this sentence.

### **Sample 2**

- **Ideal Translation:** The surface of the water is hidden by the decomposing vegetation.
- **Google Translate:** (-)  
Google Translate could not translate this sentence.

## **4.1.2. Text B: Title: ‘Mustafa Kemal Atatürk’s Address to Turkish Youth’**

### **4.1.2.1. Original Version**

#### **Atatürk’ün Gençliğe Hitabesi**

Ey Türk Gençliği! Birinci vazifen, Türk istiklâlini, Türk Cumhuriyetini, ilelebet, muhafaza ve müdafaa etmektir. Mevcudiyetinin ve istikbalinin yegâne temeli budur. Bu temel, senin, en kıymetli hazinendir. İstikbalde dahi, seni bu hazineden mahrum etmek isteyecek, dâhilî ve haricî bedhahların olacaktır. Bir gün, İstiklâl ve Cumhuriyeti müdafaa mecburiyetine düşersen, vazifeye atılmak için, içinde bulunacağın vaziyetin imkân ve şerâitini düşünmeyeceksin! Bu imkân ve şerâit, çok

namüsaıt bir mahiyette tezahür edebilir. İstiklâl ve Cumhuriyetine kastedecek düşmanlar, bütün dünyada emsali görülmemiş bir galibiyetin mümessili olabilirler. Cebren ve hile ile aziz vatanın, bütün kaleleri zapt edilmiş, bütün tersanelerine girilmiş, bütün orduları dağıtılmış ve memleketin her köşesi bilfiil işgal edilmiş olabilir. Bütün bu şerâitten daha elim ve daha vahim olmak üzere, memleketin dahilinde, iktidara sahip olanlar gaflet ve dalâlet ve hatta hıyanet içinde bulunabilirler. Hatta bu iktidar sahipleri şahsî menfaatlerini, müstevlilerin siyasi emelleriyle tevhit edebilirler. Millet, fakr ü zaruret içinde harap ve bîtap düşmüş olabilir.

Ey Türk istikbalinin evlâdı! İşte, bu ahval ve şerâit içinde dahi, vazifen; Türk İstiklâl ve Cumhuriyetini kurtarmaktır!

Muhtaç olduğun kudret, damarlarındaki asil kanda mevcuttur (Ataturk, M. K. (1927)!

Mustafa Kemal Atatürk  
20 Ekim 1927

#### 4.1.2.2. Ideal Translation

Declaration by Atatürk to the Turkish Youth

Turkish Youth!

Your first duty is forever to preserve and to defend the Turkish Independence and the Turkish Republic.

This is the very foundation of your existence and your future. This foundation is your most precious treasure. In the future, too, there may be malevolent people at home and abroad who will wish to deprive you of this treasure. If some day you are compelled to defend your independence and your republic, you must not tarry to weigh the possibilities and circumstances of the situation before taking up your duty. These possibilities and circumstances may turn out to be extremely unfavourable. The enemies conspiring against your independence and your republic, may have behind them a victory unprecedented in the annals of the world. It may be that, by violence and ruse, all the fortresses of your beloved fatherland may be captured, all its shipyards

occupied, all its armies dispersed and every part of the country invaded. And sadder and graver than all these circumstances, those who hold power within the country may be in error, misguided and may even be traitors. Furthermore, they may identify their personal interests with the political designs of the invaders. The country may be impoverished, ruined and exhausted.

Youth of Turkey's future,

Even in such circumstances it is your duty to save the Turkish Independence and Republic.

You will find the strength you need in your noble blood (Ataturk, M.K. (n.d.).

Mustafa Kemal Atatürk  
20 October 1927

#### **4.1.2.3. Translation of Google Translate**

Atatürk's Address to Youth

O Turkish Youth! The first task is to preserve and protect the Turkish independence and the Turkish Republic forever. This is the very foundation of your existence and your future. This foundation is your most precious treasure. Even in the future, you will want to deprive you of this treasure, there will be internal and external deeds. One day, if you fall under the obligation to defend the Independence and the Republic, you will not think of the possibility and the state of the situation in which you will be in order to embark on duty! This possibility and shari'ah, can manifest in a very honorable nature. The enemies that will mean the Independence and the Republic can be representative of an unprecedented victory all over the world. All the fortresses of the saintly homeland, all its fortresses have been occupied, all its armies have been disbanded and all corners of the country have been invaded. Those who have power in their hometowns can be found in gaff and discipline, and even in betrayal. In fact, the owners of this power may relieve their personal interests with the political ambitions of the fathers. The nation may have fallen into ruin and misery.

O son of the Turkish future! Here, in this ahval and shariah, even your duty; To save the Turkish Independence and the Republic!

The strength you need in the noble blood in your veins!

Mustafa Kemal Atatürk

20 October 1927

#### 4.1.2.4. Discussion

This text is a rhetorical text written by Mustafa Kemal Atatürk. Since it addresses to a broader audience, the word choice in the original text is closer to the daily language, even though there are some complex words and sentence structures.

- **Syntactic Mistakes:** Depending on the text types, Google Translate's performance in producing an efficient translation changes. Even though this text is easier to translate, the software still is not completely efficient in producing a correctly translated text as a whole. There are mistakes in subject word choices and sentence structure.

##### *Sample 1*

- ***Ideal Translation:*** In the future, too there may be malevolent people at home and abroad who wish to deprive you of this treasure.
- ***Google Translate:*** Even in the future, you will want to deprive you of this treasure, there will be internal and external deeds.

Here in this sentence, Google Translate changes the meaning by choosing a wrong subject word. This causes a shift in the meaning which is not desired.

##### *Sample 2*

- ***Ideal Translation:*** And sadder and graver than all these circumstances, those who hold power within the country may be in error, misguided and may even be traitors.
- ***Google Translate:*** Those who have power in their hometowns can be found in gaff and discipline, and even in betrayal.

The change of the subject in the sentence translated by Google Translate causes a slight change in the meaning. While the ideal translation mentions the individuals

who hold the power in the country, the sentence by Google Translate refers to the people who hold power in smaller residential areas, instead of referring the country as a whole.

### **Sample 3**

- **Ideal Translation:** Furthermore, they may identify their personal interests with the political designs of the invaders.
- **Google Translate:** In fact, the owners of this power may relieve their personal interests with the political ambitions of the fathers.

While the ideal translation tries to explain that there could be people using political powers of the enemy, the sentence translated by Google Translate does not mean the same.

- **Wrong Word Choice:** This text is written in old Turkish language which consists of words from the Ottoman Turkish. Since those words are not frequently used today, they are complex words to translate. While a trained translator can translate them, they can be problematic for the software even though it is capable of mocking the human cognition and perception to some extent.

### **Sample 1**

- **Ideal Translation:** These possibilities and circumstances may turn out to be extremely unfavourable.
- **Google Translate:** This possibility and shari'ah, can manifest in a very honorable nature.

Here, the ideal translation uses words that are more familiar than the ones Google Translate uses. As the emphasis in translation is to transmit the messages from one language to the other correctly and efficiently, the word choice of Google Translate fails.

### **Sample 2**

- **Ideal Translation:** Even in such circumstances it is your duty to save the Turkish Independence and Republic.
- **Google Translate:** Here, in this ahval and shariah, even your duty; To save the Turkish Independence and the Republic.

Since Google Translate cannot mock human perception completely, the word choice of the software is nothing more than finding the best equivalent in the TL. Nevertheless, the result is not efficient in terms of understandability by the target reader.

- **Semantic and / or Pragmatic Mistakes:** This text consists of words that are not used frequently today, which can be a challenge for the software. Moreover, the sentence structures are complex, to create the intended effect on the reader. In order to find the correct meaning and convey the message accurately, the software should mimic the human cognition and the perception in that specific context to reflect the desired meaning.

### *Sample 1*

- ***Ideal Translation:*** The enemies conspiring against your independence and your republic may have behind them a victory unprecedented in the annals of the world.
- ***Google Translate:*** The enemies that will mean the Independence and the Republic can be representative of an unprecedented victory all over the world.

While the ideal translation gives the message that there is a great victory behind the enemies, the sentence produced by Google Translate does not give the same meaning.

### *Sample 2*

- ***Ideal Translation:*** If some day you are compelled to defend your independence and your republic, you must not tarry to weigh the possibilities and circumstances of the situation before taking up your duty.
- ***Google Translate:*** One day, if you fall under the obligation to defend the Independence and the Republic, you will not think of the possibility and the state of the situation in which you will be in order to embark on duty!

While the ideally translated sentence advises the Turkish youth not to lose time evaluating the possible outcomes before acting on, Google Translate pragmatically fails to give the same meaning.

- **Deletion Mistakes:** For this text, Google Translate did not make any deletion mistakes. Even though it could not produce perfectly translated sentences, it could produce an English sentence for each and every sentence in the original text.

### 4.1.3. Text C: 'BRUSSELS EUROPEAN COUNCIL-PRESIDENCY CONCLUSIONS 15/16 JUNE 2006'

#### 4.1.3.1. Original Version

Türkiye

54. AB Konseyi müktesebat taramasında kaydedilen ilerlemeyi gözden geçirmiştir ve Türkiye ile fiili katılım müzakerelerinin başlamasını memnuniyetle karşılamaktadır. Türkiye'den antlaşmalarda ortaya koyulan değerler, hedefler ve hukuki düzeni paylaşması beklenmektedir. Birlik, Türkiye'nin Birliğin standartları ve Kopenhag kriterleri dahil üyelik yükümlülüklerini yerine getirme yönündeki gayretlerini desteklemek konusunda kararlıdır. AB Konseyi, daha önceki sonuç bildirgelerine paralel olarak, müzakerelerin her bir ülkenin kendi performansına göre işleyeceğini ve hızının her bir ülkenin Müzakere Çerçevesi'nde ortaya koyulan yükümlülükleri yerine getirmede kaydettiği ilerlemeye bağlı olacağını hatırlatmaktadır. Bu, Ortaklık Anlaşması ve Avrupa Topluluğu ile Üye Ülkelerinin 21 Eylül 2005 tarihli Deklarasyonunda üzerinde mutabakat sağlandığı üzere, tam olarak uygulanması 2006 yılında denetlenecek olan Ek Protokol çerçevesindeki yükümlülüklerinin yerine getirilmesinin yanı sıra, gözden geçirilmiş Katılım Ortaklığının uygulanmasını da içermektedir. AB Konseyi, yukarıda belirtilen Deklarasyonda yer alan tüm ilgili hususlarda kaydedilen ilerlemenin Konsey tarafından 2006 yılı boyunca izlenmesinin sağlanacağını hatırlatmaktadır. AB Konseyi, reform sürecini hızlandırma ve reformları tümüyle ve etkili bir şekilde ülke genelinde uygulama yönünde Türkiye'ye çağrıda bulunmaktadır. Böylece reform sürecinin geri dönülmezliği ve sürdürülebilirliğinin sağlanmasının yanı sıra, iyi komşuluk ilişkileri taahhüdü de dahil olmak üzere Kopenhag siyasi kriterlerinin tamamen yerine getirilmesinde de ilerleme kaydedilecektir. Bu çerçevede, sorunların barışçı yollarla çözümünü olumsuz etkileyecek tüm faaliyetlerden kaçınılması gerekmektedir (Türkiye Cumhuriyeti Dışişleri Bakanlığı, n.d.).

#### **4.1.3.2. Ideal Translation**

Turkey

54. The European Council reviewed progress made in the *acquis* screening and welcomes the start of substantive accession negotiations with Turkey. Turkey is expected to share the values, objectives and the legal order set out in the treaties. The Union is committed to support Turkey in its efforts to comply with the Unions standards and membership obligations, including the Copenhagen criteria. The European Council recalls, in line with previous conclusions, that the current negotiations are based on each country's own merits and that their pace will depend on each country's progress in preparing for accession measured against the requirements set out in the Negotiating Framework. This includes the fulfilment of Turkey's obligations under the Association Agreement and under its Additional Protocol, full implementation of which will be evaluated in 2006 as agreed in the Declaration of the European Community and its Member States of 21 September 2005, as well as the implementation of the revised Accession Partnership. The European Council recalls that the Council will ensure, in the course of 2006, a follow-up on the progress made on all the relevant issues included in the above mentioned Declaration. The European Council calls on Turkey to intensify the reform process and to implement it fully and effectively, so as to ensure its irreversibility and sustainability as well as to progress towards the complete fulfilment of the Copenhagen political criteria, including the commitment to good neighbourly relations. In this context, any action which could negatively affect the process of peaceful settlement of disputes should be avoided (Brussels European Council – Presidency Conclusions, 2006).

#### **4.1.3.3. Translation of Google Translate**

Turkey

54. The European Council has reviewed the progress made in the *acquis* screening and welcomes the start of actual accession negotiations with Turkey. values laid down in the treaties from Turkey, is expected to share the objectives and the legal order. Union, the Union's Copenhagen criteria and standards and is committed to support Turkey's efforts towards fulfilling the obligations of membership included. In line with its

earlier conclusions, the EU Council reminds that the negotiations will operate according to each country's own performance, and that its speed will depend on the progress made by each country in fulfilling the obligations set out in the Negotiation Framework. This includes the implementation of the revised Accession Partnership, as well as the fulfillment of its obligations under the Additional Protocol to be audited in 2006, as fully agreed in the Association Agreement and in its Declaration of 21 September 2005 of the European Community and its Member States. The European Council reiterates that the progress made on all relevant issues in the above-mentioned Declaration will be monitored by the Council throughout 2006. Council of the EU, accelerate the reform process and reform in the country are in completely and effectively towards the implementation of the general calls on Turkey. Thus, progress will be made in the full fulfillment of the Copenhagen political criteria, including the commitment to good neighborly relations, in addition to ensuring the irreversibility and sustainability of the reform process. In this context, all activities that will adversely affect the solution of the problems by peaceful means should be avoided.

#### 4.1.3.4. Discussion

- **Syntactic Mistakes:** Since this is a legal text, it consists of quite significant statements for the parties. As any possible mistake in translating the sentence structures can result in vital outcomes. For this reason, the sentence structures should be evaluated and translated carefully.

#### *Sample 1*

- ***Ideal Translation:*** The European Council reviewed progress made in the acquis screening and welcomes the start of substantive accession negotiations with Turkey.
- ***Google Translate:*** The European Council has reviewed the progress made in the acquis screening and welcomes the start of actual accession negotiations with Turkey.

In this sample, Google Translate presents an outstanding performance in reflecting the sentence structure in the **TT**.

### **Sample 2**

- **Ideal Translation:** This includes the fulfilment of Turkey's obligations under the Association Agreement and under its Additional Protocol, full implementation of which will be evaluated I since 2006 as agreed in the Declaration of the European Community and its Member States of 21 December 2005, as well as the implementation of the revised Accession Partnership.
- **Google Translate:** This includes the implementation of the revised Accession Partnership as well as the fulfilment of its obligations under the additional protocol to be audited in 2006, as fully agreed in the Association Agreement and its Declaration of 21 September 2005 of the European Community and its Member States.

Even though there are slight differences between the ideal translation and the translation of Google Translate, the software presents an outstanding performance in conveying the message accurately without harming the sentence structure.

### **Sample 3**

- **Ideal Translation:** In this context, any action which could negatively affect the process of peaceful settlement of disputes should be avoided.
- **Google Translate:** In this context, all activities that will adversely affect the solution of the problems by peaceful means should be avoided.

In this sentence, Google Translate successfully reflects the sentence structure and the message that should be transmitted.

- **Wrong Word Choice:** Since this special text type uses a special terminology, which is called '*The EU Terminology*', the word choice in the translations of those texts needs special attention to avoid any mistakes in the meaning and misunderstandings.

### **Sample 1**

- **Ideal Translation:** The European Council recalls, in line with previous conclusions, that the current negotiations are based on each country's own merits and that their

pace will depend on each country's progress in preparing for accession measured against the requirements set out in the Negotiating Framework.

- **Google Translate:** In line with its earlier conclusions, the EU Council reminds that the negotiations will operate according to each country's own performance, and that its speed will depend on the progress made by each country in fulfilling the obligations set out in the Negotiation Framework.

Even though the word choice of the software does not equal with the ideal translation, the sentence translated by Google Translate is quite close to the ideal one in terms of terminology and word selection.

### **Sample 2**

- **Ideal Translation:** The European Council recalls that the Council will ensure, in the course of 2006, a follow-up on the progress made on all the relevant issues included in the above mentioned Declaration.
- **Google Translate:** The European Council reiterates that the progress made on all relevant issues in the above-mentioned Declaration will be monitored by the Council throughout 2006.

Here in this sentence, the word choice of Google Translate is quite successful since the terminology is outstandingly reflected.

### **Sample 3**

- **Ideal Translation:** The European Council calls on Turkey to intensify the reform process and to implement it fully and effectively, so as to ensure its irreversibility and sustainability as well as to progress towards the complete fulfilment of the Copenhagen political criteria, including the commitment to good neighbourly relations.
- **Google Translate:** Council of the EU, accelerate the reform process and reform in the country are in completely and effectively towards the implementation of the general calls on Turkey. Thus, progress will be made in the full fulfilment of the Copenhagen political criteria, including the commitment to good neighbourly relations, in addition to ensuring the irreversibility and sustainability of the reform process.

Even though the terminology in general transmits the message accurately to the TL, the software presents a crucial mistake in this sentence. While the ideal translation claims that this issue is related to the European Council, the software mistakes the European Council with the Council of the EU, which can result in vital problems between the states.

- **Semantic and / or Pragmatic Mistakes:** The politics is a critical field which cannot tolerate any mistakes. In this sense, the meanings and the pragmatic use of the words is quite important in order to avoid any possible misunderstandings that can result in serious problems.

