

System “Man – Intelligent Machine” in the Training of Translators and Interpreters

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ABSTRACT

The formation of a translator's personality involves the development of special cognitive abilities that conflict with the cognitive abilities that are formed spontaneously by the digital environment. Didactics of "digital" translation and interpretation has not yet given specific recommendations on how to train representatives of the new era, although it is clear that the old methods do not work. The authors of the article share their ideas about the use of the "human – smart machine" system in the training of translators and interpreters. The article describes the interaction of digital and traditional educational technologies in the training of translators and interpreters and proves the expediency of forming universal competencies in future translators and interpreters - thinking, interaction with others and with oneself. The digital competence of translators is considered as assistant in professional activities. Particular attention is paid to the digital technologies, methods and tools that contribute to the formation of universal and digital competencies.

Keywords: *cognitive abilities, digital translation, smart machine translation, training of translators and interpreters*

1. INTRODUCTION

The modern development of society is characterized by increasing complexity of the processes occurring in it, turbulence, increasing the degree of influence of the intellectual component on all aspects of society's life.

Only three years have passed since the concept of the "fourth industrial revolution" first became the topic of the Davos forum in 2016, but the widespread, rapid spread of digital technologies has led to a radical change in various aspects of human life and society as a whole. Digitalization, which replaced informatization and computerization, forms, as noted by the doctor of physical and mathematical Sciences, Professor of NSU D. Sviridenko, "integral technological environments "habitat" (ecosystems, platforms), within which the user can create the necessary friendly environment (technological, instrumental, methodological, documentary, partner, etc.) in order to solve entire classes of problems" [1]. It is also important that the concept of digitalization is associated with the delegation of certain production and socially significant functions to artificial intelligence. It is no accident that the Atlas of new professions lists 57 professions that should disappear by 2030. All of them are related to performing routine functions.

Changes in the profession maps and the lack of demand for digital skills in working with information and communication technologies (ICTs) clearly revealed the need to transform the educational paradigm and review existing approaches and models of training. 2016 saw the federal project “Modern Digital Educational Environment

in the Russian Federation” which was launched as a part of the implementation of the state program “Development of Education for 2013 - 2020”. Within the framework of this project, it is planned to “modernize the education and training system, bring the educational programs in accordance with the needs of the digital economy, widely introduce digital learning tools and integrate them into the information environment, provide citizens with the opportunity to learn according to an individual curriculum throughout their lives - anytime, anywhere [8]. Children of different ages adapt to the digital environment. Therefore, the education digitalization depends on the level of proficiency in using digital technologies by both the teacher and the student.

In order to be in demand and successful in the new digital world, today's student – tomorrow's employee must have new competencies. Nowadays, there are many competency frameworks offered in the form of a list or a modular network. According to the authors of the international report "Universal competencies and new literacy" [2], in scientific articles, materials of UNESCO, World economic forums, the project "Partnership for learning in the XXI century", the Asian society and other competent organizations [3, 4, 5] the terms used often overlap, but rarely coincide completely, causing some confusion. The authors of the report proposed universal competencies, which are blocks of knowledge, skills and attitudes:

- * cognitive competence (knowledge);
- * social competence (interaction with other people);
- * competence to interact with yourself.

The competence, for example, includes understanding, analyzing and interpreting a task, searching for and detection the patterns in abundance of facts; identification

of implicitly defined qualities of objects and phenomena, hidden resources for solving the problem; forming cause-and-effect relationships; creative thinking; system thinking; risk management; the choice of a balance between the speed when performing a known algorithm and the adaptability to changing conditions, etc.

Social competence is considered as a combination of the following abilities: cooperativity, the ability to negotiate, the ability to accept a different "I", resolve conflicts, and realize possible objective contradictions between different parties.

Competence of interaction with oneself implies self-regulation and self-organization, the ability to choose a strategy of persistence and flexibility.

2. BACKGROUND

We, as teachers of translation, are close to this approach to the formulation of competencies that are formed in the learning process and that should be possessed by University graduates who have chosen a complex intellectual field of activity.

Translation and interpretation activities are associated with the semantic information processing, the value of which is determined by socio-economic and legal categories. Translators and interpreters are considered as people ensuring national security in the information world. Globalization, cultural integration, digital technologies development are the fundamentals of the modern world that set new challenges for the translation community. The increasing complexity of translation and interpretation activities requires future specialists to navigate freely in the linguistic and sociocultural context of a communicative situation, to consistently implement their chosen strategy, and to predict possible development of the situations in which their professional activities are carried out.

Indeed, "no matter how the technology of translation improves, no matter what new actants are included in the translation process, each translator again and again solves the problems that Cicero, Jerome, Dole, Chukovsky, Benjamin, Berman, and many other writers, translators, and philosophers who turned to translation [7: p. 21].

Translation is essentially a cognitive process related to General cognitive functions. The main characteristics of the cognitive mechanism of a translator are flexibility, dynamism, wide operational capabilities, high speed of switching language and cultural codes, rapid transition from one system of cultural and cognitive coordinates to another, the ability to make instant decisions, the activity of all memory mechanisms, developed intuition, the ability to reflect, the ability to simultaneously perform heterogeneous speech actions, a wide arsenal of knowledge, a developed system for controlling the distribution of resources for their functioning [9,10].

