

Арнайы мектептерде зияткерлік технологияларды пайдалана отырып жоғары сынып оқушыларына шет тілін кәсіби бағдарланған оқыту

*¹К.Ж.Туленова, ¹Б.Т.Рахимбаева

¹академик Е.А.Букетов атындағы Қарағанды университеті (Қарағанда, Қазақстан)

Аңдатпа

Бұл мақалада лингвистикалық емес университетте смарт технологияларды пайдалана отырып, шетелдіктерге студенттердің тілін оқыту және кәсіби-коммуникативтік құзыреттіліктерді қалыптастыру үшін компьютерлік технологияларды енгізу мәселесі қарастырылған. Бұлттық қызметтерді пайдалана отырып оқытудың мысалы ретінде авторлар тыңдау, жазу, оқу және сөйлеу дағдыларын дамытуға бағытталған бірқатар тапсырмаларды қамтамасыз ету үшін кәсіби TED Talks лекцияларын пайдаланады. Педагогикалық әдістемеде студенттердің жазбаша және ауызша қарым-қатынасының өзара әрекеті ынтасын арттырудың және оқыту мен оқу процесін жетілдірудің негізгі факторы ретінде қарастырылады. Смарт технологияларды қолдану арқылы студенттердің өздік жұмысын ұйымдастыру бойынша жүргізілген тәжірибелер шет тілін оқыту үдерісіне тиімді ықпалдасу қажеттілігін растайды.

Түйін сөздер: тілдік дидактика, тәрбиелік оқыту теориясы, эмпирикалық зерттеулер, екінші шет тілі, көптілді қоғам.

Профессионально ориентированное преподавание иностранного языка старшекласникам с использованием интеллектуальных технологий в специальных школах

*¹К.Ж.Туленова, ¹Б.Т.Рахимбаева

¹Карагандинский университет имени академика Е.А.Букетова (Караганда, Казахстан)

Аннотация

В данной статье рассматривается вопрос обучения иностранцев языку студентов неязыкового вуза с использованием умных технологий и внедрения компьютерных технологий для формирования профессионально-коммуникативных компетенций. В качестве примера обучения с использованием облачных сервисов авторы используют профессиональные лекции TED Talks для предоставления серии заданий, направленных на развитие навыков аудирования, письма, чтения и разговорной речи. В педагогической методике взаимодействие письменного и устного общения студентов считается ключевым фактором повышения мотивации и совершенствования учебно-воспитательного процесса. Проведенные эксперименты по организации самостоятельной работы студентов с использованием смарт-технологий подтверждают необходимость эффективной интеграции в процесс обучения иностранному языку.

Ключевые слова: языковая дидактика, теория педагогического обучения, эмпирические исследования, второй иностранный язык, многоязычное общество.

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MBTI PROFILES OF FOREIGN LANGUAGE SPECIALISTS: THE CASE OF TECHNICAL TRANSLATIONS AND INTERPRETERS IN KAZAKHSTAN

*¹T.V.EM^{id}, ¹A.N.KALIZHANOVA^{id}

¹academician A.E.Buketov Karaganda University
(Karaganda, Kazakhstan)

*ehm_tanya@mail.ru, anna.kalizhanova2017@gmail.com

Abstract

The topicality of this study lies in the necessity to propose an innovative approach to preparing foreign language specialists to work in the local technical industry as translators and interpreters in accordance with internationally recognized best practices. Myers-Briggs Type Indicator (MBTI), widely adopted by the research community worldwide, is barely known in the Republic of Kazakhstan despite explaining an individual's decision-making, perception, and interactions necessary for future specialists in the translation profession. 12 technical translators and 5 leading experts in the sphere of technical translation participated in the study. Such scientific methods as semi-structural expert interviews, code extraction data processing, and descriptive analysis were applied. The MBTI profiles of the participants were thoroughly reviewed and analyzed. The study revealed that the specialists with intuitive-logical type of personality (NT) significantly outperform the colleagues with sensory-logical types (ST) in technical interpreting although the latter can demonstrate the same quality of translating multimodal technical texts and be successful in building effective professional network provided it is deemed necessary. Both intuitive-logical (NT) and intuitive-feeling (NF) types are fearless when communicate to other colleagues. However, the first need people to improve their expertise whereas the second need support to build their career. Key criteria to a good technical translation or interpretation without specialized technical education are revealed: efficient network of communication, close proximity to a technical facility, intuitive-logical thinking, and accumulating one's experience.