### *Sample 1*

- ***Ideal Translation:*** Turkey is expected to share the values, objectives and the legal order set out in the treaties.
- ***Google Translate:*** values laid down in the treaties from Turkey, is expected to share the objectives and the legal order.

Here, the meaning is changed considerably since the sentence structure is changed. This may cause a crucial outcome between the Member States.

- **Deletion Mistakes:** During the actual translation process of the texts, the human translator may decide to delete words or structures, even though this is not something that is preferred frequently. Nevertheless, the translation softwares do not have the decision mechanism about this issue. Moreover, in the legal texts such as this one, a random deletion may result in crucial outcomes. Nevertheless, the system did not make any deletion mistakes during the test.

#### **4.1.4. Text D: ‘Evaluation of the Causes Of Perianal Abscess In Childhood’**

##### **4.1.4.1. Original Version**

### **1. Giriş**

Perianal apse, sadece erişkinlerde değil, çocukluk çağında da yaygın olarak karşılaşılan bir anorektal hastalıktır. Hastalar genellikle anal bölgede şişlik, hassasiyet, ve ateş şikayetleriyle başvurumaktadırlar. Anal kript ve bezlerin obstrüksiyonu sonucu gelişen perianal apseler sıklıkla bir yaş altında ve erkek çocuklarda görülmektedir (1-4). Androjen fazlalığının veya androjen östrojen arasındaki dengesizliğin perianal apse gelişimine neden olduğu öne sürülmüştür (5,6). Perianal apselerin %30 ila %50’sinde inflamatuvar odağın yüzeye açılması sonucu anal kanal ile perianal deri arasında fistül gelişebilir. Büyük çocuklarda immun yetmezlik veya inflamatuvar barsak hastalıkları, bir yaşından küçük çocuklarda ise anal fistül gibi konjenital bir anomali perianal apse gelişimine hazırlayıcı neden olabilir (6,7). Perianal apse tedavisinde öncelikle konservativ tedavi yönetimleri tercih edilmekle birlikte semptomatik hastalarda cerrahi girişim gerekebilir (8). Çocukluk çağında perianal apse yönetimindeki veriler kısıtlıdır ve çoğunlukla cerrahi raporlara ve klinik deneyimlere dayanmaktadır. Bu amaçla çalışmamızda kliniğimizde perianal apse nedeniyle yatırılarak tedavi edilmiş hastaların klinik ve laboratuvar bulgularının, hazırlayıcı nedenlerinin, tedavi tercihlerinin ve klinik sonuçlarının sunulması amaçlanmıştır.

### **2. Gereç ve Yöntem**

#### **2.1.Çalışma planlaması**

İstanbul Üniversitesi Cerrahpaşa Tıp Fakültesi Çocuk Enfeksiyon Servisi’nde Aralık 2009-Aralık 2017 tarihleri arasında yatırılarak perianal apse tanısı konulan tüm hastaların verileri geriye dönük olarak hasta dosyaları ve elektronik kayıt sistemleri üzerinden incelendi. Çalışmamız için fakültemiz lokal kurulundan (21.05.2018-29430533) ve tüm hastalarımızın ebeveynlerinden onay alınmıştır (Aygün & Akçakaya, 2019, p.21).

#### **4.1.4.2. Ideal Translation**

### **Evaluation of the Causes of Perianal Abscess In Childhood**

#### **1. Introduction**

Perianal abscess is an anorectal disease seen very commonly not only in adulthood but also in childhood. Patients generally refer to hospitals with complaints such as swelling in the anal region, tenderness and fever. Perianal abscess forming as a result of obstruction of the anal crypts and glands are frequently seen in male children under the age of 1 (1-4). It has been suggested that androgen excess or the imbalance between androgen and estrogen causes the formation of perianal abscess (5,6). In 30-50% of perianal abscesses, fistula can develop between the perianal skin and anal canal due to the surfacing of the inflammation. Immunodeficiency or inflammatory bowel diseases (IBD) in older children and a congenital anomaly like anal fistula in children under the age of 1 can be predisposing conditions to the formation of perianal abscess (6,7). Along with the preference of conservative treatment methods in perianal abscess treatment, surgical intervention may be necessary in symptomatic patients (8). Data on the management of perianal abscess in childhood are limited and are based mostly on surgical reports and clinical experience. To that end, this study aimed to report the predisposing conditions, treatment preferences, outcomes and clinical and laboratory findings of the patients hospitalized in our clinic for perianal abscess.

#### **2. Material and Methods**

##### **2.1. Study plan**

Data of all patients hospitalized with the diagnosis of perianal abscess between December 2009 and December 2017 in the Pediatric Infection Disease Department of Istanbul University Cerrahpasa Medical Faculty were retrospectively reviewed from patient files and electronic record system. Consent from all parents of our patients and approval from the local ethics committee of our faculty (21.05.2018-29430533) were received for the study.

#### **4.1.4.3. Translation of Google Translate**

### **Evaluation of Perianal Abscess Causes in Childhood**

#### **1. Introduction**

Perianal abscess is an anorectal disease that is common in childhood, not only in adults. Patients usually present with anal area swelling, tenderness, and fever. Perianal abscesses that develop as a result of obstruction of the anal crypts and glands are frequently seen under one year of age and in boys (1-4). It has been suggested that the imbalance between androgen excess or androgen estrogen causes the development of perianal abscess (5,6). In 30% to 50% of perianal abscesses, the fistula may develop between the anal canal and the perianal skin due to the opening of the inflammatory focus to the surface. In older children immunodeficiency or inflammatory bowel diseases, in children younger than one year, a congenital anomaly such as anal fistula may lead to the preparation of perianal abscess development (6,7). Although conservative treatment regimens are preferred in perianal abscess treatment, surgical intervention may be required in symptomatic patients (8). Data on perianal abscess management in childhood are limited and often rely on surgical reports and clinical experience. In this study, we aimed to present the clinical and laboratory findings, preparatory causes, treatment preferences and clinical results of patients who were hospitalized for perianal abscess in our clinic.

#### **2. Materials and Methods**

##### **2.1. Work planning**

The data of all patients who were hospitalized between December 2009-December 2017 at Istanbul University Cerrahpaşa Medical Faculty Pediatric Infection Service were retrospectively analyzed with patient files and electronic registry systems. Approval was obtained from the local board of our faculty (21.05.2018-29430533) and the parents of all our patients for our study.

#### 4.1.4.4. Discussion

- **Syntactic Mistakes:** As conveying the messages in a text from medical field is quite important to understand the treatments and diseases completely, reflecting the sentence structure is vital.

##### *Sample 1*

- ***Ideal Translation:*** Perianal abscess is an anorectal disease seen very commonly not only in adulthood, but also in childhood.
- ***Google Translate:*** Perianal abscess is an anorectal disease that is common in childhood, not only in adults.

Google Translate presents a quite successful performance in reflecting the sentence structure in this sample.

##### *Sample 2*

***Ideal Translation:*** Along with the preference of conservative treatment methods in perianal abscess treatment, surgical intervention may be necessary in symptomatic patients (8).

- ***Google Translate:*** Although conservative treatment regimens are preferred in perianal abscess treatment, surgical intervention may be required in symptomatic patients (8).

Although there are slight changes in the sentence structure, the message is conveyed successfully and the intended meaning of the sentence is quite understandable.

##### *Sample 3*

- ***Ideal Translation:*** Data on the management of perianal abscess in childhood are limited and are based mostly on surgical reports and clinical experience.
- ***Google Translate:*** Data on perianal abscess management in childhood are limited and often rely on surgical reports and clinical experience.

Google Translate successfully transmits the message from the **SL** to the **TL** without breaking the sentence structure down in this sample.

- **Wrong Word Choice:** To reach clear cut understandings, word choice becomes an important issue in the medical field. As the diseases and the treatments should be understood clearly and to avoid any mistakes in the treatment and diagnosis processes, explaining both of them gains emphasis.

### *Sample 1*

- **Ideal Translation:** To that end, this study aimed to report the predisposing conditions, treatment preferences, outcomes and clinical and laboratory findings of the patients hospitalized in our clinic for perianal abscess.
- **Google Translate:** In this study, we aimed to present the clinical and laboratory findings, preparatory causes, treatment preferences and clinical results of patients who were hospitalized for perianal abscess in our clinic.

The change of the subject in the sentence translated by Google Translate takes the meaning from a formal sense to an informal sense. As the text type is didactic and the aim is to explain and teach, this kind of word choice is not proper for the translation of this text type. The word choice should be formal.

### *Sample 2*

- **Ideal Translation:** It has been suggested that androgen excess or the imbalance between androgen and estrogen causes the formation of perianal abscess (5,6).
- **Google Translate:** It has been suggested that the imbalance between androgen excess or androgen estrogen causes the development of perianal abscess.

The software adds and extra word in this sentence, which results in an ambiguity in the meaning.

### *Sample 3*

- **Ideal Translation:** Consent from all parents of our patients and approval from the local ethics committee of our faculty (21.05.2018-29430533) were received for the study.
- **Google Translate:** Approval was obtained from the local board of our faculty (21.05.2018-29430533) and the parents of all our patients for our study.

The system produces a translation of this sentence in which the word ‘approval’ refers both to the ethics committee of the faculty and the parents of the patients. Nevertheless, the word ‘consent’ is a must in the translation of this sentence to present the reader of the **TL** with a clear cut meaning.

- **Semantic and / or Pragmatic Mistakes:** Carrying the messages clearly from one language to another is a vital issue, especially the aim is to teach or define. In the medical field, this gains additional emphasis since the subject is human life.

### **Sample 1**

- **Ideal Translation:** Patients generally refer to hospitals with complaints such as swelling in the anal region, tenderness, and fever.
- **Google Translate:** Patients usually present with anal area swelling, tenderness and fever.

The use of the word ‘present’ instead of ‘refer’ in the translation of Google Translates change the meaning, causing a semantic mistake. The emphasis here is referring to hospitals.

### **Sample 2:**

- **Ideal Translation:** In 30-50% of perianal abscesses, fistula can develop between the perianal skin and anal canal due to the surfacing of the inflammation.
- **Google Translate:** In 30% to 50% of perianal abscesses the fistula may develop between the anal canal and the perianal skin due to the opening of the inflammatory focus to the surface.

The changes in the word choice of the Google Translates result in an ambiguity in the meaning, which is not desired in such texts. The meaning should be conveyed clearly.

- **Deletion Mistakes:** The deletion of any word from any sentence of the **ST** is a crucial decision, which should be carefully monitored. A human translator is capable of making this kind of decisions; nevertheless, the software systems

are still in training to reach this the human level in this sense. In addition, deleting a word during the translation process may cause crucial results.

### **Sample 1**

- **Ideal Translation:** It has been suggested that androgen excess or the imbalance between androgen and estrogen causes the formation of perianal abscess (5,6).
- **Google Translate:** It has been suggested that the imbalance between androgen excess or androgen estrogen causes the development of perianal abscess (5,6).

The deletion of the transition word 'and' in the sentence translated by Google Translate breaks the flow of the sentence.

### **Sample 2**

- **Ideal Translation:** Immunodeficiency, or inflammatory bowel diseases (IBD) in older children and a congenital anomaly like anal fistula in children under the age of 1 can be predisposing conditions to the formation of perianal abscess (6,7).
- **Google Translate:** In older children immunodeficiency or inflammatory bowel diseases, in children younger than one year, a congenital anomaly such as anal fistula may lead to the preparation of perianal abscess development (6,7).

In this sentence, Google Translate removes the abbreviation. This seems a slight mistake, nevertheless; this may create problems in the later parts of the text in terms of reference.

### **Sample 3**

- **Ideal Translation:** Consent from all parents of our patients and approval from the local ethics committee of our faculty (21.05.2018-29430533) were received for the study.
- **Google Translate:** Approval was obtained from the local board of our faculty (21.05.2018-29430533) and the parents of all our patients for our study.

The deletion of the word 'consent' creates a significant change in the meaning, since 'approval' and 'consent' have different meanings.

## 4.2. Microsoft Translator

Microsoft Translator is another artificial-intelligence integrated translator software. It was once based on semantic-predicate argument structures. The current needs of the globalized world also forced the Microsoft Team to work with the feature artificial intelligence presents, and they changed the basis of the software to a neural network system which is capable of learning as the users benefit from the services of the system. The aim in integrating the AI to the system was basically to remove the gap between the translations made by human translators and the AI-integrated software.

### 4.2.1. Text A: ‘Yashar Kemal’s Memed, My Hawk’

#### 4.2.1.1. Original Version

Toros dağlarının etekleri ta Akdenizden başlar. Kıyıları döven ak köpüklerden sonra doruklara doğru yavaş yavaş yükselir. Akdenizin üstünde daima, top top ak bulutlar salınır. Kıyıları dümdüz, cilalanmış gibi düz killi topraklardır. Killi toprak et gibidir. Bu kıyıları saatlarca içe kadar deniz kokar, tuz kokar. Tuz keskindir. Düz, killi, sürülmüş topraklardan sonra Çukurovanın bükleri başlar. Örülmüşçesine sık çalılar, kamışlar, böğürtlenler, yaban asmaları, sazlarla kaplı, koyu yeşil, ucu bucağı belirsiz alanlardır bunlar. Karanlık bir ormandan daha yabancı, daha karanlık!

Biraz daha içeri, bir taraftan Anavarzaya, bir taraftan Osmaniyeyi geçip İslahiyeye gidilecek olursa geniş bataklıklara varılır. Bataklıklar yaz aylarında fıkır fıkır kaynar. Kirli, pistir. Kokudan yanına yanaşılmaz. Çürümüş saz, çürümüş ot, ağaç, kamış, çürümüş toprak kokar. Kışınsa duru, pırıl pırıl, taşkın bi sudur. Yazın otlardan, sazlardan suyun yüzü gözükmeyiz. Kışınsa çarşaf gibi açılır. Bataklıklar geçildikten sonra, tekrar sürülmüş tarlalara gelinir. Toprak yağlı, ıslık ıslıktır. Bir e kırk, bire elli vermeye hazırlanmıştır. Sıcacık, yumuşaktır.

Üstleri ağır kokulu mersin ağaçlarıyla kaplı tepeler geçildikten sonradır ki, kayalar birdenbire başlar. İnsan birden ürker. Kayalarla birlikte çam ağaçları da başlar. Çamların birer billur parıltısındaki sakızları burada toprağa sızar. İlk çamlar geçildikten sonra, gene düzlüklere varılır. Bu düzlükler boz topraktır. Verimsiz,

kıraç... Buralardan Torosun karlı dorukları yanındaymış, elini uzatsan tutacaktıydın gibi gözüdür (Kemal, 2019, p. 9-10).

#### **4.2.1.2. Ideal Translation**

The slopes of the Taurus Mountains rise from the shores of the Eastern Mediterranean, on the southern coast of Turkey, in a steady ascent from the white, foam-fringed rocks to the peaks. They then spread inland, at a tangent to the curve of the coast. Clouds in white masses always float over the sea. The coastal plains between the mountains and the shore are of clay, quite smooth, as if polished. Here, the soil is rich. For miles inland the plain holds the tang of the sea, its air still salt and sharp. Beyond this smooth ploughed land the scrub of the Chukurova begins. Thickly covered with a tangle of brushwood, reeds, blackberry brambles, wild vines and rushes, its deep green expanse seems boundless, wilder and darker than a forest.

A little farther inland, beyond Anavarza on one side and Osmaniya on the other, on the way towards Islahiye, begin the broad marshes. In the summer months they bubble with the heat. Filthy, unapproachable because of their stench, they reek of rotting reeds and rushes, rotting grass and timber, rotting earth. The surface of the water is then hidden by the decomposing vegetation. In winter, the whole area is covered by the sheen of stagnant flood-water, unrolling like a carpet. Beyond the marshes there are more ploughed fields. The earth is oily, shining, warm and soft ready to repay forty-fold, fifty-fold, the seed that it receives.

Only beyond the low hill-tops crowned with heavy-scented myrtle do the rocks suddenly begin to appear, and with them the pine trees. The crystal-bright drops of resin ooze from the trunks and trickle down to the ground. Beyond the pines are plateaux where the soil is grey and arid. From here, it looks as if the snow-capped peaks of the Taurus are very close, almost within arm's reach (Kemal, 2016, p.5).

#### **4.2.1.3. Translation of Microsoft Translator**

The skirts of the Taurus Mountains start from the Aksea. After the white foams that beat the Shores, they gradually rise towards the peaks. Always on top of the Mediterranean, the ball is released from the clouds. The Shores are flat clay, like plain, polished. Clay is like meat. These Shores stink of sea until hours inward, smelling of

salt. Salt is sharp. After the Flat, clay, plowed peles, the bends of Çukurovas begin. They are often covered with bushes, straits, blackberries, wild vines, reeds, dark green and obscure areas. More savage, darker than a Dark forest!

A Little further in, on the one hand, Anavarzaya, one side of the Ottomans to go to Juvie if the vast marshes are reached. The Marshes boils in the summer. Dirty, Rundown. You can't be approached by the Scent. Rotten Reed, rotten weed, tree, reed, rotten soil. The water is clear, sparkling, flood. In the Summer, there is no water from the grass and the reed. It opens up like a sheet of Cake. Once the Marshes are crossed, they come back to the plowed fields. The Earth is greasy, radiant. Forty to One, one to fifty. It's Warm, soft.

The Tops of the hills covered with heavily fragrant myrtle trees are crossed, so the rocks suddenly start. A Man is a spoof. Pine trees begin with the Rocks. The gum in the crystal glow of the Pines infiltrates the soil here. After the First pines are crossed, the plains are still reached. These plains are grey soil. Inefficient, Barren... This is the snowy peaks of the Torso, and if you hand it over, it looks like you're holding it.

#### 4.2.1.4. Discussion

- **Syntactic Mistakes:** Since the translation of literary texts is more complex than translating the other types of texts, they need a special attention during the translation process. While the main aim is always to transmit the message correctly to the other language, conveying the emotions and feelings are also quite significant in this type of texts. The correct reflection of the sentence structure is a vital element in this process.

#### *Sample 1*

- ***Ideal Translation:*** For miles, inland the plain holds the tang of the sea, its air still salt and sharp.
- ***Microsoft Translator:*** These Shores stink of sea until hours of inward, smelling of salt. Salt is sharp.

The ideally translated sentence explains that the air smelling of salt can be noticed from a long distance while the sentence translated by Microsoft Translator both

changes the meaning and the sentence structure. This creates a vital difference in the meaning.

### **Sample 2**

- **Ideal Translation:** Filthy, unapproachable because of their stench, they reek of rotting reeds and rushes, rotting grass and timber, rotting earth.
- **Microsoft Translator:** Dirty, Rundown. You can't be approached by the Scent. Rotten Reed, rotten weed, rotten soil.

The decomposition of the ideal sentence structure not only changes the meaning, but also creates ambiguity. While the aim is to explain that the smell around the lake is disturbing, the change of the subject of the sentence and the sentence structure creates a vital difference in the meaning.

### **Sample 3**

- **Ideal Translation:** The earth is oily, shining, warm and soft, ready to repay forty-fold, fifty-fold, the seed that it receives.
- **Microsoft Translator:** The Earth is greasy, radiant. Forty to One, one to fifty. It's Warm, soft.

While the ideally translated sentence carries a clear, easily-understandable meaning, the translation of Microsoft Translator cannot be as effective as the ideal translation due to the significant changes in the sentence structure.

- **Wrong Word Choice:** The selection of words in translating this type of texts is vital in terms of carrying the meaning and the emotions effectively.

### **Sample 1**

- **Ideal Translation:** Clouds in white masses always float over the sea.
- **Microsoft Translator:** Always on top of the Mediterranean, the ball is released from the clouds.

Here in this sample, the main aim is to explain the state of clouds over the Mediterranean, while Microsoft Translator changes the meaning by choosing wrong word for the translation of this sentence.

### **Sample 2**

- **Ideal Translation:** A little farther inland, beyond Anavarza on one side and Osmaniya on the other, on the way towards Islahiye, begin the broad marshes.
- **Microsoft Translator:** A little further in, on the one hand, Anavarzaya, one side of the Ottomans to go to Juvie if the vast marshes are reached.

As it can be seen above, the word choice of Microsoft Translator creates a big fail in conveying the message. While the ideally translated sentence describes a vast place, and the location of the cities, there is a significant ambiguity in the sentence translated by Microsoft Translator.

### **Sample 3**

- **Ideal Translation:** From here, it looks like as if the snow-capped peaks of the Taurus are very close, almost within arm's reach.
- **Microsoft Translator:** This is the snowy peaks of the Torso, and if you hand it over, it looks like you're holding it.

While the aim here is to explain how close the mountain seems from a certain distance, the sentence translated by Microsoft Translator cannot give the same meaning due to the wrong word choice. In addition, the software has problems with the translation of special words like names of the mountains.

- **Semantic and / or Pragmatic Mistakes:** Since the different meanings of a word gains emphasis in the translation of literary texts, finding the most accurate meaning of a word is vital in the translation process.

### **Sample 1**

- **Ideal Translation:** The coastal plains between the mountains and the shore are of clay, quite smooth as if polished.
- **Microsoft Translator:** The shores are flat clay, like plain, polished.

Since reflecting the harmony in the meaning is significant in the translation, Microsoft Translator fails to give this harmony in its translation. The meaning is correct on the surface; nevertheless, it does not reflect the desired effect on the reader.

### **Sample 2**

- **Ideal Translation:** Here, the soil is rich.

- **Microsoft Translator:** Clay is like meat.

While the ideally translated sentence explains the reader that the soil is rich in terms of minerals, organic compounds etc., the sentence of Microsoft Translator fails to transfer the desired effect.

### **Sample 3**

- **Ideal Translation:** Only beyond the low hill-tops crowned with heavy-scented myrtle do the rocks suddenly begin to appear, and with them the pine trees.
- **Microsoft Translator:** The Tops of the hills covered with heavily fragrant myrtle trees are crossed, so the rocks suddenly start. A man is a spoof. Pine trees begin with the Rocks.

Here in this sample, the sentence structure and the word choice add to the desired effect that the sentence would create on the reader in terms of meaning. Since the translation of Microsoft Translator fails to give the desired semantic and pragmatic effect, the meaning ambiguous.

- **Deletion Mistakes:** Excluding a structure or a sentence from a text is a process that should be carefully evaluated. Generally speaking, the translation softwares does not authorized to delete a sentence or a word from the original text. If so, the meaning can be changed, which is not desired.

### **Sample 1**

- **Ideal Translation:** They then spread inland, at a tangent to the curve of the coast.
  - **Microsoft Translator:** (no translation)
- Microsoft Translator fails to translate this sentence.

## **4.2.2. Text B: ‘Mustafa Kemal Atatürk’s Address to Turkish Youth’**

### **4.2.2.1. Original Version**

Atatürk’ün Gençliğe Hitabesi

Ey Türk Gençliği! Birinci vazifen, Türk istiklâlini, Türk Cumhuriyetini, ilelebet, muhafaza ve müdafaa etmektir. Mevcudiyetinin ve istikbalinin yegâne temeli budur. Bu temel, senin, en kıymetli hazinedir. İstikbalde dahi, seni bu hazineden

mahrum etmek isteyecek, dâhilî ve haricî bedhahların olacaktır. Bir gün, İstiklâl ve Cumhuriyeti müdafaa mecburiyetine düşersen, vazifeye atılmak için, içinde bulunacağın vaziyetin imkân ve şerâitini düşünmeyeceksin! Bu imkân ve şerâit, çok namüsaid bir mahiyette tezahür edebilir. İstiklâl ve Cumhuriyetine kastedecek düşmanlar, bütün dünyada emsali görülmemiş bir galibiyetin mümessili olabilirler. Cebren ve hile ile aziz vatanın, bütün kaleleri zapt edilmiş, bütün tersanelerine girilmiş, bütün orduları dağıtılmış ve memleketin her köşesi bilfiil işgal edilmiş olabilir. Bütün bu şerâitten daha elim ve daha vahim olmak üzere, memleketin dahilinde, iktidara sahip olanlar gaflet ve dalâlet ve hatta hıyanet içinde bulunabilirler. Hatta bu iktidar sahipleri şahsî menfaatlerini, müstevlilerin siyasi emelleriyle tevhit edebilirler. Millet, fakr ü zaruret içinde harap ve bîtap düşmüş olabilir.

Ey Türk istikbalinin evlâdı! İşte, bu ahval ve şerâit içinde dahi, vazifen; Türk İstiklâl ve Cumhuriyetini kurtarmaktır (Ataturk, M. K. (1927)!

Muhtaç olduğun kudret, damarlarındaki asil kanda mevcuttur!

Mustafa Kemal Atatürk  
20 Ekim 1927

#### 4.2.2.2. Ideal Translation

Declaration by Atatürk to the Turkish Youth

Turkish Youth!

Your first duty is forever to preserve and to defend the Turkish Independence and the Turkish Republic.

This is the very foundation of your existence and your future. This foundation is your most precious treasure. In the future, too, there may be malevolent people at home and abroad who will wish to deprive you of this treasure. If some day you are compelled to defend your independence and your republic, you must not tarry to weigh the possibilities and circumstances of the situation before taking up your duty. These possibilities and circumstances may turn out to be extremely unfavourable. The enemies conspiring against your independence and your republic, may have behind

them a victory unprecedented in the annals of the world. It may be that, by violence and ruse, all the fortresses of your beloved fatherland may be captured, all its shipyards occupied, all its armies dispersed and every part of the country invaded. And sadder and graver than all these circumstances, those who hold power within the country may be in error, misguided and may even be traitors. Furthermore, they may identify their personal interests with the political designs of the invaders. The country may be impoverished, ruined and exhausted.

Youth of Turkey's future,

Even in such circumstances it is your duty to save the Turkish Independence and Republic.

You will find the strength you need in your noble blood (Ataturk, M.K. (n.d.).

Mustafa Kemal Atatürk  
20 October 1927

#### **4.2.2.3. Translation of Microsoft Translator**

Ataturk's addressing to youth

O Turkish Youth! Your first duty is to preserve and defend the Turkish Republic, the Turkish republics, forever. This is the sole basis of your presence and future. This foundation is your most precious treasure. Even in the future, you will want to deprive you of this treasure, the internal and external Beddeans. One day, if you are to defend the direction and the Republic, you will not consider the possibility and the sharia of the situation in which you are to be thrown into the task! This possibility and the Sharad can manifest in a very namuite nature. The enemies that will butcher the future and the Republic may be the representative of an unprecedented victory all over the world. With Cebren and gimmick, all the castles have been conquered, all the troops have been invaded, all armies distributed, and every corner of the country may have been occupied. More hands and more grave than all of this, within the country, those who have power, can be found in the unrest and in the fellahin and even in treason. In fact, these ruling owners can repenters their personal interests with the political

ambitions of the exceptional. People may have been devastated and torn up in the poorer.

O Turkish future son! Here, even in this circumstance and the sheriff, your duty; To save the Turkish direction and Republic!

The potency you need is in the noble blood of your veins!

Mustafa Kemal Atatürk

20th Oct 1927

#### 4.2.2.4. Discussion

- **Syntactic Mistakes:** Since this is a rhetoric text, the effect of it on its audience is quite important. The desired effect is created by a careful design of sentence structures and an effective word choice. Nevertheless, without a successful sentence structure which is vital in transmitting the desired meaning effect, the word choice does not be as effective as intended.

##### *Sample 1*

- **Ideal Translation:** Your first duty is forever to preserve and to defend the Turkish Independence and the Turkish Republic.
- **Microsoft Translator:** Your first duty is to preserve and defend the Turkish Republic, the Turkish republics, forever.

Apart from the addition of needless words by Microsoft Translator, the sentence structure is correct.

##### *Sample 2*

- **Ideal Translation:** If someday you are compelled to defend your independence and your republic, you must not tarry to weigh the possibilities and circumstances of the situation before taking up your duty.
- **Microsoft Translator:** One day, if you are to defend the direction and the Republic, you will not consider the possibility and the sharia of the situation in which you are to be thrown into the task!

Here in this sample, it can be seen that Microsoft Translator can build the sentence structures accurately even though there are mistakes in the word choice. Nevertheless, there is not subject-verb disagreement.

**Sample 3**

- **Ideal Translation:** These possibilities and circumstances may turn out to be extremely unfavourable.
- **Microsoft Translator:** This possibility and the Sharad can manifest in a namuite nature.

While the ideal translation provides a smooth transmission of the meaning through a correct sentence structure, Microsoft Translator fails to convey the meaning accurately while the sentence structure is still correct.

- **Wrong Word Choice:** Every language has more than one word that have the same meaning, nevertheless; the issue here is to choose the most appropriate one during the translation process. Any mistake in this process can change the intended meaning.

**Sample 1**

- **Ideal Translation:** The enemies conspiring against your independence and your republic may have behind them a victory unprecedented in the annals of the world.
- **Microsoft Translator:** The enemies that will butcher the future and the Republic may be the representative of an unprecedented victory all over the world.

Even though the sentence structure is correct, the word choice of Microsoft Translator becomes an obstacle in the accurate transmission of the meaning from one language to the other.

**Sample 2**

- **Ideal Translation:** It may be that, by violence and ruse, all the fortresses of your beloved fatherland may be captured, all its shipyards occupied, all its armies dispersed and every part of the country invaded.
- **Microsoft Translator:** With Cebren and gimmick, all the castles have been conquered, all the troops have been invaded, all armies distributed and every corner of the country may have been occupied.

The poor word choice here in this sentence translated by Microsoft Translator creates ambiguity in the meaning.

**Sample 3**

- **Ideal Translation:** Furthermore, they may identify their personal interests with the political designs of the invaders.

- **Microsoft Translator:** In fact, these ruling owners can repenters their personal interests with the political ambtions of the exceptional.

Here in this sample it can be seen that the word choice and the spelling mistake of Microsoft Translator does not meet the intended meaning to be conveyed to another language.

- **Semantic and / or Pragmatic Mistakes:** As well as the correct word choice, finding the most accurate meaning of those words are quite significant in the translation process. The translated text should convey the intended meaning without causing any social and political problems.

### **Sample 1**

- **Ideal Translation:** The enemies conspiring against your independence and your republic may have behind them a victory unprecedented in the annals of the world.
- **Microsoft Translator:** The enemies that will butcher the future and the Republic may be the representative of an unprecedented victory all over the world.

The word 'butcher' here in the sentence translated by Microsoft Translator is too aggressive and politically not correct. When the ideally translated sentence is examined, it can be seen that the meaning does not cause any problems socially or politically. Nevertheless, the word 'butcher' may cause problems.

### **Sample 2**

- **Ideal Translation:** And sadder and graver than all these circumstances, those who hold power within the country may be in error, misguided and may even be traitors.
- **Microsoft Translator:** More hands and more graver than all of this, within the country, those who have power, can be found in the unrest and in the fellahin and even in treason.

Here in this sample, the word 'unrest' does not meet the intended meaning. While ideally translated sentence tries to explain that the authorities may have bad intentions about the country, the word 'unrest' does not have the equal meaning.

- **Deletion Mistakes:** In order to create an ideal translation, the favorable situation is to avoid any deletions from the original text. Nevertheless, a human translator can sometimes decide to delete or merge some sentences or structures. Yet, translation software is not authorized to do so. In this text, Microsoft Translator does not present any deletion mistakes.

### 4.2.3. Text C: ‘BRUSSELS EUROPEAN COUNCIL-PRESIDENCY CONCLUSIONS 15/16 JUNE 2006’

#### 4.2.3.1. Original Version

Türkiye

54. AB Konseyi müktesebat taramasında kaydedilen ilerlemeyi gözden geçirmiştir ve Türkiye ile fiili katılım müzakerelerinin başlamasını memnuniyetle karşılamaktadır. Türkiye’den antlaşmalarda ortaya koyulan değerler, hedefler ve hukuki düzeni paylaşması beklenmektedir. Birlik, Türkiye’nin Birliğin standartları ve Kopenhag kriterleri dahil üyelik yükümlülüklerini yerine getirme yönündeki gayretlerini desteklemek konusunda kararlıdır. AB Konseyi, daha önceki sonuç bildirgelerine paralel olarak, müzakerelerin her bir ülkenin kendi performansına göre işleyeceğini ve hızının her bir ülkenin Müzakere Çerçevesi’nde ortaya koyulan yükümlülükleri yerine getirmede kaydettiği ilerlemeye bağlı olacağını hatırlatmaktadır. Bu, Ortaklık Anlaşması ve Avrupa Topluluğu ile Üye Ülkelerinin 21 Eylül 2005 tarihli Deklarasyonunda üzerinde mutabakat sağlandığı üzere, tam olarak uygulanması 2006 yılında denetlenecek olan Ek Protokol çerçevesindeki yükümlülüklerinin yerine getirilmesinin yanı sıra, gözden geçirilmiş Katılım Ortaklığının uygulanmasını da içermektedir. AB Konseyi, yukarıda belirtilen Deklarasyonda yer alan tüm ilgili hususlarda kaydedilen ilerlemenin Konsey tarafından 2006 yılı boyunca izlenmesinin sağlanacağını hatırlatmaktadır. AB Konseyi, reform sürecini hızlandırma ve reformları tümüyle ve etkili bir şekilde ülke genelinde uygulama yönünde Türkiye’ye çağrıda bulunmaktadır. Böylece reform sürecinin geri dönülmezliği ve sürdürülebilirliğinin sağlanmasının yanı sıra, iyi komşuluk ilişkileri taahhüdü de dahil olmak üzere Kopenhag siyasi kriterlerinin tamamen yerine getirilmesinde de ilerleme kaydedilecektir. Bu çerçevede, sorunların barışçı yollarla çözümünü olumsuz etkileyecek tüm faaliyetlerden kaçınılması gerekmektedir (Türkiye Cumhuriyeti Dışişleri Bakanlığı, n.d.).

#### **4.2.3.2. Ideal Translation**

Turkey

54. The European Council reviewed progress made in the *acquis* screening and welcomes the start of substantive accession negotiations with Turkey. Turkey is expected to share the values, objectives and the legal order set out in the treaties. The Union is committed to support Turkey in its efforts to comply with the Unions standards and membership obligations, including the Copenhagen criteria. The European Council recalls, in line with previous conclusions, that the current negotiations are based on each country's own merits and that their pace will depend on each country's progress in preparing for accession measured against the requirements set out in the Negotiating Framework. This includes the fulfilment of Turkey's obligations under the Association Agreement and under its Additional Protocol, full implementation of which will be evaluated in 2006 as agreed in the Declaration of the European Community and its Member States of 21 September 2005, as well as the implementation of the revised Accession Partnership. The European Council recalls that the Council will ensure, in the course of 2006, a follow-up on the progress made on all the relevant issues included in the above mentioned Declaration. The European Council calls on Turkey to intensify the reform process and to implement it fully and effectively, so as to ensure its irreversibility and sustainability as well as to progress towards the complete fulfilment of the Copenhagen political criteria, including the commitment to good neighbourly relations. In this context, any action which could negatively affect the process of peaceful settlement of disputes should be avoided (Brussels European Council – Presidency Conclusions, 2006).