Keywords: Myers-Briggs Type Indicator (MBTI), technical translation and interpretation, the translation profession, MBTI profiles.

Introduction

The translation profession contributes to the intelligent, communicative, and scientific development of any country worldwide. In the Republic of Kazakhstan, the "Translation Studies" discipline is considered as a relatively new science [Emelianova E.V., 2021: P.33], which is not free from some significant drawbacks connected to preparing professional technical translators and interpreters, ready to guarantee the customers a high quality of interpreting and translating services [Rysmagambetova S.B., 2021].

Recent studies for the last ten years indicate the following issues that have been actively raised:

- (1) revision of the contents of curricula in favor of adding such elective courses that form practical skills in the sphere of oral and written interpretation and translation including those relating to scientific and technical fields [Feoktistova E.A., 2013];
- (2) correct use of terminology in translation as well as bilingual and trilingual glossaries creation [Rysmagambetova S.B., 2021];
- (3) formation of future specialists' soft skills such as interpersonal communication and leadership.

However, the key problem lies in the complexities within technical texts due to their multimodality or, in other words, coexistence of various modes to transmit information such as variations of fonts, colors, and sizes as well as diagrams or pictures to facilitate readers' understanding [Gibbons A., 2012: P.8] and meaning-making [Ketola A., 2016: P.67]. Although the visuals in the technical texts are intended to help technical translators, they tend to ignore any illustrations for the sake of translating verbal information [Olohan M., 2019: P.55]. It happens because translation of multimodal technical texts imposes additional responsibility on the translator: (1) it excludes machine translation and (2) makes translators correct mistakes typical for all technical texts [Troitskii D.I., Stepanova M.M., 2019: P.59]. The latter often exceeds the abilities of linguists with humanitarian mindset. Specialized dictionaries also cannot fully assist in correct technical translation but the knowledge of grammar, general lexis and terms is not enough where it is necessary to get the general idea and then to explain it in the traditions of the target language of the relevant field of knowledge.

This divergence between the theory and practice along with the necessity of seeking for the innovative approach to facilitate understanding of technical texts by the linguists without additional specialized education [Seidenova S., Mussaly L., 2022] justify the topicality of this research. We did not find any research studies connected to the correlation between the quality of multimodal technical texts [Hirvonen M., Tiittula L., 2010] and possessing by technical translators and interpreters certain

dominant and auxiliary cognitive functions, defined by one of the most popular western instruments of typology – Myers-Briggs Type Indicator, designed in accordance to the Jungian concept of persona [Schaubhut N.A., Thompson R.C., 2016], and that's exactly the gap we would like to fill.

The research object is the process of translation of technical texts in English and Russian languages. The research subject is the MBTI profiles of the technical translators and interpreters. The research aims at revealing the correlation between the technical interpreters and translators' cognitive functions and the efficiency of translating technical texts from Russian into English and vice versa. The following research methods were used: semi-structural expert interviews, code extraction of data obtained, and descriptive analysis. The practical results will be used in the process of teaching the discipline "Methods of teaching language and translation".

Literature review

Multimodality of technical texts. Various pictures, diagrams, graphs and other visual components of any document, including technical documentation are the first thing that stands out to a translator [Kuznetsova A.S., Elagina Ju.S., 2022: P.374]. The illustration makes it possible to expand the idea of the document and is a kind of link between spiritual and material culture [Borodina S.D. et al., 2013: P.260].

Illustrated technical texts are considered as informative and instructive, since they explain how a particular device works through both verbal and visual means [Byrne J., 2014]. Such texts constitute a significant part of the documents currently translated, and illustrations are an integral part of them [Byrne J., 2014]. Nevertheless, the research in the translation field of illustrated technical texts, for the most part, focuses on the development of criteria for choosing an appropriate picture [Tercedor-Sánchez M., Abadía-Molina F., 2005] or a terminological database [Velasco J.A.P., 2013].