#### **4.2.3.3. Translation of Microsoft Translator**

Turkey

54. The Council of the EU has reviewed the progress recorded in the *acquis* screening and welcomes the start of the actual accession negotiations with Turkey. It is expected to share the values, objectives and legal order set out in the agreements in Turkey. The Union is committed to supporting Turkey's efforts to meet its membership obligations, including the Union's standards and the Copenhagen criteria. The EU Council, in line

with previous results, depends on the progress that the negotiations will process for each country's own performance and the pace in fulfilling the obligations set forth in the negotiating framework of each country. This is in lieu of its obligations under the Additional Protocol framework, which will be audited in 2006, as agreed upon by the Partnership agreement and the European Community and Member States ' declaration on September 21, 2005. As well as the implementation of the revised participation Partnership. The Council of the EU reminds you that the progress made by the Council on all related issues in the aforementioned declaration will be followed by the Committee for the year 2006. The EU Council calls on Turkey to accelerate the reform process and to implement reforms completely and effectively throughout the country. Thus, in addition to ensuring the irreversibility and sustainability of the reform process, progress will be made in the complete fulfillment of the Copenhagen political criteria, including the commitment of good neighbourly relations. In this context, it is necessary to avoid all activities that adversely affect the solution of problems in peaceful ways.

#### 4.2.3.4. Discussion

- **Syntactic Mistakes:** The correct reflection of the sentence structures in the translated text is quite significant in conveying the message accurately especially in legal documents. In order to prevent any ambiguities and changes in the meaning the sentence should be built up in the most accurate way.

#### *Sample 1*

- **Ideal Translation:** The European Council reviewed progress made in the acquis screening and welcomes the start of substantive accession negotiations with Turkey.
- **Microsoft Translator:** The Council of the EU has reviewed progress recorded in the acquis screening and welcomes the start of the actual accession negotiations with Turkey.

Apart from some mistakes in the word choice, the sentence structure is reflected accurately by Microsoft Translator.

### **Sample 2**

- **Ideal Translation:** The European Council recalls, in line with previous conclusions, that the current negotiations are based on each country's own merits and that their pace will depend on each country's progress in preparing for accession measured against the requirements set out in the Negotiating Framework.
- **Microsoft Translator:** The EU Council, in line with previous results, depends on the progress that the negotiations will process for each country's own performance and the pace in fulfilling the obligations set forth in the negotiating framework of each country.

Here in this sample, Microsoft Translator translates the sentence in a more informal way, while the sentence structure of the ideal translation creates a more serious effect on the reader.

### **Sample 3**

- **Ideal Translation:** This includes the fulfilment of Turkey's obligations under the Association Agreement and under its Additional Protocol, full implementation of which will be evaluated in 2006 as agreed in the Declaration of the European Community and its Member States of 21 September 2005, as well as the implementation of the revised Accession Partnership.
- **Microsoft Translator:** The This is in lieu of its obligations under the Additional Protocol framework, which will be audited in 2006, as agreed upon by the Partnership agreement and the European Community and Member States' declaration on September 21, 2005. As well as the implementation of the revised participation Partnership.

The ideal translation of this sentence reflect the noun clauses in the successfully. Nevertheless, Microsoft Translator cannot handle the complex sentence structure and unnecessarily breaks the sentence down, and the product sentence causes ambiguities in the meaning.

- **Wrong Word Choice:** Legal documents need special attention in word choice during the translation process, in order to avoid ambiguities in the

meaning and conflicts in the political field. As a result, the translation software should be capable of choosing the right word.

### *Sample 1*

- ***Ideal Translation:*** The European Council reviewed progress made in the acquis screening and welcomes the start of substantive accession negotiations with Turkey.
- ***Microsoft Translator:*** The Council of the EU has reviewed progress recorded in the acquis screening and welcomes the start of the actual accession negotiations with Turkey.

While the ideally translated sentence mentions about a situation related to ‘the European Council’, the sentence translated by Microsoft Translator uses ‘the Council of the EU’, instead of ‘the European Council’. Since they are different political organizations, this situation creates ambiguity in the meaning.

### *Sample 2*

- ***Ideal Translation:*** Turkey is expected to share the values, objectives and the legal order set out in the treaties.
- ***Microsoft Translator:*** It is expected to share the values, objectives and legal order set out in the agreements in Turkey.

As it can be seen in this sample, Microsoft Translator uses the subject pronoun ‘it’ instead of using the country’s name. This makes the sentence sound more informal, while the document should be formal.

- **Semantic and / or Pragmatic Mistakes:** Since legal documents concerns countries and politics, choosing the right meaning of the right word is an important issue during the translation process. Any changes in this can cause imbalances in the power relations, and further political conflicts.

### *Sample 1*

- ***Ideal Translation:*** Turkey is expected to share the values, objectives and the legal order set out in the treaties.

- **Microsoft Translator:** It is expected to share the values, objectives and legal order set out in the agreements in Turkey.

Instead of using the country's name as the subject, Microsoft Translator uses the subject pronoun 'it'. This may be a factor that can result in political conflicts.

### **Sample 2**

- **Ideal Translation:** The European Council recalls that the Council will ensure, in the course of 2006, a follow-up on the progress made on all the relevant issues included in the above mentioned Declaration.
- **Microsoft Translation:** The Council of the EU reminds you that the progress made by the Council on all related issues in the aforementioned declaration will be followed by the Committee for the year 2006.

While the ideally translated sentence mentions that the document is related to 'The European Council', Microsoft Translator changes the name with 'The Council of the EU', which changes the subject. This creates a quite significant change both in the meaning and pragmatics. Moreover, the European Council re-states its intention, does not remind someone to do something.

- **Deletion Mistakes:** Removing a structure from the original text depends upon the human translator's decision, even though this is something not preferred frequently. However, the translation software is not capable of deciding upon such situations. In this text, Microsoft Translator did not made any deletion mistakes.

#### 4.2.4. Text D: 'Evaluation of the Causes Of Perianal Abscess In Childhood'

##### 4.2.4.1. Original Version

### Çocukluklarda Perianal Abse Nedenlerinin Değerlendirilmesi

#### 1. Giriş

Perianal apse, sadece erişkinlerde değil, çocukluk çağında da yaygın olarak karşılaşılan bir anorektal hastalıktır. Hastalar genellikle anal bölgede şişlik, hassasiyet, ve ateş şikayetleriyle başvurumaktadırlar

Perianal apse, sadece erişkinlerde değil, çocukluk çağında da yaygın olarak karşılaşılan bir anorektal hastalıktır. Hastalar genellikle anal bölgede şişlik, hassasiyet, ve ateş şikayetleriyle başvurumaktadırlar. Anal kript ve bezlerin obstrüksiyonu sonucu gelişen perianal apseler sıklıkla bir yaş altında ve erkek çocuklarda görülmektedir (1-4). Androjen fazlalığının veya androjen östrojen arasındaki dengesizliğin perianal apse gelişimine neden olduğu öne sürülmüştür (5,6). Perianal apselerin %30 ila %50'sinde inflamatuvar odağın yüzeye açılması sonucu anal kanal ile perianal deri arasında fistül gelişebilir. Büyük çocuklarda immun yetmezlik veya inflamatuvar barsak hastalıkları, bir yaşından küçük çocuklarda ise anal fistül gibi konjenital bir anomali perianal apse gelişimine hazırlayıcı neden olabilir (6,7). Perianal apse tedavisinde öncelikle konservativ tedavi yönetimleri tercih edilmekle birlikte semptomatik hastalarda cerrahi girişim gerekebilir (8). Çocukluk çağında perianal apse yönetimindeki veriler kısıtlıdır ve çoğunlukla cerrahi raporlara ve klinik deneyimlere dayanmaktadır. Bu amaçla çalışmamızda kliniğimizde perianal apse nedeniyle yatırılarak tedavi edilmiş hastaların klinik ve laboratuvar bulgularının, hazırlayıcı nedenlerinin, tedavi tercihlerinin ve klinik sonuçlarının sunulması amaçlanmıştır.

#### 2. Gereç ve Yöntem

##### 2.1.Çalışma planlaması

İstanbul Üniversitesi Cerrahpaşa Tıp Fakültesi Çocuk Enfeksiyon Servisi'nde Aralık 2009-Aralık 2017 tarihleri arasında yatırılarak perianal apse tanısı konulan tüm hastaların verileri geriye dönük olarak hasta dosyaları ve elektronik kayıt sistemleri

üzerinden incelendi. Çalışmamız için fakültemiz lokal kurulundan (21.05.2018-29430533) ve tüm hastalarımızın ebeveynlerinden onay alınmıştır (Aygün & Akçakaya, 2019, p.21)

#### **4.2.4.2. Ideal Translation**

### **Evaluation of the Causes of Perianal Abscess In Childhood**

#### **1. Introduction**

Perianal abscess is an anorectal disease seen very commonly not only in adulthood but also in childhood. Patients generally refer to hospitals with complaints such as swelling in the anal region, tenderness and fever. Perianal abscess forming as a result of obstruction of the anal crypts and glands are frequently seen in male children under the age of 1 (1-4). It has been suggested that androgen excess or the imbalance between androgen and estrogen causes the formation of perianal abscess (5,6). In 30-50% of perianal abscesses, fistula can develop between the perianal skin and anal canal due to the surfacing of the inflammation. Immunodeficiency or inflammatory bowel diseases (IBD) in older children and a congenital anomaly like anal fistula in children under the age of 1 can be predisposing conditions to the formation of perianal abscess (6,7). Along with the preference of conservative treatment methods in perianal abscess treatment, surgical intervention may be necessary in symptomatic patients (8). Data on the management of perianal abscess in childhood are limited and are based mostly on surgical reports and clinical experience. To that end, this study aimed to report the predisposing conditions, treatment preferences, outcomes and clinical and laboratory findings of the patients hospitalized in our clinic for perianal abscess.

#### **2. Material and Methods**

##### **2.1. Study plan**

Data of all patients hospitalized with the diagnosis of perianal abscess between December 2009 and December 2017 in the Pediatric Infection Disease Department of Istanbul University Cerrahpasa Medical Faculty were retrospectively reviewed from patient files and electronic record system. Consent from all parents of our patients and

approval from the local ethics committee of our faculty (21.05.2018-29430533) were received for the study.

#### **4.2.4.3. Translation of Microsoft Translator**

##### **Evaluation of PERIBBW ABSCP causes in childhood**

###### **1. Introduction**

PERIBBW abscess is a common anorectal disorder, not only in adults but also in childhood. Patients often apply swelling, tenderness, and fever complaints in the Buttfuck region.

PERIBBW abscess is a common anorectal disorder, not only in adults but also in childhood. Patients often apply swelling, tenderness, and fever complaints in the area of the Buttfuck. PERIBBW abscesses, which result from the obstruction of the internal and the glands, are often seen under one age and in male children (1-4). It has been suggested that the imbalance between androgen excess or androgen estrogen is caused by the development of PERIBBW abscess (5.6). As a result of the opening of inflammatory focus to the surface in 30 to 50% of PERIBBW Abscand, the fistula can develop between the buttercup and the PERIBBW skin. In older children, immune deficiency or inflammatory bowel diseases, whereas in children under one age, a congenital anomaly such as an ingestal fistula may cause a preparatory development of the PERIBBW abscess (6.7). In the treatment of PERIBBW abscess, surgical intervention may be required in symptomatic patients, although it is preferable to administer conservative treatment (8). The data in the administration of PERIBBW abscess in childhood is limited and mainly based on surgical reports and clinical experiences. For this purpose, we aimed to present clinical and laboratory findings, preparatory causes, treatment preferences and clinical outcomes of patients who were treated in our clinic due to PERIBBW abscess.

## 2. Material and method

### 2.1. Working schedule

The data of all patients diagnosed as PERIBBW abscesses were deposited between December 2009-December 2017 in the pediatric infection service of Cerrahpaşa Medical Faculty of Istanbul University retrospectively, patient files and electronic recording systems. We have received approval from the local board (21.05.2018-29430533) of our faculty and the parents of all our patients for our study.

#### 4.2.4.4. Discussion

- **Syntactic Mistakes:** The main aim of this text is to teach, explain and introduce a disease or treatment. Therefore, the sentence structures must be clear and correct, the translated product should reflect the original version accurately. The changes in sentence structure may create ambiguities in the meaning or deficits of knowledge.

#### *Sample 1*

- **Ideal Translation:** Immunodeficiency or inflammatory bowel diseases (IBD) in older children and a congenital anomaly like anal fistula in children under the age of 1 can be predisposing conditions to the formation of perianal abscess (6-7).
- **Microsoft Translator:** In older children, immune deficiency or inflammatory bowel diseases whereas in children under one age, a congenital anomaly such as an ingestal fistula may cause a preparatory development of the PERIBBW abscess (6-7).

The change in the sentence structure has created a significant change in the meaning. The addition of transition word 'whereas' is unnecessary and the breaks in the SVO order result in an unclear meaning.

#### *Sample 2*

- **Ideal Translation:** Data of all patients hospitalized with the diagnosis of perianal abscess between December 2009 and December 2017 in the Pediatric Infection

Disease Department of Istanbul University Cerrahpasa Medical Faculty were retrospectively retrieved from patient files and electronic record system.

- **Microsoft Translator:** The data of patients diagnosed as PERIBBW abscesses were deposited between December 2009-December 2017 in the pediatric infection service of Cerrahpaşa Medical faculty of Istanbul University retrospectively, patient files and electronic recording systems

Here in this sample, the mistakes in the order of SVO result in ambiguity in the meaning.

- **Wrong Word Choice:** To give the intended meaning, and to create the intended effect on the reader, the words should be carefully selected during the translation process. In such a text, this step gains extra importance since the field is related to human health.

### **Sample 1**

- **Ideal Translation:** Perianal abscess is an anorectal disease seen very commonly not only in adulthood, but also in childhood.
- **Microsoft Translator:** PERIBBW abscess is a common anorectal disorder, not only in adults, but also in childhood.

Instead of using the word ‘perianal’, Microsoft Translator uses ‘PERIBBW’, which has no meaning. This creates a vital deficiency in the meaning.

### **Sample 2**

- **Ideal Translation:** Perianal abscess forming as a result of obstruction of the anal crypts and glands are frequently seen in male children under the age of 1 (1-4).
- **Microsoft Translator:** PERIBBW abscesses, which result from the obstruction of the internal and the glands, are often seen under one age and in male children (1-4).

Here in this sample, Microsoft Translator prefers the word ‘internal’ instead of ‘anal crypts’. Nevertheless, the words ‘anal crypts’ have to be in the translated sentence, since the ideally translated sentence tries to explain the reason of the formation of perianal abscesses.

### **Sample 3**

- **Ideal Translation:** In 30-50% of perianal abscesses, fistula can develop between the perianal skin and anal canal due to the surfacing of the inflammation.
- **Microsoft Translator:** As a result of the opening of inflammatory focus to the surface in 30 to 50% of PERIBBW Abscand, the fistula can develop between the buttercup and the PERIBBW skin.

Here in this sample, Microsoft Translator uses 'Abscand', instead of the word 'abscess'. The word Microsoft Translator uses does not have any meaning. In addition, the software uses the word 'buttercup' for the translation of 'anal'. These result in a quite serious change and ambiguity in the meaning.

- **Semantic and / or Pragmatic Mistakes:** Since the aim in this text to explain and teach, the reflection of the intended meaning is important. The translated product should be clear, open and understandable, which depends on the correct choice of semantic and pragmatic meanings of the words.

### **Sample 1**

- **Ideal Translation:** Patients generally refer to hospitals with complaints such as swelling in the anal region, tenderness, and fever.
- **Microsoft Translator:** Patients often apply swelling, tenderness and fever complaints in the Buttfuck region.

While the ideally translated sentence explains the reasons of referring to hospitals of the patients, Microsoft Translator is not successful in reflecting the same meaning.

### **Sample 2**

- **Ideal Translation:** It has been suggested that androgen excess or the imbalance between androgen and estrogen causes the formation of perianal abscess (5,6).
- **Microsoft Translator:** It has been suggested that the imbalance between androgen excess or androgen estrogen is caused by the development of PERIBBW abscess (5,6).

The meaning here is not clear, due to the mistakes in the sentence structure. Microsoft Translator fails to give the intended meaning.

- **Deletion Mistakes:** A human translator can merge sentences, or delete some structures from some sentences, nevertheless; this is a serious decision. The end result should still reflect the same meaning with the original, even though some structures are deleted from the original structure. However, the translation software can result in mistakes if it deletes structures or sentences from the original text.

### *Sample 1*

- **Ideal Translation:** Patients generally refer to hospitals with complaints such as swelling in the anal region, tenderness and fever.
- **Microsoft Translator:** Patients often apply swelling, tenderness and fever complaints in the Buttfuck region.

The deletion of the word 'refer' in the sentence produced by Microsoft Translator changes the meaning of the sentence completely.

### *Sample 2*

- **Ideal Translation:** Consent from all parents of our patients and approval from the local ethics committee of our faculty (21.05.2018-29430533) were received for the study.
- **Microsoft Translator:** The We have received approval from the local board (21.05.2018-29430533) of our faculty and the parents of all our patients for our study.

The deletion of the word 'ethics' creates ambiguity in the meaning of the sentence produced by Microsoft Translator. While the ideally translated sentence explains that the local ethics committee of the faculty approved the study, Microsoft Translator fails to reflect the same meaning due to the deletion mistake.