But we intend to identify the way interaction of the "picture-word" pair affects the technical translator's understanding of the translated text, and, consequently, the quality of his translation, as well as whether there is a significant relationship between the psychological portrait of the technical translator and his ability to carry out high-quality oral and written technical translation.

Myers-Briggs Typology. Myers-Briggs typology is one of the tools widely adopted in the world practice for compiling a specialist's psychological portrait [Schaubhut N.A., Thompson R.C., 2016]. The 2020 study shows a significant correlation between the successful performance of work duty, the efficient development of an industrial company in the long term with the proper headhunting, based on the Myers-Briggs typology [Lee D.S., Ahn C.K., 2020] and, thereby, explaining its popularity among HR specialists [Trompenaars F., Woollimas P., 2005].

The Myers-Briggs Type Indicator (MBTI) test was created on the basis of Yung's typology of personality with dominant cognitive functions and has four scales with polar values: (1) Extroversion vs. Introversion (EI) – consciousness orientation; (2) Sensing vs. iNtuition (SN) – situational awareness; Thinking vs. Feeling (TF) – decision-making; Judging vs. Perceiving (JP) – preparation of decisions [Tatarnikova T.M., Bogdanov P.Ju., 2021: P.87]. According to this typology [Myers I., McCauley M., 1985], each person can be assigned to one of 16 types (Figure 1).

Myers-Briggs Typology in Translation Studies. The Myers-Briggs typology is widely adopted in translation studies. Thus, in 2005, a research paper was published clarifying different views on the "ideal translator" and his competencies [Nicholson N.S., 2005]. It was revealed that those who use the S function have a perfect memory, a tendency to grasping details, but tasks that require imagination and an intuitive approach are not supposed to relate to them. The same paper notes that translators with a developed N function easily find different ways of interpreting what has been said, as well as a huge number of different options in order to say or explain something. This study considers N or intuition to be the ideal function of a translator [Nicholson N.S., 2005] and confirms an earlier study that intuitives and logicians, being called theorists and belonging to the NT personality type (INTP, ENTP, INTJ, ENTJ), tend to better translate technical texts [Karimnia A., Makhubi M., 2013: P.41].

	ESFJ	ISFJ	ESTJ	ISTJ	ENFJ	INFJ	ENFP	INFP
Dominant	Fe	Si	Te	Si	Fe	Ni	Ne	Fi
Auxiliary	Si	Fe	Si	Te	Ni	Fe	Fi	Ne
Tertiary	Ne	Ti	Ne	Fi	Se	Ti	Te	Si
Inferior	Ti	Ne	Fi	Ne	Ti	Se	Si	Te

	ESFP	ISFP	ESTP	ISTP	ENTJ	INTJ	ENTP	INTP
Dominant	Se	Fi	Se	Ti	Te	Ni	Ne	Ti
Auxiliary	Fi	Se	Ti	Se	Ni	Te	Ti	Ne
Tertiary	Te	Ni	Fe	Ni	Se	Fi	Fe	Si
Inferior	Ni	Te	Ni	Fe	Fi	Se	Si	Fe

Figure 1. Myers-Briggs Typology: Cognitive functions' stack

Myers-Briggs Typology in Translation Studies. The Myers-Briggs typology is widely adopted in translation studies. Thus, in 2005, a research paper was published clarifying different views on the "ideal translator" and his competencies [Nicholson N.S., 2005]. It was revealed that those who use the S function have a perfect memory, a tendency to grasping details, but tasks that require imagination and an intuitive approach are not supposed to relate to them. The same paper notes that translators with a developed N function easily find different ways of interpreting what has been said, as well as a huge number of different options in order to say or explain something. This study considers N or intuition to be the ideal function of a translator [Nicholson N.S., 2005] and confirms an earlier study that intuitives and logicians, being called theorists and belonging to the NT personality type (INTP, ENTP, INTJ, ENTJ), tend to better translate technical texts [Karimnia A., Makhubi M., 2013: P.41].