### 4.3. DeepL

DeepL is a recent translation software, based on Linguee, which is the first internet search engine for translations. The experience behind Linguee created DeepL translator. It searches the internet for bilingual texts, and finds the parallel sentences in them. The learning ability of the system continuously adds to its database, which allows the further translations to be better. The main aim of the system is to produce translations which sound human-like, more than produced by a machine. The software trains itself to create more natural-sounding translations as the users benefit from its services. *The texts that will be translated through DeepL will be in German, since the software does not support Turkish language.*

#### 4.3.1. Text A: ‘Yashar Kemal’s Memed, My Hawk’

##### 4.3.1.1. Original Version

Toros dağlarının etekleri ta Akdenizden başlar. Kıyıları döven ak köpüklerden sonra doruklara doğru yavaş yavaş yükselir. Akdenizin üstünde daima, top top ak bulutlar salınır. Kıyıları dümdüz, cilalanmış gibi düz killi topraklardır. Killi toprak et gibidir. Bu kıyıları saatlarca içe kadar deniz kocar, tuz kocar. Tuz keskindir. Düz, killi, sürülmüş topraklardan sonra Çukurovanın bükleri başlar. Örülmüşçesine sık çalılar, kamışlar, böğürtlenler, yaban asmaları, sazlarla kaplı, koyu yeşil, ucu bucağı belirsiz alanlardır bunlar. Karanlık bir ormandan daha yabancı, daha karanlık!

Biraz daha içeri, bir taraftan Anavarzaya, bir taraftan Osmaniyeyi geçip İslahiyyeye gidilecek olursa geniş bataklıklara varılır. Bataklıklar yaz aylarında fıkır fıkır kaynar. Kirli, pistir. Kokudan yanına yanaşılmaz. Çürümüş saz, çürümüş ot, ağaç, kamış, çürümüş toprak kocar. Kışınsa duru, pırıl pırıl, taşkın bi sudur. Yazın otlardan, sazlardan suyun yüzü gözükmeyiz. Kışınsa çarşaf gibi açılır. Bataklıklar geçildikten sonra, tekrar sürülmüş tarlalara gelinir. Toprak yağlı, ıslık ıslıktır. Bire kırk, bire elli vermeye hazırlanmıştır. Sıcacık, yumuşaktır.

Üstleri ağır kokulu mersin ağaçlarıyla kaplı tepeler geçildikten sonradır ki, kayalar birdenbire başlar. İnsan birden ürker. Kayalarla birlikte çam ağaçları da başlar. Çamların birer billur parıltısındaki sakızları burada toprağa sızar. İlk çamlar

geçildikten sonra, gene düzlüklere varılır. Bu düzlükler boz topraktır. Verimsiz, kıraç... Buralardan Torosun karlı dorukları yanındaymış, elini uzatsan tutacaktıydın gibi gözükür (Kemal, 2019, p. 9-10).

#### **4.3.1.2. Ideal Translation**

The slopes of the Taurus Mountains rise from the shores of the Eastern Mediterranean, on the southern coast of Turkey, in a steady ascent from the white, foam-fringed rocks to the peaks. They then spread inland, at a tangent to the curve of the coast. Clouds in white masses always float over the sea. The coastal plains between the mountains and the shore are of clay, quite smooth, as if polished. Here, the soil is rich. For miles inland the plain holds the tang of the sea, its air still salt and sharp. Beyond this smooth ploughed land the scrub of the Chukurova begins. Thickly covered with a tangle of brushwood, reeds, blackberry brambles, wild vines and rushes, its deep green expanse seems boundless, wilder and darker than a forest.

A little farther inland, beyond Anavarza on one side and Osmaniya on the other, on the way towards Islahiye, begin the broad marshes. In the summer months they bubble with the heat. Filthy, unapproachable because of their stench, they reek of rotting reeds and rushes, rotting grass and timber, rotting earth. The surface of the water is then hidden by the decomposing vegetation. In winter, the whole area is covered by the sheen of stagnant flood-water, unrolling like a carpet. Beyond the marshes there are more ploughed fields. The earth is oily, shining, warm and soft ready to repay forty-fold, fifty-fold, the seed that it receives.

Only beyond the low hill-tops crowned with heavy-scented myrtle do the rocks suddenly begin to appear, and with them the pine trees. The crystal-bright drops of resin ooze from the trunks and trickle down to the ground. Beyond the pines are plateaux where the soil is grey and arid. From here, it looks as if the snow-capped peaks of the Taurus are very close, almost within arm's reach (Kemal, 2016, p. 5).

#### **4.3.1.3. German**

Die Hänge des Taurusgebirges steigen von der weiß schäumenden Mittelmeerküste ganz allmählich bis zu den Höhen der Taurusgipfel an. Über dem Mittelmeer kann man immer weiße Wolken sehen, die, aufeinandergetürmt,

dahintreiben. Das Küstenland ist so glatt und ebenmäßig, daß man glauben könnte, es sei mit einer Glanzschicht überzogen. Sein Lehmboden läßt einen an Fleisch denken. Auf Stunden ins Landesinnere hinein riecht es hier nach Meer, nach der Schärfe des Salzes. Hinter den flachen Äckern mit ihrem von Furchen durchzogenen Lehm beginnt das Röhricht der Çukurova, bedeckt mit unentwirrbar ineinander verfilztem Gestrüpp, mit Brombeeren, Wildreben und Schilf — eine dunkelgrüne Hölle, ohne Anfang und Ende, dunkler und wilder noch als Urwald.

Ein Stück weiter landeinwärts, zur Rechten Anavarza, zur Linken Osmaniye, auf dem Weg nach Islahije, kommt man in eine weite Sumpflandschaft. Hier brodelte es im Sommer ringsumher, wenn die Sümpfe kochen und der widerwärtige Geruch von verfauletem Schilf, Kraut und Holz, der Fäulnisgestank des Bodens jedermann fernhält. Das klare Wasser, das im Sommer von den Sumpfpflanzen und vom Schilf verborgen wird, glänzt und glitzert im Winter wie ein Spiegel. Jenseits der Sumpfgebiete gelangt man wieder auf bebautes Land, auf fetten, warmen Boden. Ein Land, das vor Fruchtbarkeit glänzt, das für seine Saat vierzig- bis fünfzigfachen Ertrag zurückgibt.

Aber wenn man die sanften, myrtenduftenden Hügel hinter sich zurückgelassen hat, schrickt man jäh vor den Felsen zusammen, die sich plötzlich vor einem auftürmen. Mit den Felsen beginnt das Reich der Kiefern, deren Harz in kristallinen Tropfen an den Stämmen entlang zur Erde sickert. Die Ebenen, die sich hinter den Kiefern erstrecken, haben kargen Boden, der nichts trägt... Von hier aus sind die Taurushöhen mit ihren Schneegipfeln zum Greifen nahe (Kemal, 1955, p. 5).

#### **4.3.1.4. Translation of DeepL**

The slopes of the Taurus Mountains gradually rise from the white foaming Mediterranean coast to the heights of the Taurus peaks. Over the Mediterranean you can always see white clouds piled on top of each other. The coastal land is so smooth and even that one might think it is covered with a layer of shine. Its loamy soil makes you think of meat. For hours into the interior, it smells of the sea, of the pungency of the salt. Behind the shallow fields with their clay interspersed with furrows, the reeds of the Çukurova begin, covered with inextricably intertwined matted undergrowth,

with blackberries, wild vines and reeds - a dark green hell, with no beginning and no end, darker and wilder than the jungle.

A bit further inland, to the right Anavarza, to the left Osmaniye, on the way to Islahije, one comes into a wide swamp landscape. In summer, the marshes boil here and the disgusting smell of rotten reed, cabbage and wood keeps the rotten smell of the soil away from everyone. The clear water hidden by the marsh plants and the reeds in summer shines and glitters like a mirror in winter. Beyond the marshlands one gets back to cultivated land, to fat, warm soil. A land that shines with fertility, that returns forty to fifty times the yield for its seeds.

But when you have left the gentle, myrtle-scented hills behind you, you suddenly trick them together in front of the rocks that suddenly pile up in front of you. With the rocks begins the kingdom of the pines, whose resin seeps in crystalline drops along the trunks to the earth. The plains, which extend behind the pines, have barren ground, which carries nothing... From here the Taurus heights with their snow peaks are within reach.

#### 4.3.1.5. Discussion

- **Syntactic Mistakes:** The true reflection of the sentence structures as in the original creates the intended effect on the reader. The feelings and emotions of the writer of the original text can be shared, and the story becomes attention-catching for the reader.

#### *Sample 1*

- ***Ideal Translation:*** A little farther inland, beyond Anavarza on one side and Osmaniya on the other, on the way towards Islahiye, begin the broad marshes.
- ***DeepL:*** A bit further inland, to the right Anavarza, to the left Osmaniye, on the way to Islahije, one comes into a wide swamp landscape.

In this sample, DeepL fails to establish a correct sentence structure, due to the inverted sentence structure of the original text. Therefore, the translated product is not successful.

### **Sample 2**

- **Ideal Translation:** In the summer months they bubble with the heat. Filthy, unapproachable because of their stench, they reek of rotting reeds and rushes, rotting grass and timber, rotting earth.
- **DeepL:** In summer, the marshes boil here and the disgusting smell of rotten reed, cabbage and wood keeps the rotten smell of the soil away from everyone.

While the aim here is to explain that the smell keeps everyone away, the sentence translated by DeepL cannot reflect the intended meaning, due to the complexity of the original sentence. The inverted sentence structure has become an obstacle for the software.

### **Sample 3**

- **Ideal Translation:** From here, it looks as if the snow-capped peaks of the Taurus are very close, almost within arm's reach.
- **DeepL:** From here, the Taurus heights with their snow peaks are within reach.

Here in this sample, DeepL fails to reflect the correct sentence structure as in the ideal translation. This causes an ambiguity in the meaning.

- **Wrong Word Choice:** In such texts, reflecting the writer's original sentences and the meaning behind them is quite significant. As well as building accurate sentence structures, choosing the right word is vital during the translation process

### **Sample 1**

- **Ideal Translation:** Here, the soil is rich.
- **DeepL:** Its loamy soil makes you think of meat.

The main aim is here is to explain that the soil is rich in terms of minerals, etc. Nevertheless, DeepL fails to give this meaning in the sentence it has produced, due to its failure in choosing the right words.

**Sample 2**

- **Ideal Translation:** Beyond this smooth, ploughed land the scrub of the Chukurova begins. Thickly covered with a tangle of brushwood, reeds, blackberry brambles, wild vines and rushes, its deep expanse seems boundless, wilder and darker than a forest.
- **DeepL:** Behind the shallow fields with their clay interspersed with furrows, the reeds of Çukurova begin, covered with inextricably intertwined, matted undergrowth, with blackberries, wild vines and reeds – a dark green hell, with no beginning, and no end, darker and wilder than the jungle.

The comparison of the scrub of Cukurova and a forest cannot be reflected correctly in the sentence translated by DeepL due to its word choice.

- **Semantic and / or Pragmatic Mistakes:** In such texts, the meanings that a word carry in it are quite significant. The writer aims to share some feelings and emotions through words on the reader. This is done by the different meanings of a word.

**Sample 1**

- **Ideal Translation:** Here, the soil is rich.
- **DeepL:** Its loamy soil makes you think of meat.

The semantic aim here is to explain the richness of the soil in terms of minerals and organic compounds, whereas DeepL produces a sentence which relates the soil to meat. This breaks the harmony of the meaning between the sentences of the original text down.

**Sample 2**

- **Ideal Translation:** Only beyond the low hill-tops, crowned with heavy-scented myrtle do the rocks suddenly begin to appear and with them the pine trees.
- **DeepL:** But when you have left the gentle, myrtle-scented hills behind you, you suddenly trick them together in front of the rocks that suddenly pile up in front of you.

While the ideally translated sentence explains that rocks and pine trees suddenly begin, the sentence produced by DeepL means one can trick the hills. In terms of meaning, this sentence fails.

- **Deletion Mistakes:** Deleting a structure, a word or a sentence from the original text during the translation process may effect the intended meaning in a great deal. From time to time, a human translator can decide to do so, however, this does not affect the meaning in the end. Nevertheless, the software should be as intelligent as a human translator to mimic this process.

### *Sample 1*

- **Ideal Translation:** They then, spread inland, at a tangent to the curve of the coast.
- **DeepL:** (no translation)

DeepL fails to translate this sentence, which creates a breakdown in the integrity of the meaning of the whole text.

## **4.3.2. Text B: Title: ‘Mustafa Kemal Atatürk’s Address to Turkish Youth’**

### **4.3.2.1. Original Version**

Mustafa Kemal Atatürk’s Address to Turkish Youth

Ey Türk Gençliği!

Birinci vazifen, Türk istiklâlini, Türk Cumhuriyetini, ilelebet, muhafaza ve müdafaa etmektir. Mevcudiyetinin ve istikbalinin yegâne temeli budur. Bu temel, senin, en kıymetli hazinendir. İstikbalde dahi, seni bu hazineden mahrum etmek isteyecek, dâhilî ve haricî bedhahların olacaktır. Bir gün, İstiklâl ve Cumhuriyeti müdafaa mecburiyetine düşersen, vazifeye atılmak için, içinde bulunacağın vaziyetin imkân ve şerâitini düşünmeyeceksin! Bu imkân ve şerâit, çok namüsait bir mahiyette tezahür edebilir. İstiklâl ve Cumhuriyetine kastedecek düşmanlar, bütün dünyada emsali görülmemiş bir galibiyetin mümessili olabilirler. Cebren ve hile ile aziz vatanın, bütün kaleleri zapt edilmiş, bütün tersanelerine girilmiş, bütün orduları dağıtılmış ve memleketin her köşesi bilfiil işgal edilmiş olabilir. Bütün bu şerâitten daha elim ve daha vahim olmak üzere, memleketin dahilinde, iktidara sahip olanlar gaflet ve dalâlet

ve hatta hıyanet içinde bulunabilirler. Hatta bu iktidar sahipleri şahsî menfaatlerini, müstevlilerin siyasi emelleriyle tevhit edebilirler. Millet, fakr ü zaruret içinde harap ve bîtap düşmüş olabilir.

Ey Türk istikbalinin evlâdı! İşte, bu ahval ve şerâit içinde dahi, vazifen; Türk İstiklâl ve Cumhuriyetini kurtarmaktır!

Muhtaç olduğun kudret, damarlarındaki asil kanda mevcuttur (Ataturk, M. K. (1927)!

Mustafa Kemal Atatürk  
20 Ekim 1927

#### 4.3.2.2. Ideal Translation

Declaration by Atatürk to the Turkish Youth

Turkish Youth!

Your first duty is forever to preserve and to defend the Turkish Independence and the Turkish Republic.

This is the very foundation of your existence and your future. This foundation is your most precious treasure. In the future, too, there may be malevolent people at home and abroad who will wish to deprive you of this treasure. If some day you are compelled to defend your independence and your republic, you must not tarry to weigh the possibilities and circumstances of the situation before taking up your duty. These possibilities and circumstances may turn out to be extremely unfavourable. The enemies conspiring against your independence and your republic, may have behind them a victory unprecedented in the annals of the world. It may be that, by violence and ruse, all the fortresses of your beloved fatherland may be captured, all its shipyards occupied, all its armies dispersed and every part of the country invaded. And sadder and graver than all these circumstances, those who hold power within the country may be in error, misguided and may even be traitors. Furthermore, they may indentify their personal interests with the political designs of the invaders. The country may be impoverished, ruined and exhausted.

Youth of Turkey's future,

Even in such circumstances it is your duty to save the Turkish Independence and Republic.

You will find the strength you need in your noble blood (Ataturk, M.K. (n.d.).

Mustafa Kemal Atatürk

20 October 1927

#### 4.3.2.3. German

Rede an die Türkische Jugend

Türkische Jugend!

Deine erste Pflicht ist, die nationale Unabhängigkeit, die türkische Republik immerdar zu wahren und zu verteidigen.

Das ist die einzige Basis Deiner Existenz und Deiner Zukunft. Diese Basis enthält Deinen kostbarsten Schatz. Auch in der Zukunft wird es im Lande selbst wie im Ausland Missgunst geben, die Dir diesen Schatz entreißen will. Wenn Du eines Tages dazu gedrängt bist, die Unabhängigkeit und die Republik verteidigen zu müssen, dann wirst Du, um Deine Pflicht zu erfüllen, von den Möglichkeiten und Bedingungen der Lage absehen müssen, in der Du Dich befinden könntest. Es kann sein, dass diese Bedingungen und diese Möglichkeiten durchaus ungünstig sind. Es ist möglich, dass die Feinde, die Deine Unabhängigkeit und Deine Republik vernichten wollen, die siegreichste Macht vorstellen, die die Erde jemals gesehen hat; dass man sich durch List oder Gewalt aller Festungen und aller Zeughäuser des Vaterlandes bemächtigt hat; dass alle seine Armeen zerstreut sind und das Land tatsächlich und völlig besetzt ist. Nimm an, um eine noch düstere Möglichkeit ins Auge zu fassen, dass diejenigen, die die Regierungsgewalt im Lande innehaben, in Irrtum verfallen sind, dass sie Dummköpfe oder Verräter sein könnten, ja, dass diese leitenden Leute ihre persönlichen Interessen mit den politischen Zielen der Feinde zusammenfallen lassen. Es könnte kommen, dass die Nation in völlige Entbehrung, in ungesehene Not gerät; dass sie sich im Zustand des Zusammenbruchs und völliger Erschöpfung befindet.

Selbst unter diesen Umständen und unter diesen Bedingungen, oh türkisches Kind zukünftiger Jahrhunderte, ist es Deine Pflicht, die Unabhängigkeit, die türkische Republik zu retten.

Die Kraft, die Du hierzu brauchst, ist mächtig in dem edlen Blute, das in Deinem Adern fließt (Ataturk, M.K. (n.d.).

Mustafa Kemal Atatürk

20 Oktober 1927

#### 4.3.2.4. Translation of DeepL

Speech to the Turkish Youth

Turkish youth!

Your first duty is to preserve and defend the national independence, the Turkish Republic forever.