The Myers-Briggs typology is recognized by scientists as reliable due to the fact it is directly related to emotional intelligence [Hubscher-Davidson S., 2013: P:334]. A 2007 study showed that translators-intuitives of the French-English language pair proved to perform better translation results, and intuition along with developed emotional intelligence had a positive effect on their productivity [Hubscher-Davidson S., 2013: P:334].

A more recent study in 2017 reveals that the quality of technical translation is significantly better for translators with developed intuition (N) and logic (T), and vice versa, people with the sensing type (S) are better at translating expressive texts, but worse at common ones, where intuitives (N), logicians (T) and ethicists (F) are absolute leaders [Shaki R., Khoshsaligheh M., 2017: P.122]. Besides, it was found out that there are more ethicists and logicians along with intuitives among translators [Shaki R., Khoshsaligheh M., 2017: P.127] who actually do not care what type of text needs to be translated, unlike sensorics (S), who demonstrate different translation quality depending on the source text type [Shaki R., Khoshsaligheh M., 2017: P.128].

Summing up the preferred psychological profiles of successful translators, we found studies proposing that (1) a translator with an intuitive-logical type will always outperform specialists with sensory perception [Al-Ismail Y.A., 2022: P.847], and (2) an ideal technical translator is an ENTP or ENTJ [SÎTNIC I., 2018: P.371], that we made up our mind to check out along with the above conclusions as well.

Methodology

Our research consisted of three stages: empirical, analytical, and statistical.

During *Stage 1*, we gathered all necessary data about twelve technical translators and interpreters of one of the largest industrial companies of Karaganda Region. The data included: (1) twelve technical foreign language specialists' demography such as their gender, age, and general work experience in technical translation sphere, gathered with the help of Google Form technology; (2) the assessment of our respondents' technical translation and interpretation according to the 5-point Likert scale; and (3) the personality types of the specialists as well as their dominant and auxiliary cognitive functions, tested by the following instrument <https://sakinorva.net/functions>.

During *Stage 2*, we conducted five semi-structural expert interviews with: (1) two experienced project managers, who were in charge of coordinating technical translators work and their communication with all other members of the projects they had been assigned to; (2) experienced technical translators and interpreters, who had quite a long and successful work experience at the mentioned-above company. All interviewees participated voluntarily, and they agreed on transcribing their answers, which were coded and the extracts from them were analyzed by the authors of this article. To avoid any subjectivity, both authors analyzed the transcribed answers individually and then discussed together.

During *Stage 3*, to accept or reject the connection between the duration of the close cooperation of technical translators and interpreters with other technical specialists of the projects and the quality of multimodal technical text translation, the method of mathematical statistics was applied with the help of the module "Data Analysis" in the program Excel. We proposed a null hypothesis (H_0) that a technical translator's closer proximity to other technical specialists and technical objects does not affect the quality of his/her translation or interpretation, and the alternative hypothesis (H_1) about the connection between a technical translator's closer proximity and his/her work efficiency.

Results and Discussion

During *Stage 1*, we found out that the translation department of one of the largest industrial companies of Karaganda region presented by thirteen technical translators, possessing the following MBTI types: INFP (n=1); ENFP (n=2); ENTP (n=2); INTJ (n=1); ESFP (n=1); ISFJ (n=1); ISTJ (n=2); ENTJ (n=2); ESTJ (n=1). Such findings partly prove the study, according to which ENTP and ENTJ types dominate among technical translators and interpreters [SÎTNIC I., 2018: P.371]. However, another study, according to which intuitive-logic people become technical translators and interpreters [Karimnia A., Mahjubi M., 2013: P.41], has been proved by our data as well.

Stage 2 involved five semi-structural interviews, which code extracted transcribed pre-recorded data allowed to reveal some key criteria to a good technical translation or interpretation (Table 1).