This is the only basis of your existence and your future. This base contains your most precious treasure. Also in the future there will be envy in the country itself as well as abroad that wants to snatch this treasure from you. If one day you are urged to defend the independence and the republic, then you will have to refrain from the possibilities and conditions of the situation in which you could find yourself in order to fulfill your duty. These conditions and possibilities may be unfavorable. It is possible that the enemies who want to destroy your independence and your republic imagine the most victorious power Earth has ever seen; that they have seized all the fortresses and arsenals of the fatherland by cunning or violence; that all its armies are scattered and the land is actually and completely occupied. Suppose, to consider an even darker possibility, that those who hold the power of government in the land have fallen into error, that they may be fools or traitors, yes, that these leading people make their personal interests coincide with the political aims of the enemies. The nation may fall into total deprivation, into unseen distress; it may be in a state of collapse and total exhaustion.

Even under these circumstances and under these conditions, oh Turkish child of future centuries, it is your duty to save the independence, the Turkish Republic.

The power you need for this is powerful in the noble blood that flows in your veins.

Mustafa Kemal Atatürk

20 October 1927

#### 4.3.2.5. Discussion

- **Syntactic Mistakes:** In such a rhetorical text, the correct establishment of the sentence structures carry significance. In order to create the true effect on the reader, the sentences have to be built quite carefully. Any breakdowns, any mistakes in the sentence structure may result in errors in the meaning that should be conveyed to the reader.

#### *Sample 1*

- ***Ideal Translation:*** Your first duty is forever to preerve and to defend the Turkish Independence and the Turkish Republic.
- ***DeepL:*** Your first duty is to preserve and defend the national independence, the Turkish Republic forever.

Here in this sample, lack of the word ‘and’ between ‘the national independence’ and ‘the Turkish Republic’ in the translation of DeepL breaks the flow of the sentence structure.

#### *Sample 2*

- ***Ideal Translation:*** In the future, too, there may be malevolent people at home and abroad who will want to deprive you of this treasure.
- ***DeepL:*** Also in the future, there will be envy in the country itself as well as abroad that wants to snatch this treasure from you.

While the ideally translated sentence mentions a future possibility, the wrong tense choice of DeepL leaves the impression of a certainty on the reader.

**Sample 3**

- **Ideal Translation:** If some day, you are compelled to defend your independence and republic, you must not tarry to weight the possibilities and circumstances of the situation before taking up your duty.
- **DeepL:** If one day, you are urged to defend the independence and republic, then you will have to refrain from the possibilities and conditions of the situation in which you could find yourself in order to fulfill your duty.

This sample is a successful translation example for DeepL. Even though the word choice is not professional as it is in the ideal translation, the sentence structure reflects the intended meaning and the effect on the reader.

- **Wrong Word Choice:** Even though many words carry the same meaning, not every meaning is suitable for every situation. In such texts, it is important to find the most accurate meaning in the most accurate word to create the intended effect on the reader.

**Sample 1**

- **Ideal Translation:** In the future, too, there may be malevolent people at home and abroad who will wish to deprive you of this treasure.
- **DeepL:** Also in the future there will be envy in the country itself as well as abroad that wants to snatch this treasure from you.

The ideally translated sentence explains that there may be politically powerful people with negative intentions in the future in the country. On the other hand, the word 'envy' in the sentence translated by DeepL changes the whole meaning.

**Sample 2**

- **Ideal Translation:** The country may be impoverished, ruined and exhausted.
- **DeepL:** The nation may fall into total deprivation, into unseen distress, it may be in a state of collapse and total exhaustion.

The word 'unseen' used by DeepL is not suitable for the total meaning of the sentence.

- **Semantic and / or Pragmatic Mistakes:** The meanings include different elements such as social relationships and politics. The words and their meanings should be chosen accordingly, during the translation process.

### *Sample 1*

- ***Ideal Translation:*** This foundation is your most precious treasure.
- ***DeepL:*** This base contains your most precious treasure.

While the words ‘foundation’ and ‘base’ more or less carry the same meaning, ‘foundation’ is more suitable due to the power relations in the text.

### *Sample 2*

- ***Ideal Translation:*** The country may be impoverished, ruined and exhausted.
- ***DeepL:*** The nation may fall into total deprivation, into unseen distress, it may be in a state of collapse and total exhaustion.

Here in this sample, DeepL cannot give the same strong meaning as it is in the ideally translated sentence due to its word choice. Even though the words more or less enough to explain the situation of the country, the meaning is not strong as it is in the ideally translated sentence.

- **Deletion Mistakes:** Removing a sentence structure, or a phrase from the text is a crucial decision during the translation process. The meaning should remain the same in any case. Even though a human translator is capable of doing so, this is not proper for a translation software, since it cannot mock human cognition and perception completely. In this text, DeepL did not make any deletion mistakes.

#### **4.3.3. Text C: ‘BRUSSELS EUROPEAN COUNCIL-PRESIDENCY CONCLUSIONS 15/16 JUNE 2006’**

##### **4.3.3.1. Original Version**

Türkiye

54. AB Konseyi müktesebat taramasında kaydedilen ilerlemeyi gözden geçirmiştir ve Türkiye ile fiili katılım müzakerelerinin başlamasını memnuniyetle karşılamaktadır.

Türkiye'den antlaşmalarda ortaya koyulan değerler, hedefler ve hukuki düzeni paylaşması beklenmektedir. Birlik, Türkiye'nin Birliğin standartları ve Kopenhag kriterleri dahil üyelik yükümlülüklerini yerine getirme yönündeki gayretlerini desteklemek konusunda kararlıdır. AB Konseyi, daha önceki sonuç bildirgelerine paralel olarak, müzakerelerin her bir ülkenin kendi performansına göre işleyeceğini ve hızının her bir ülkenin Müzakere Çerçevesi'nde ortaya koyulan yükümlülükleri yerine getirmede kaydettiği ilerlemeye bağlı olacağını hatırlatmaktadır. Bu, Ortaklık Anlaşması ve Avrupa Topluluğu ile Üye Ülkelerinin 21 Eylül 2005 tarihli Deklarasyonunda üzerinde mutabakat sağlandığı üzere, tam olarak uygulanması 2006 yılında denetlenecek olan Ek Protokol çerçevesindeki yükümlülüklerinin yerine getirilmesinin yanı sıra, gözden geçirilmiş Katılım Ortaklığının uygulanmasını da içermektedir. AB Konseyi, yukarıda belirtilen Deklarasyonda yer alan tüm ilgili hususlarda kaydedilen ilerlemenin Konsey tarafından 2006 yılı boyunca izlenmesinin sağlanacağını hatırlatmaktadır. AB Konseyi, reform sürecini hızlandırma ve reformları tümüyle ve etkili bir şekilde ülke genelinde uygulama yönünde Türkiye'ye çağrıda bulunmaktadır. Böylece reform sürecinin geri dönülmezliği ve sürdürülebilirliğinin sağlanmasının yanı sıra, iyi komşuluk ilişkileri taahhüdü de dahil olmak üzere Kopenhag siyasi kriterlerinin tamamen yerine getirilmesinde de ilerleme kaydedilecektir. Bu çerçevede, sorunların barışçı yollarla çözümünü olumsuz etkileyecek tüm faaliyetlerden kaçınılması gerekmektedir (Türkiye Cumhuriyeti Dışişleri Bakanlığı, n.d.).

#### **4.3.3.2. Ideal Translation**

Turkey

54. The European Council reviewed progress made in the acquis screening and welcomes the start of substantive accession negotiations with Turkey. Turkey is expected to share the values, objectives and the legal order set out in the treaties. The Union is committed to support Turkey in its efforts to comply with the Unions standards and membership obligations, including the Copenhagen criteria. The European Council recalls, in line with previous conclusions, that the current negotiations are based on each country's own merits and that their pace will depend on each country's progress in preparing for accession measured against the requirements

set out in the Negotiating Framework. This includes the fulfilment of Turkey's obligations under the Association Agreement and under its Additional Protocol, full implementation of which will be evaluated in 2006 as agreed in the Declaration of the European Community and its Member States of 21 September 2005, as well as the implementation of the revised Accession Partnership. The European Council recalls that the Council will ensure, in the course of 2006, a follow-up on the progress made on all the relevant issues included in the above mentioned Declaration. The European Council calls on Turkey to intensify the reform process and to implement it fully and effectively, so as to ensure its irreversibility and sustainability as well as to progress towards the complete fulfilment of the Copenhagen political criteria, including the commitment to good neighbourly relations. In this context, any action which could negatively affect the process of peaceful settlement of disputes should be avoided (Brussels European Council – Presidency Conclusions, 2006).

#### **4.3.3.3. German**

Türkei

54. Der Europäische Rat hat eine Bilanz der Fortschritte bei der analytischen Prüfung des gemeinschaftlichen Besitzstands gezogen und begrüßt die Aufnahme von Beitrittsverhandlungen mit der Türkei über inhaltliche Fragen. Von der Türkei wird erwartet, dass sie die in den Verträgen niedergelegten Werte und Ziele sowie die darin verankerte Rechtsordnung teilt. Die Union wird die Türkei bei ihren Bemühungen um die Einhaltung der Unionsnormen und der mit der Mitgliedschaft verbundenen Verpflichtungen, einschließlich der Kopenhagener Kriterien, unterstützen. Im Einklang mit früheren Schlussfolgerungen erinnert der Europäische Rat daran, dass bei den laufenden Verhandlungen die individuellen Leistungen eines jeden Beitrittslands zugrunde gelegt werden und dass das Tempo der Verhandlungen davon abhängt, wie die einzelnen Länder bei ihren Beitrittsvorbereitungen gemessen an den im Verhandlungsrahmen niedergelegten Anforderungen vorankommen. Zu diesen Anforderungen gehört, dass die Türkei ihre Verpflichtungen aufgrund des Assoziierungsabkommens und seines Zusatzprotokolls erfüllt und die Bestimmungen der überarbeiteten Beitrittspartnerschaft anwendet; ob diese Verpflichtungen in vollem Umfang erfüllt sind, wird, wie in der Erklärung der Europäischen Gemeinschaft und

ihrer Mitgliedstaaten vom 21. September 2005 vereinbart, im Jahr 2006 einer Bewertung unterzogen. Der Europäische Rat erinnert daran, dass der Rat im Laufe des Jahres 2006 die Fortschritte in allen einschlägigen Themenbereichen, die in der Erklärung aufgeführt sind, überprüfen wird. Der Europäische Rat ruft die Türkei auf, den Reformprozess zu intensivieren und ihn in vollem Umfang wirksam durchzuführen, so dass die Unumkehrbarkeit und die Dauerhaftigkeit der Reformen gewährleistet sind und auf dem Weg zur vollständigen Erfüllung der politischen Kriterien von Kopenhagen, einschließlich der Verpflichtung zu gutnachbarlichen Beziehungen, weitere Fortschritte erzielt werden. In diesem Zusammenhang sollten alle Maßnahmen vermieden werden, die den Prozess der friedlichen Beilegung von Streitigkeiten beeinträchtigen könnten (Europäischer Rat (Brüssel - Schlussfolgerungen Des Vorsitzes, 2006).

#### **4.3.3.4. Translation of DeepL**

##### Turkey

The European Council took stock of progress in the analytical examination of the *acquis communautaire* and welcomes the opening of accession negotiations with Turkey on substantive issues. Turkey is expected to share the values, objectives and legal order enshrined in the Treaties. The Union will support Turkey in its efforts to meet the Union's standards and obligations of membership, including the Copenhagen criteria. In line with previous conclusions, the European Council recalls that the ongoing negotiations are based on the individual merits of each candidate country and that the pace of the negotiations will depend on the progress made by each country in its preparations for accession in relation to the requirements set out in the negotiating framework. These requirements include Turkey's fulfilment of its obligations under the Association Agreement and its Additional Protocol and the application of the provisions of the revised Accession Partnership, which will be assessed in 2006, as agreed in the Declaration by the European Community and its Member States of 21 September 2005. The European Council recalls that in the course of 2006 the Council will review progress on all relevant issues identified in the Declaration. The European Council calls on Turkey to intensify the reform process and to implement it fully and effectively so as to ensure the irreversibility and sustainability of reforms and to make

further progress towards full compliance with the Copenhagen political criteria, including the commitment to good neighbourly relations. In this context, any action that might prejudice the process of peaceful settlement of disputes should be avoided.

#### 4.3.3.5. Discussion

- **Syntactic Mistakes:** In such texts, it is quite significant to carry the meaning to the other language through a correct sentence structure is vital since the text carries political importance. Any mistakes in the sentence structure may result in crucial situations.

#### *Sample 1*

- ***Ideal Translation:*** The European Council reviewed progress made in the acquis screening and welcomes the start of substantive accession negotiations with Turkey.
- ***DeepL:*** The European Council took stock of progress in the analytical examination of the acquis communautaire and welcomes the opening of accession negotiations with Turkey on substantive issues.

The addition of the word ‘analytical’ changes the meaning in the sentence translated by DeepL and changes the sentence structure. In addition, while the ideally translated sentence explains that important accession negotiations would start, the sentence translated by DeepL emphasizes the word ‘issues’.

#### *Sample 2*

- ***Ideal Translation:*** The Union is committed to support Turkey in its efforts to comply with the Unions standards and membership obligations, including the Copenhagen criteria.
- ***DeepL:*** The Union will support Turkey in its efforts to meet the Union’s standards and obligations of membership, including the Copenhagen criteria.

Apart from poor word choice, DeepL reflects the intended meaning and the sentence structure successfully here in this sample.

- **Wrong Word Choice:** This kind of texts require special attention during the translation process, as it carries political power and any mistakes in the expression may result in political tensions.

### *Sample 1*

- **Ideal Translation:** Turkey is expected to share the values, objectives and the legal order set out in the treaties.
- **DeepL:** Turkey is expected to share the values, objectives and legal order enshrined in the Treaties.

While the ideally sentence uses the phrase ‘set out’ to explain that the legal order and objectives are listed in the treaties, DeepL uses the word ‘enshrine’. Even though the meanings are close, this word is not appropriate to use here in this sentence.

- **Semantic and / or Pragmatic Mistakes:** Since politics is a sensitive concept, the translation of political texts needs special attention in terms of semantics and pragmatics. The translator should avoid any risky word choices and statements during the translation process.

### *Sample 1*

- **Ideal Translation:** The European Council recalls, in line with previous conclusions, that the current negotiations are based on each country’s own merits and that their pace will depend on each country’s progress in preparing for accession measured against the requirements set out in the Negotiating Framework.
- **DeepL:** In line with previous conclusions, the European Council recalls that the ongoing negotiations are based on the individual merits of each candidate country, and that the pace of the negotiations will depend on the progress made by each country in its preparations for accession, in relation to the requirements set out in the negotiating framework.

While the sentence translated by DeepL reflects the intended meaning and sentence structure successfully, it is risky pragmatically. Since it fails to capitalize the first

letters of ‘negotiating framework’ there is a possibility that it can be understood as a concept, not as a document.

### **Sample 2**

- **Ideal Translation:** In this context, any action which could negatively affect the process of peaceful settlement of disputes should be avoided.
- **DeepL:** In this context, any action that might be prejudice the process of peaceful settlement of disputes should be avoided.

In this sample, DeepL uses the word ‘prejudice’ instead of ‘negatively’. This changes the direction of the meaning, resulting in a pragmatic mistake.

- **Deletion Mistakes:** Deleting a structure or a phrase from this kind of documents are risky and it should be up to the decision of a human translator. Even though the translator decides to remove a structure, the meaning should still remain the same. Since the software cannot mimic the human decision mechanism 100%, it is risky for the software to erase a structure or a phrase from the original text, during the translation process. In this DeepL did not make any deletion mistakes.

#### **4.3.4. Text D: ‘Evaluation of Perianal Abscess Causes in Childhood’**

##### **4.3.4.1. Original Version**

### **Çocukluklarda Perianal Apse Nedenlerinin Değerlendirilmesi**

#### **1. Giriş**

Perianal apse, sadece erişkinlerde değil, çocukluk çağında da yaygın olarak karşılaşılan bir anorektal hastalıktır. Hastalar genellikle anal bölgede şişlik, hassasiyet, ve ateş şikayetleriyle başvurumaktadırlar. Anal kript ve bezlerin obstrüksiyonu sonucu gelişen perianal apseler sıklıkla bir yaş altında ve erkek çocuklarda görülmektedir (1-4). Androjen fazlalığının veya androjen östrojen arasındaki dengesizliğin perianal apse gelişimine neden olduğu öne sürülmüştür (5,6). Perianal apselerin %30 ila %50’sinde inflamatuvar odağın yüzeye açılması sonucu anal kanal ile perianal deri arasında fistül

gelişebilir. Büyük çocuklarda immün yetmezlik veya inflamatuvar barsak hastalıkları, bir yaşından küçük çocuklarda ise anal fistül gibi konjenital bir anomali perianal apse gelişimine hazırlayıcı neden olabilir (6,7). Perianal apse tedavisinde öncelikle konservativ tedavi yönetimleri tercih edilmekle birlikte semptomatik hastalarda cerrahi girişim gerekebilir (8). Çocukluk çağında perianal apse yönetimindeki veriler kısıtlıdır ve çoğunlukla cerrahi raporlara ve klinik deneyimlere dayanmaktadır. Bu amaçla çalışmamızda kliniğimizde perianal apse nedeniyle yatırılarak tedavi edilmiş hastaların klinik ve laboratuvar bulgularının, hazırlayıcı nedenlerinin, tedavi tercihlerinin ve klinik sonuçlarının sunulması amaçlanmıştır.