Table 1

Connection of closer proximity technical scheme and the quality of technical translation or interpretation

Key criteria to a good technical translation or interpretation	Extract from the expert interview	Dominant and auxiliary cognitive functions	Expert
Efficient network of communication	« <u>Good communication is the foundation of effective management</u> » « <u>Well-executed translation will make your target audience understand your message as precisely as if they could read your mind</u> » « <u>Communication is one of the most essential soft skills required today and it is the process of people exchanging ideas, information, feelings and intent through messages and signals.</u> »	<u>Fe</u> – extroverted feeling Effective communication and orientation to people surrounded him	Project manager (ENFJ)
Close proximity to a technical facility	« <u>To understand the technicality of the language, you should also come to the site... If you see that technical term, at site, like some equipment, we</u>	<u>Extraverted Sensing (Se)</u>	Project manager (ESTP)

	are having, say, emulsifier ... <i>If you <u>see</u> such words technically, you will know Russian, Kazakh, and English word for it. ..., <u>to see the actual equipment is the key to understand the technical language.</u></i>	The word ' see ' prevails in the interview.	
Direct contact with technicians	«Kogda ty v etoj sfere, ty, vizualiziruya, ponimaesh' , chto k chemu, i tol'ko togda nachinaesh' pravil'no perevodit' ». «...,obyazatel'no ponimat' o chem imenno idet rech', inache drugaya storona i vovse ne pojmet, chto ej pytayutsya donesti ...»	<u>Introverted Sensing (Si)</u> Key phrases are connected to <u>understanding</u> what <u>happened before...</u> to grasp the essence of the subject and discussion.	Experienced senior technical interpreter and translator (ISTJ)
Logical thinking and accumulation of one's experience	«...perevodchik dolzhen byt' bolee menee znakom s tekhnicheskimi vokabulyarom, libo rabotat' v tekhnicheskoy sfere , no, v lyubom sluchae, vseгда est' internet , prosto esli perevodchik voobshche ne znakom s tekhnicheskimi anglijskim, to emu ponadobitsya namnogo bol'she vremeni v nem razobrat'sya » « Illyustracii, v lyubom sluchae pomagayut pri perevode, no est' temy s kotorymi perevodchik mozhet byt' voobshche ne znakom, v takom sluchae, illyustracii ne ochen' mogut byt' polezny, no, v lyubom sluchae, kakoj-to plyus budet » « Lichno ya vseгда pol'zuyus' onlajn-perevodchikom... esli chto-to ne podhodit, to perevodchik ispravlyayet... zdes' takzhe igraet rol' i opyt raboty... v ustnom perevode perevodchik poluchaet nastoyashchie znaniya i nachinaet ponimat', kak i chto gde rabotaet... »	<u>Extraverted Thinking (Te)</u> <i>Generalisation of information, <u>positive attitude</u> and understanding of how this global logic works</i> <u>Introverted Sensing (Si)</u> Building on <u>own</u> inner expertise	Experienced technical translator (ESTJ)
External search and contacting experts	« Tekhnicheskoe obrazovanie ne pomeshalo by, no i bez nego tozhe normal'no » « S illyustratsiyami proshche perevesti chto-to ved' mozžno i sprosit' chto eto, kuda konkretnee » « Pri starte perevoda neznakomyh slov nachinaetsya 'tanec s bubnom' ili poisk togo, chto eto za slovo takoe ... » « Osobenno eto proiskhodit s abreviaturami, tam voobshche nachinaetsya igra v ugadaj melodiyyu...po kontekstu v osnovnom... A tak zhe sprashivayu, esli est' vozmozhnost' ... » «Ya rabotayu s indusami-ekspatami, v osnovnom, a sprashivayu u nih i u drugih perevodchikov. »	<u>Extraverted Intuition (Ne)</u> Speech is metaphorical, <u>intuitive</u> search and acquiring new knowledge from <u>the outside</u> <u>Introverted Thinking (Ti)</u> <i>Practical approach and lack of fear of seeming ignorant</i>	Experienced technical interpreter (ENTP)

Talking to the experts in the sphere of technical interpretation and translation allowed revealing four essential conditions for high-quality technical translation and interpretation development: (1) efficient network of communication; (2) close proximity to a technical facility; (3) intuitive-logical thinking; (4) accumulating one's experience. After connecting each of criteria obtained to the MBTI types of our experts, we got the following picture (Table 2).

Based on the data obtained, we see that the intuitive-logical type of ENTP corresponds to all 4 conditions, that confirms the conclusion of existing studies on the dominance of this type in translations of various kinds, including technical [Nicholson N.S., 2005; Karimnia A., Makhubi M., 2013: P.41].

Table 2

Essential conditions for high-quality technical translation and interpretation development according to Myers-Briggs typology

No.	Condition	MBTI type
1	Efficient network of communication	ISTJ, ENFP, ENTP
2	Close proximity to a technical facility	ISTP, ISTJ, ENTP
3	Intuitive-logical thinking	ISTP, ESTJ, ENFP, ENTP
4	Accumulating one's experience	ISTJ, ESTJ, ENTP

We also see that the ISTJ type meets all the necessary criteria, except for external searching, and therefore this type may have interpretation problems, but will be successful in written translation. This conclusion is partially confirmed by the study stating that sensorics are much better at dealing with expressive texts [Shaki R., Khoshsaligheh M., 2017: P.122].

The ISTP type is supposed to become a good technical translator or interpreter with the current accumulated experience and sufficient presence in the environment. As for the ENFP type, on the contrary, there can be success in interpretation, since there is an understanding of what the client wants to hear and what sort of mood he is in, which is also confirmed by a study of previous years [Shaki R., Khoshsaligheh M., 2017: P.122].

It is also worth noting the type of ESTJ is certain to succeed in effective communication only if he enjoys the benefits of it, which is shown in the interview with him, namely the words that it is **oral translation that helps learn a foreign language**. If a potential translator or interpreter of this type realizes all the advantages of effective communication, then his phenomenal memory will help him succeed in interpreting in regard to the study that we are going to verify by proceeding with this experiment [Nicholson N.S., 2005].

If the engineers and technical specialists are native English speakers and Russian-speaking technical workers, then it will make it possible to realize the value of the technical term in both languages for all the types surveyed according to the Myers-Briggs typology.

When we approached to **Stage 3**, exact linear relationship between technical translators and interpreters' close proximity to a technical facility and the quality of translation became visible. Two-sample t-test allowed to reveal a statistically significant relationship between the mentioned-before two variables ($t=3.4$; $a \leq 0.05$). Pearson correlation analysis showed that the revealed relationship was quite high ($p=0.6$; $a \leq 0.05$). It allowed us to reject the null hypothesis (H_0) about no relationship between a technical translator's closer proximity to technical environment and the quality of his/her translation. We accept the alternative hypothesis (H_1) – the longer the technical translator or interpreter is immersed in the scientific and technical environment with the subsequent efficient communication, the higher quality translation he/she demonstrates.

Conclusion

Thus, the visual aspect of technical translation, both oral and written, along with knowledge in the field of technical sciences though are an integral part of understanding the essence of the subject, but on their own do not tend to fill the void of misunderstanding the essence of the term without close proximity of the technical translator or interpreter to the technical context.

This study only breaks new ground in the field of translation studies in terms of investigating the translator or interpreter's personality traits, his leading, secondary and other cognitive functions, and needs a more extensive analysis and data gathering.

Personality traits may not be considered to be the most crucial in the translation process, but they are sure to play a role in communicating with customers, colleagues, speed of decision-making and productivity. Further research will allow for a more thorough study of the relationship between various cognitive functions in translation and create conditions for high-quality specialists training in

the field of translation. At the moment, we have found out that developed extroverted intuition and introverted logic in tandem allow novice translators to successfully adapt to the technical environment, thanks to quick reaction, associative approach, deduction and interpersonal skills.

We also started to understand what qualities are necessary for successful oral and/or written translation, which helps correctly choose equivalents and connect seemingly incompatible details to build a holistic picture. Further research is needed to find out which functions are responsible for a particular type of translation in a local context.

We believe that our purpose has been achieved, the tasks set have been completed, and the findings of the research have been introduced into the educational process at the Faculty of Foreign Languages of the university.

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