## **2.Gereç ve Yöntem**

### **2.2.Çalışma planlaması**

İstanbul Üniversitesi Cerrahpaşa Tıp Fakültesi Çocuk Enfeksiyon Servisi'nde Aralık 2009-Aralık 2017 tarihleri arasında yatırılarak perianal apse tanısı konulan tüm hastaların verileri geriye dönük olarak hasta dosyaları ve elektronik kayıt sistemleri üzerinden incelendi. Çalışmamız için fakültemiz lokal kurulundan (21.05.2018-29430533) ve tüm hastalarımızın ebeveynlerinden onay alınmıştır (Aygün & Akçakaya, 2019, p.21).

#### **4.3.4.2. Ideal Translation**

### **Evaluation of the Causes of Perianal Abscess In Childhood**

#### **1. Introduction**

Perianal abscess is an anorectal disease seen very commonly not only in adulthood but also in childhood. Patients generally refer to hospitals with complaints such as swelling in the anal region, tenderness and fever. Perianal abscess forming as a result of obstruction of the anal crypts and glands are frequently seen in male children under the age of 1 (1-4). It has been suggested that androgen excess or the imbalance between androgen and estrogen causes the formation of perianal abscess (5,6). In 30-50% of perianal abscesses, fistula can develop between the perianal skin and anal canal due to the surfacing of the inflammation. Immunodeficiency or inflammatory bowel diseases

(IBD) in older children and a congenital anomaly like anal fistula in children under the age of 1 can be predisposing conditions to the formation of perianal abscess (6,7). Along with the preference of conservative treatment methods in perianal abscess treatment, surgical intervention may be necessary in symptomatic patients (8). Data on the management of perianal abscess in childhood are limited and are based mostly on surgical reports and clinical experience. To that end, this study aimed to report the predisposing conditions, treatment preferences, outcomes and clinical and laboratory findings of the patients hospitalized in our clinic for perianal abscess.

## **2. Material and Methods**

### **2.2. Study plan**

Data of all patients hospitalized with the diagnosis of perianal abscess between December 2009 and December 2017 in the Pediatric Infection Disease Department of Istanbul University Cerrahpasa Medical Faculty were retrospectively reviewed from patient files and electronic record system. Consent from all parents of our patients and approval from the local ethics committee of our faculty (21.05.2018-29430533) were received for the study.

#### **4.3.4.3. German**

### **Bewertung der Ursachen des perianalen Abszesses im Kindesalter**

#### **1. Einführung**

Beim Perianalabszess handelt es sich um eine anorektale Beschwerde, die nicht nur Erwachsene betrifft, sondern auch unter Kindern weit verbreitet ist. Die Patienten beschwerten sich im Allgemeinen über Schwellungen, Schmerzempfindlichkeit im anorektalen Bereich und Fieber. Perianalabszesse, die aufgrund von Analkrypten und Obstruktion von Drüsen entstehen, werden sehr oft bei männlichen Kindern unter einem Jahr beobachtet (1 – 4). Es wurde vorgetragen, dass ein Überschuss an Androgenen oder ein Ungleichgewicht zwischen Androgenen und Östrogenen zur Entwicklung eines Perianalabszesses führten (5,6). Bei 30 % bis 50 % der

Perianalabszesse kann aufgrund der Öffnung der entzündlichen Herde an die Oberfläche eine Fistel zwischen dem Analkanal und der perianalen Haut zustande kommen. Auch eine Immunschwäche oder entzündliche Darmerkrankungen bei älteren Kindern bzw. eine kongenitale Anomalie, wie eine Analfistel bei Kindern unter 1 Jahr, können die Voraussetzungen der Entwicklung eines Perianalabszesses gewährleisten (6,7). Bei der Behandlung der Perianalabszesse werden vorrangig konservative Behandlungsmethoden angewandt, wobei bei symptomatischen Patienten auch ein chirurgischer Eingriff vonnöten sein kann (8). Daten über Perianalabszesse im Kindesalter sind nur eingeschränkt vorhanden und lehnen sich zumeist an chirurgische Berichte und klinische Tests an. Aus diesem Grund wird mittels dieser Arbeit bezweckt, anhand von Patienten, die aufgrund eines Perianalabszesses in unserer Klinik stationär behandelt werden, die klinischen und labortechnischen Befunde, die Feststellung der wegberreitenden Ursachen, die Wahl der Art der Behandlung und der klinischen Ergebnisse vorzustellen.

## **2.Mittel und Methode**

### **1.Durchführungsplanung**

Die Daten der in der pädiatrischen Abteilung für Infektionen der medizinischen Fakultät der Universität Istanbul im Zeitraum Dezember 2009 – Dezember 2017 stationär behandelten Patienten, bei denen Perianalabszesse diagnostiziert wurden, sind zeitlich rückwirkend mittels der Patientenakten und der elektronisch vorliegenden Datensätze geprüft worden. Für diese Durchführung wurden die Genehmigung des lokalen Ethikausschusses unserer Fakultät (21.05.2018-29430533) und die Zustimmung der Eltern aller unserer Patienten eingeholt.

#### **4.3.4.4. Translation of DeepL**

##### **Evaluation of the causes of perianal abscess in childhood**

###### **1. introduction**

Perianal abscess is an anorectal complaint that affects not only adults but is also common among children. Patients generally complain of swelling, sensitivity to

anorectal pain and fever. Perianal abscesses caused by anal crypts and obstruction of glands are very often observed in male children under one year of age (1-4). It has been reported that excess androgens or an imbalance between androgens and estrogens led to the development of a perianal abscess (5,6). In 30% to 50% of perianal abscesses a fistula may develop between the anal canal and the perianal skin due to the opening of the inflammatory foci to the surface. Immunodeficiency or inflammatory bowel disease in older children or a congenital anomaly, such as an anal fistula in children under 1 year of age, can also guarantee the development of a perianal abscess (6,7). In the treatment of perianal abscesses, conservative treatment methods are primarily used, although surgical intervention may also be necessary in symptomatic patients (8). Data on perianal abscesses in childhood are limited and mostly based on surgical reports and clinical tests. For this reason, the purpose of this work is to present clinical and laboratory findings, the identification of pathogenic causes, the choice of treatment and clinical outcomes on the basis of patients admitted to our clinic for perianal abscess treatment.

## **2.means and methods**

### **1. Implementation planning**

The data of patients diagnosed with perianal abscesses treated in the Pediatric Infection Unit of the Medical Faculty of Istanbul University during the period December 2009 - December 2017 have been reviewed retrospectively using the patient files and the electronic data sets. The approval of the local ethics committee of our faculty (21.05.2018-29430533) and the consent of the parents of all our patients were obtained.

#### **4.3.4.5. Discussion**

- **Syntactic Mistakes:** Since the aim of this kind of texts are to teach about a medical condition, the true expression of the situation is quite significant. Any mistakes in the sentence structure during the translation process may result in crucial situations.

**Sample 1**

- **Ideal Translation:** Perianal abscesses forming as a result of obstruction of the anal crypts and glands are frequently seen in male children under the age of 1 (1-4).
- **DeepL:** Perianal abscesses caused by anal crypts and obstruction of glands are very often observed in male children under one year of age (1-4).

While the word ‘anal’ refers to both crypts and glands in the ideally translated sentence, the breakdown of the same structure in the sentence translated by DeepL creates an ambiguity in the meaning.

**Sample 2**

- **Ideal Translation:** It has been suggested that androgen excess or the imbalance between androgen and estrogen causes the formation of perianal abscess (5,6).
- **DeepL:** It has been reported that excess androgens or an imbalance between androgens and estrogens led to the development of a perianal abscess.

Here in this sample, the needless use of DeepL of plural ‘-s’ in the words ‘androgen’ and ‘estrogen’ breaks the natural flow of the sentence.

- **Wrong Word Choice:** Since this type of texts is closely related to human health, finding the right word with the right meaning is a crucial step in the translation process. Any mistakes in this step may result in serious conditions.

**Sample 1**

- **Ideal Translation:** Perianal abscess is an anorectal disease seen very commonly not only in adulthood, but also in childhood.
- **DeepL:** Perianal abscess is an anorectal complaint that affects not only adults but is also common among children.

In this sample, DeepL uses the word ‘complaint’ instead of ‘disease’. This changes the meaning of the sentence seriously. While the condition is seen as a disease, the word choice of DeepL simplifies it.

### **Sample 2**

- **Ideal Translation:** Immunodeficiency or inflammatory bowel diseases (IBD) in older children and a congenital anomaly like anal fistula in children under the age of 1 can be predisposing conditions to the formation of perianal abscesses (5,6).
- **DeepL:** Immunodeficiency or inflammatory bowel diseases in older children or a congenital anomaly, such as an anal fistula in children under 1 year of age, can also guarantee the development of a perianal abscess.

Whereas the ideally translated sentence explains a possibility, the sentence translated by DeepL carries a different meaning, due to the choice of the word 'guarantee' instead of 'predisposing' of DeepL.

### **Sample 3**

- **Ideal Translation:** To that end, this study aimed to report the predisposing conditions, treatment preferences, outcomes and clinical and laboratory findings of the patients hospitalized in our clinic for perianal abscess.
- **DeepL:** For this reason, the purpose of this work is to present clinical and laboratory findings, the identification of pathologic causes, the choice of treatment and clinical outcomes on the basis of patients admitted to our clinic for perianal abscess treatment.

In this sample, the word 'work' is used instead of the word 'study'. Even though the meanings are quite close, 'study' is better for this reference.

- **Semantic and / or Pragmatic Mistakes:** Since this type of texts address a defined community, the deeper meanings of the words should be carefully selected. The text should be clear in the meaning, and the aim of the text should be openly reflected in the translated product.

### **Sample 1**

- **Ideal Translation:** Patients generally refer to hospitals with complaints such as swelling in the anal region, tenderness and fever.
- **DeepL:** Patients generally complain of swelling, sensitivity to anorectal pain and fever.

The change in the structure creates a vital difference in the meaning of the sentence translated by DeepL. While ideally translated sentence clearly explains that the patients refer to hospitals with some defined complaints, the meaning is away from the true one in the sentence translated by DeepL.

### **Sample 2**

- **Ideal Translation:** Perianal abscess forming as a result of obstruction of the anal crypts and glands are frequently seen in male children under the age of (1-4).
- **DeepL:** Perianal abscesses caused by anal crypts and obstruction of glands are very often observed in male children under one year of age (1-4).

While the word ‘anal’ refers to both crypts and glands in the ideally translated sentence, the change of the structure in the sentence translated by DeepL creates an ambiguity in the meaning, since there are many types of glands in human body.

- **Deletion Mistakes:** Since the deletion of a structure, a phrase or a sentence from the original text during the translation process is a vital decision, it should be done carefully. The translation software cannot act completely as human brain, as a result, deleting a structure or a phrase from the original sentence may result in errors in translation.

### **Sample 1**

- **Ideal Translation:** Immunodeficiency or inflammatory bowel diseases (IBD) in older children and a congenital anomaly like anal fistula in children under the age of 1 can be predisposing conditions to the formation of perianal abscesses (6,7).
- **DeepL:** Immunodeficiency or inflammatory bowel disease in older children or a congenital anomaly, such as an anal fistula in children under 1 year of age, can also guarantee the development of a perianal abscess (6,7).

Here in this sample, DeepL removes the abbreviation ‘IBD’ which will be a reference for the later parts of the text.

## V. CONCLUSION & RECOMMENDATION

Humankind has needed to communicate, since the first steps of mankind on earth. As the time passed, individuals created communities, and the communities became societies. While the world developed, the nations created their orders in the world, and the need to communicate between the nations emerged. The communication process started with gestures, gestures turned into mumbling sounds and in time, languages appeared. Nevertheless, one language was not enough to provide communication between different societies. This significant need is a concern since ancient periods. In time, the need to communicate became greater, and the fast globalization of the world during the modern ages has made this need more essential. Thereby, the responsibilities of a translator has increased, and the qualities of a translated product has gained significance more than ever before.

Beginning with Cicero (first century B.C.), translation is a critical issue, as it is an essential element which provides communication between nations. The focus has changed in translation process in time, but the main aim has always been the same; to convey the message in the most accurate way. The reader should feel as if he reads the original text. The human translators were the only source of conveying messages between languages once. Yet, the developments in technology also affected the field of translation. The idea of creating machines that would replace human translators was remarkable. After the invention of computer, the next breakthrough change in people's lives was the emergence of the internet. However, different languages was still a barrier between people from different nations. Thus the globalization speed of the world and the increasing need of communication have made translation a vital part of the communication process in every field of life. In a scale ranging between daily life and professional use, smooth and correct transition of messages between languages has increased the workload of translators, emerging a new idea which is creating translation softwares.

Currently developing technology has given the answer; computer-assisted translation programs. Nevertheless, the first versions of the softwares were not as efficient as it should be, since translation is a process that needs human cognition, and perception. Even though those programs were time-saving, they could not mimic

human perception, resulting in inaccurate translations that needed a post-translation editing process. At this point, the integration of Artificial Intelligence to those translation softwares has become the solution of this problem. Intelligence is composed of a variety of elements, such as psychology, cognition and reasoning. The aim was to bring those features of human brain and computer science together, to create a tool that could obtain correct and natural-sounding translation products like a professional human translator does.

In the present day, Artificial Intelligence (**AI**) is a popular tool that brings a new point of view to many fields in life. It is frequently used in medicine, computer science, robotics etc. The developments that were achieved with the integration of **AI** to medical field has led to the emergence of devices that can diagnose cancer, EKG devices that can recognize an unusual heartbeat and many more. In addition, business life has also benefited from the assets of **AI**. New **AI**-integrated systems currently help people to find the most accurate job vacancies for themselves and the e-mail providers use **AI** to make its services easier and handy for its users. Since it brings significant solutions to various fields that was designed with clear-cut rules, it is expected to be the key to the perfect translations like a human translator produces. Nevertheless, human cognition and perception are elements that cannot be separated from language and culture.

Perceiving the world, understanding the events and contexts and obtaining knowledge is done through human cognition. In other words, it is the key that allow individuals to gain knowledge and experience through the senses and practice. Thanks to cognition, the individuals process knowledge, evaluate it and learn. As translation is not a tool that helps to find the perfect equivalence of words and sentence structures in a language pair, human cognition and perception are elements that cannot be separated from this process. Even though Artificial Intelligence has become a key solution for many fields, the main issue at this point is that if it can replace human cognition competently and become a tool that could produce accurate and natural-sounding translation products like a human translator to speed up the translation studies.

Machine translation is a time and energy-saving concept, yet, it is not capable of translating every text type perfectly, especially the texts that include cultural items and written in a special context. Those type of texts require a special attention and understanding, which can be provided by a human translator. Even though the translation softwares can translate simple sentence structures and words easily, they cannot perform very well with the texts that are more complex. The lack of human cognition may cause the target text to be monotonous, and influent, lacking the elements that give the intended effect on the reader. The emergence of the **AI** has brought the issue of integration of **AI** to those kinds of softwares, yet, the translated products should be error-free, and it should ease the responsibility on the translators to create excellent translation products. In addition, the post-translation period of those computer-assisted translation software should not consume additional time and energy. Since artificial intelligence is a concept that can be improved continuously, it is thought that deeper integration of human cognition and perception into **AI** would perform more efficiently. In this sense, the integration of **AI** into computer-assisted translation tools would allow the system to evaluate the original context and cultural aspects of the original text, providing the required background for natural-sounding translations, as if they were produced by a professional human translator.

Human intelligence consists of reasoning, learning, perception, problem-solving and language understanding. **AI** also aims to equalize human intelligence. Even though it can work perfectly in various fields such as robotics and medicine, it may not meet the requirements of every field of life. Current computer-assisted translation software cannot meet the requirements of a perfectly translated product done by a professional translator even though they work on a system that is supported by artificial intelligence. They create the first steps of translation through artificial intelligence and they should be capable of mimicking human thinking, reasoning, perception, problem-solving and language understanding while working on a text. The main aim of this study to find out if those qualities of human mind could be integrated into the computer-assisted translation software to obtain perfect translations without the assistance and support of a human translator.

Currently, the popular computer-assisted translation softwares does not carry the features of human mind such as learning, reasoning, perception, language understanding and problem solving. This study hypothesizes that when the needed cognitive, scientific and linguistic background is provided for **AI**, this will be the key to obtain perfect and natural-sounding translations when compared to the current condition of the computer-assisted translation software. This would ease the responsibilities on the translators and allow the translation business to overcome large-scale tasks easily that cannot be done previously due to time and energy issues.

*Even though there are many AI-integrated translation softwares, only three of them are evaluated in this study. Those are Google Translate, Microsoft Translator and DeepL. The performance of those software programs are evaluated according to a certain set of criterion (see pg. 37-39).*

### ***Google Translate***

After changing the basis of the system from a statistical approach to an **AI**-integrated one, the system was expected to present more efficient, accurate and fluent translations. The current system in Google Translate has the ability to learn and improvise itself in the future translations, as the users benefit from its services.

The first text to be tested with Google Translate was a part from Yashar Kemal's *Memed, My Hawk*. The text includes cultural elements and figures of speech. The syntactic structure of the original text should be reflected while keeping the meaning fluent after the translation process. The semantic mistakes in the translation produced by Google Translate changes the meaning by breaking the original structure down, adding extra words to the sentence, wrong word choice, failure in the transmission of the original meaning and deletion. These add to the overall accuracy and create ambiguity in the meaning.

Since the source language and the target language are not from the same language family, the system fails to create perfect sentences during the translation process. While the figures of speech add to the original text in the aspects of meaning and fluency, the same effect cannot be given due to these mistakes. In addition, the system fails to choose the correct word with the correct meaning from time to time,

which leads to the failure in transmitting the intended meaning. This also affects the semantic and pragmatic features of the translated product. Furthermore, the system sometimes adds extra and unnecessary letters to the words, which leads to a breakdown in the fluency of the structure.

Ataturk's Declaration to Turkish Youth was used to test Google Translate in rhetorical aspects. This text is decorated with figures of speech and a product of the art of eloquence. The main aim of this text is to lead. In order to keep the same effect in another language, the translation of this text should be done carefully. The complex words, sentence structures and the meaning must be conveyed to the target language as it is in the original. Nevertheless, Google Translate fails to translate this text as it should be. The system fails to recognize the context, and the message itself, thus cannot reflect these in the translated product well.

The software fails to reflect the ideal sentence structure, when they are complex. The word choice adds to this failure, and the meaning shifts from the ideal. In such texts, the word choice carries a significant emphasis. As a result, the meaning and the effect should be transferred to the target language effectively. However, the word choice of Google Translate is not competent enough to create the same effect. This comes from the software's deficiency to act fully as human cognition and perception. Since giving the right meaning needs more than finding the equivalent of the word in the target language, the software is not capable of meeting the expectations in this field. In addition, this text dates back to a time when the language consists more Ottoman words than present. This also needs special attention during translation, yet, the system is unable to diagnose the complex stylistic features of the text. The wrong word choices resulting from this fact adds to the change of the meaning in the translated product by Google Translate. Semantics and pragmatics carries emphasis in this text, since it relates to politics and social relationships between countries. A carelessness in the meaning may result in serious situations. Google Translate cannot meet the requirements of the ideal word choices of this text.

Google Translate is also tested with an EU text, titled 'BRUSSELS EUROPEAN COUNCIL-PRESIDENCY CONCLUSIONS 15/16 JUNE 2006', for formal and political aspects. In such texts, the translator should keep a special attention

on sentence structure, word choice and semantic and pragmatic meaning, in order to translate correctly for any mistake can result in serious situations politically. Ideally, Google Translate is expected perform as a human translator would do.. Even though it does not make any crucial mistakes in sentence structures, the word choice, semantics and pragmatics of the meanings of the words cannot be reflected correctly in the translated product very well.

The test done with a text from medical field revealed that Google Translate performs better with technical texts, in which the meanings are clear, and sentence structures are not quite complex. The samples of Google Translate show that the sentence structures are transferred successfully to the **TL**, with minor errors from time to time. On the other hand, the word choice of the system is not quite successful, since the meanings should be clear in the **TL** as it is in the **SL**. Semantically and pragmatically, the system cannot perform effectively, since this is a step in translation that should be carefully thought. Any mistakes in this process in the terms of semantics and pragmatics can result in serious results. Moreover, the system may result in deletion mistakes, which cannot be accepted in such texts since deletion is a serious decision in the translation process.

As it can be seen above, Google Translate is an **AI**-integrated system that is quite successful in some text types such as technical texts, in which the sentence structures are simpler, and the meanings are clearer. Even though the software makes mistakes in the translation processes of those kind of texts, the mistakes are mainly not vital, and does not affect the overall meaning of the source text. It can convey the message from the **SL** to the **TL**. Yet, the software cannot perform effectively in texts that includes figures of speech and pragmatics take part in. The translation process of those kind of texts require more than finding the equivalent in the target language, power relations, social relationships and politics include in the meanings. In addition, the sentence structures are more complex, and this makes the translation harder for the system. The translation process requires a special attention in such texts, and the system is not yet quite successful in meeting the requirements, even though artificial intelligence helps it to produce better translations, compared to the older versions of the system.

## *DeepL*

DeepL can be regarded as the most efficient **AI**-integrated translation software, since it was established upon the experience of Linguee, which is an online dictionary. It is the most recent **AI**-integrated translation software, and it aims to create natural-sounding translation products as the other software programs do. Thanks to the artificial intelligence integration to the system, it can learn and evaluate, which would result in better translations in time. Nevertheless, the testing is done in German with DeepL, since the system does not support Turkish language.

The first text to be tested with DeepL is Yashar Kemal's *Memed, My Hawk*. The text is composed of cultural and contextual elements, which should be reflected without breaking the flow between the sentences and paragraphs down. The inverted sentence structures in the text becomes a challenge for the software, and the translated product has errors in this sense. This affects the whole accuracy and creates ambiguity in the intended meaning. In addition the wrong word choice of the software adds to the ambiguity in the translated product. While the ideal translation can transmit the message and the harmony between the lines thanks to the correct sentence structures, the breakdown in the sentence structures in the translated product by DeepL creates a failure in accurate message transmission. It cannot recognize the context, and the cultural elements cannot be reflected. In addition, the story-telling effect through the sentence structures cannot be mirrored in the translated product, since the system is insufficient in reflecting pragmatic dimension of the context itself. In addition, the system deletes some of the structures from the text in the translated product, which should be decided by a human translation. Nevertheless, the system translates the text quite fast.

Secondly, the system is tested with a rhetorical text, *Address to Turkish Youth* by Mustafa Kemal Ataturk. The text is composed of Ottoman words, which were frequently used at that time. Nevertheless, those words are not common today, and this is a great obstacle for the system. To create the needed effect, the sentences were built accordingly, and the same effect should be given in the translated product. Nevertheless, apart from a couple of minor errors in the sentence structures, DeepL succeeds to reflect the sentence structure of ideal translation. Yet, the system cannot

perform well when it comes to the word selection, due to the Ottoman words in the original text. This causes errors in semantic and pragmatic aspects of the text, and the intended effect to be created on the reader weakens. For this text, the system cannot recognize the context well, and cannot diagnose the complicated stylistic features. Those elements create a failure in reflecting pragmatic dimension of the text and the context itself. However, the translation time of the system is quite short.

In order to see the performance of the system with political texts, the system is tested with an European Union text. The text is composed of a special terminology, which is also known as ‘the EU Language’. Since it is a political text which is quite significant for a number of countries, the message should be conveyed well, the sentence structures should not consist any mistakes, and semantic and pragmatic aspects of the text should not be erroneous in order to prevent any disputes between countries. Apart from the poor word selection, DeepL succeeds in reflecting the sentence structures, nevertheless semantics and pragmatics of the text are ambiguous. This adds to the overall accuracy of the text. It can be said that the system is successful in recognizing the stylistic features of the text, however; it fails to reflect the intended meaning clearly. Yet, the system translated in a quite short time.

Lastly, the system is tested with a technical text, from the medical field. The translation process of this text requires a special attention on the terminology, since it includes Latin words, and the meaning should be conveyed clearly to the target language. The syntax of the sentences should be clear and accurate, in order to transfer the message without any errors. Without a couple of minor mistakes, which can be handled with future training of the system, DeepL could reflect the sentence structure. Nevertheless, errors in the word selection weakens the overall accuracy of the text, and it creates ambiguity in the meaning. Yet, the system could not recognize the context well, and it was unable to diagnose the complicated stylistic features. Due to the failure in reflection of complicated stylistic features and the wrong word choice, the translation by DeepL could not efficient in reflecting the pragmatic dimension of the context and the text itself.

As it can be understood, the system does not work well with complex texts, in which the sentence structures are not simple and clear, and the word choices need

special attention. Nevertheless, the system works quite fast during the test of each text. Even though the system works well with simple sentences, built with frequently used words, it cannot perform well since it lacks full human cognition and perception. It cannot recognize the contexts well, and this creates a failure in reflecting the pragmatic dimension of the contexts and texts. Moreover, the complex stylistic features of the texts need special attention, which can be performed by a human translator.

### ***Microsoft Translator***

Microsoft Translator is an **AI**-integrated translation software that was once based on semantic predicate argument structures. With the integration of artificial intelligence to the software, it has gained the ability to learn and understand texts, as the users benefit from its services. This learning ability allowed the system to develop itself in time, and produce more natural-sounding translations. Nevertheless, the efficiency of the system depends on the type of the text currently.

The software's performance changes according to the text types. With the first sample text, titled *Memed, My Hawk* by Yashar Kemal, the system frequently changes the sentence structure, causing vital differences in the meaning. The lyrical and poetic flow and the harmony of the sentences makes the translation process hard for the system. It cannot detect the features of the context and this causes serious mistakes in the translated product. This type of sentences requires a great deal of attention in order to keep the original harmony in the translated product. However, the software is not yet capable of translating perfectly. Because of the complexity of the sentence structures of the original, the software sometimes decomposes the sentence structures, resulting in differences in the intended meaning. Whereas the ideal translation transmits the effect and the meaning perfectly, the system fails. The word choices of the software adds to this process. Since the cultural items in the texts need particular attention, the system cannot transmit the intended effect due to its wrong word choices. The word choices and the failure of establishing the correct sentence structure affects the success in reflecting semantic and pragmatic aspects of meaning. As the system cannot handle the text efficiently, it creates ambiguity and mistakes in the meaning. Nevertheless, it still translates the text faster than any human translator.

Second sample text, Mustafa Kemal Atatürk's *Declaration to Turkish to the Turkish Youth* resulted similarly with the literary text sample. Since this text also contains cultural and contextual items, the requirements of the translation process of this text are similar. As if a human translator would to, it has to recognize the context, diagnose the stylistic features, and reflect pragmatic dimension of the text. Moreover, the text is written in 1927, a time period when Ottoman words are used frequently in Turkish language. This becomes an extra challenge for the software. The cultural items, and contextual elements in the sentences makes the translation process hard for the software, and it cannot reflect the true sentence structure when its translation is compared to the ideal translation. The wrong word choices of the software adds to the level of accuracy of the translated product. As the text includes words that are not used frequently today, the system cannot recognize them from time to time, resulting in wrong word selection. The errors in syntactic structures and word selection breaks the flow between the lines and paragraphs and it affects the meaning negatively. Yet, the system can translate quite fast, helping the user save time.

The next sample to test Microsoft Translator is a European Union text, which carries a political importance, and concerns a number of countries. Thus, the translation of this text should be carefully performed, since a mistake in the translation may result in serious situations politically. The text is free from cultural elements and the sentence structure is simpler, when it is compared to the previous samples. This makes the process easier for the structure, nevertheless; the process still needs a special attention in order to prevent any political disputes. The system can recognize the context but cannot reflect it as perfectly as the ideal translation does. Even though Microsoft Translator reflects the ideal sentence structure in this text better than the previous samples, it still cannot produce perfectly translated products. From time to time, it breaks the complex sentence structure down, and the wrong word choices create a vital difference in the meaning. Though the semantic aspects of the text is reflected more or less, the insufficiency of the software to reflect the pragmatic dimension create a serious error. The system shortens the translation time, when it is compared to the time a human translator spends to translate the same text.

The last sample to test Microsoft Translator is a medical text, which can be regarded as a technical text when it is compared to the other sample texts. It is composed of a special terminology, and the sentence structures are complex due to the terminology used in the text. Yet, the terminology, the semantic and pragmatic aspects of the text should be reflected as the ideal translation does. Nevertheless, the terminology used in the text creates a significant challenge for the system. In order to produce a correct translation, the lexical features of the software should have been updated with this kind of terminology. Since this software is produced for the commercial use, it lacks this special feature. In addition, the incognition of the context itself affects the accuracy of the translation directly. While the ideal translation clearly states the problem, and reflects the terminology correctly, the stylistic features of the text and the insufficiency in recognizing pragmatic dimension of the text results in a failure in transferring the message accurately and clearly in the translated product by Microsoft Translator. However, the system is quite effective in terms of translation time.

It can be understood that Microsoft Translator cannot perform well with complicated texts. The special stylistic features, the terminology and semantic and pragmatic dimension of the texts become a challenge for the system. Even though it works well with simple sentences with contemporary words, it fails to recognize the complex structures with rarely used words. This creates ambiguity and failure in the meaning. The system fails to recognize the context of the texts well, which is a factor that would create ambiguity in the meaning of the translated product. The special stylistic features of the texts such as a special terminology are also needs special attention during the translation process, nevertheless; the system cannot mimic the human cognition and perception fully. This adds to the overall accuracy of the meaning and sentence structures. The failure in recognizing the special features of the context creates an insufficiency in reflecting the semantic and pragmatic dimensions of the text.

*All in all, in the light of the experiences achieved upon the completion of the analyses above it can be said that:*

In this study, AI-integrated computer-assisted translation softwares Google Translate, DeepL and Microsoft translator was evaluated according to certain criterion (see pg. 37-39) that would expose the strong and weak sides of the software. Thanks to these criterion, the advantages and disadvantages of these software programs to the translation process and the translation studies would be revealed. It was assumed that, they are strong in providing accuracy, in other words, they can find the correct lexical items and avoid wrong word selection and establish accurate sentence structures. In addition, they are assumed that they succeed in producing correct translations in a short time, allowing the translators to produce more. Then, the softwares are supposed that they succeed in reflecting semantic aspects of meaning, providing the reader with correctly transferred messages and effect.

Yet, the criterion also had negative factors as the current technology is not capable of reflecting the human perception, logical reasoning, and cognition perfectly. The integration of artificial intelligence may not meet the requirements in certain texts and situations which may result in extra work that should be done in post-translation process and spending additional time. The systems were assumed that they cannot recognize the context and discourse and are unable to acquire the value of cultural elements. Moreover, they are unable to diagnose complicated stylistic features of the texts. The text types and the features of those texts needs special attention and a proper action during the translation process. Last, but not the least, they are assumed to be insufficient in reflecting pragmatic dimension of the context itself. Since the translation process is more than finding the best equivalent of a word in the target language, the extra-linguistic environment gains vital significance during the translation process. They are factors that cannot be obtained through semantic analysis and transferring them to the target language is vital to keep the essence of the text in the translated product.

The test of those computer-assisted translation software included four different types of texts, each of them required a different approach during the translation

process. The first text to test was Yashar Kemal's *Memed, My Hawk*, which is decorated with cultural elements. The text was the beginning of a novel, and the stylistic features were established according to the text type. In order to transfer the same effect and the same meaning to the target language, the translator should work on the dialectic, the cultural elements in the text and the sentence structures. The AI-integrated translation softwares were expected to do the same, nevertheless, they failed to detect the special sentence structures, resulting in a break of the accuracy of the ideal translation, when compared. In addition, the systems were not successful in reflecting semantic aspects of meaning in this text. Since the systems could not perceive the context, they could not reflect the context as it should be done. As they are unable to diagnose complicated stylistic features, it was not possible for them to reflect the pragmatic dimension of the text and the context itself. The extra-linguistic items in the text were perceivable only through human cognition and perception. The systems fail to perform equally. The current situation of the systems resulted in breakdowns in sentence structures of the text, inaccuracy in the meaning and the effect on the reader, and inability of transferring pragmatic dimension of the text. The only positive side of the test of this text was the efficiency of the systems in turnaround time. The translations have been done in seconds, which is not possible for any human translator.

Second text to test the systems was Mustafa Kemal Atatürk's Address to Turkish Youth. The text was written in 1927, in which the Turkish language was still decorated with Ottoman words, many of which are not used today. In order to translate this text accurately, the systems should be able to perceive the differences in the language and take action accordingly. Nevertheless, the ability of perceiving the text of the systems were not enough to detect the complicated stylistic features of the text, resulting in errors in establishing sentence structures and word selection. This negatively affects the semantic aspects of meaning in the target text. Moreover, the systems could not evaluate the context and reflect the pragmatic dimensions of the context. Since it is a rhetorical text, the sentences and lines contain more meaning than the words themselves. The translated product should reflect all, nevertheless; the systems fail to obtain an effective and accurate translation for this text. Yet, the

translation has been done fast, which allows the users to obtain the translated product in seconds.

Then, the systems were tested with a text of European Union. The terminology used in this text and the context required a particular attention during the translation of the text. Since it relates to a number of countries and the political issues between the nations, the translated product should not carry any errors in meaning and in the text itself, to avoid any political disputes. Nevertheless, the systems were not as efficient as a professional human translator, since they produced translations that has ambiguities in the meaning and inaccuracies in the sentence structures. For this text, the systems failed to reflect the semantic aspects of the meaning. Furthermore, inability in perceiving the discourse and the stylistic features of the text resulted in errors and ambiguities in the meaning. In addition, the extra-linguistic content of the text could not be reflected efficiently. Yet, the turnaround time of every and each of the systems were efficient, the translated products were obtained in seconds.

The last text to test the systems was an excerpt of a medical article whose terminology requires a careful translation process. The sentence structures in the text seems simpler when compared to the other texts, nevertheless; the latin-rooted terminology becomes an obstacle for the systems. After the tests, the systems were unable to establish accurate sentence structures, and select correct lexical items to transfer the meaning. Since the systems were unable to detect the context and stylistic features, the translated products were erroneous. The systems were also unable to reflect the pragmatic dimension of the context. However, the systems were able to translate this sample in seconds, which helps to save time.

In conclusion, the current situation of Google Translate, Microsoft Translator and DeepL is not sufficient to work on complicated texts. Even though they can produce a translation for each and every text in seconds, the results are erroneous, the meanings are ambiguous, and the stylistic features of the texts could not be reflected sufficiently. The systems are **AI**-integrated and able to learn and improvise themselves as the users benefit from their services, yet, the current situation of the systems does not meet the requirements of professional use. The systems can perform well with

daily usage, with simple texts and simple words that does not require a special attention during the translation process. Still, they are not sufficient for professional use, since they create a workload on the translator himself during the post-editing period. The supposed aim of integrating artificial intelligence to computer-based translation software was to obtain perfect translations that does not require post-translation editing process to save time and energy. Nevertheless, currently the software programs are not suitable to obtain accurate and natural-sounding translation products.

Since technology today is a constantly developing concept, the progress in the field of artificial intelligence will continue. The upcoming developments will also affect the situation of **AI**-integrated translation software. For the data obtained as a result of the tests with different types of texts done with Google Translate, Microsoft Translator and DeepL will change after the future developments in the field of **AI**, this study should be repeated after a while, in order to find out how much the potential contributions of technology and **AI** to the translation studies field and translation business increased or not.



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