Any act of translation begins with the perception of the original message. If the most important channel of information perception in oral translation is auditory, then the original message in written form assumes reading as a

certain cognitive function implemented by the translator. At the same time, for a successful translation, the depth of understanding and the linear nature of reading are important to the translator. Currently, the text is usually provided to the translator (a student studying translation) on electronic media after digital processing. Russian and foreign researchers pay attention to changes in the reading process itself. Thus, according to Yu. P. Melentyeva, digital reading "loses its linear character, the load on the brain when reading hypertext is much greater than when reading linear, and the possibility of deep thoughtful reading is noticeably reduced." The level of understanding and the degree of pleasure from reading also decreases" [11: p.34]. According to the American scientist G. Small, the experience of working with the Internet is not just a new form of reading, it is a completely new practice for the CNS, and it really changes the usual processes of the brain, which, obviously, adapts to the performance of online tasks [12]. Constant presence in the visual environment from an early age forms the skill of simultaneous (nonlinear) perception, that is, not a consistent attention to detail, but an instant "grasp" of the entire image [13].

Research on the specifics of translation thinking allows us to conclude that this thinking is practical, reproductive, productive, verbal-logical, analytical, intuitive (highlighted by us) [14] People with verbal-logical (conceptual) thinking use the capabilities of their brain more and better, because they perform complex mental operations, operate with abstract concepts, delve into the essence, and rely on a well-developed verbal-logical memory. To a large extent, under the influence of electronic means of communication, the way of thinking and perception of information has changed dramatically for modern youth, and clip thinking has been formed and continues to be formed. Domestic scientists who study the phenomenon of clip thinking note that it is a superficial, fragmentary, mosaic, discrete knowledge. "An individual operates with clip images that change as in a kaleidoscope, and does not use any mental operations related to analytical and synthetic brain activity, the sequence of storing conscious information is disrupted, since there is no deep insight into the essence of things – understanding, comprehension, evaluation, and forming an attitude to the information perceived by sensory systems" [15: p. 97]. Describing clip thinking, G. I. Girenok notes that it "tries to avoid meeting with the language, to minimize its presence. Therefore, the first sign of clip thinking is language minimalism" [16], which does not agree with translation activities.

All memory mechanisms work intensively during the translation process. The need to constantly refer to the existing knowledge in the translator's mental arsenal determines the active functioning of long-term memory, and the need to correlate the knowledge obtained in the process of translation with the existing knowledge requires high activity of short term memory. Focusing on the focal points of perceived utterances determines the significance of short-term memory. Of great importance is the ability of the translator to hold in memory large segments of speech, which requires a significant amount of memory, its

intensive work [8]. A feature of the cognitive sphere of modern youth is short-term memory. Moreover, the younger generation tends not so much to remember information received from the network as to remember the place in cyberspace where this information can be extracted [17]. In other words, the digital person is characterized by googling thinking and transactional memory.

The considered examples with some changes in the cognitive sphere of those born and living in the digital environment indicate that there is a serious contradiction between the cognitive abilities formed spontaneously by the digital environment and the cognitive abilities necessary for translation, in conditions where the former counteract the development of the latter.

At the same time, the "human – smart machine" system, as practice shows, can be effectively used in the training of future translators. First of all, this concerns the issue of forming students' skills to work with electronic dictionaries (Linguee, Ludwig, Multitrun, The Free Dictionary, etc.), machine and automated translation systems based on the technology of accumulation of translation memory – Translation Memory (SDL Trados Studio, MemoQ, Memsource, etc.). In addition, the use of information technology and mobile applications (for example, a digital notepad for translation writing Note Shelf, Notability, Bamboo Paper; file managers Readdle Documents, Clean File Manager, which help you to arrange work files and synchronize them with several mobile devices; virtual scanners Scanbot, Scanner Pro, which use the built-in camera of a tablet for digitizing documents, etc.), allows you to create digital competence. N.N. Gavrilenko considers the digital competence of a translator as an ability and responsibility to choose and apply information technology at all stages of the professional activity effectively, critically and safely [6]. The structure of digital competence includes the following components: technical, informational, organizational, communicative. The technical component implies the ability of the translator to work safely on the network and effectively use the software. The information and organizational components are associated with the ability to use the system of knowledge, skills, personal qualities necessary for the search, processing, presentation and storage of the information on the network. The communicative component represents the ability of the translator and interpreter to literate online communication. The main thing is that students clearly understand that these computer technologies are nothing more than tools designed to facilitate the routine work of the translator. In our opinion, training in these technologies should be conducted within the framework of a computer science training course.

Taking into account the results of research by foreign and domestic scientists (N. Carr, M. Wolf, A. Mangen, A. A. Konina, T. V. Chernihiv) on the impact of reading high-quality fiction on the human brain (the effect of a rocket accelerator, activation of the right hemisphere when reading poetry), we strongly recommend that students in the course of literature, extracurricular reading use books

on paper. At the same time, you can also find space for thoughtful reading on the Internet. These are longreads – large, complex materials, reports, research, or essays. In English they are available on the website longreads.com. Large texts are also available on the Medium platform. Apparently, while there are no recommendations from specialists in translation didactics, the question of the correct balance between materials that should be presented in digital format and in traditional paper format should be decided by teachers themselves.

3. CONCLUSION

The use of on-line components in the teaching of psychology, such as on-line simulators, attention and memory training courses, would contribute to the development of long-term and short-term memory of translation students. (e.g. Memrise, 4brain, Mnemonica, Cognifit, Brainscale, Uplift, S-mind, Quantified-mind, Litlbeta, Mozgame, etc.). However, given that these tools are paid, it is obvious that special exercises need to be developed by teachers themselves, especially since a certain set of them already exists: exercises "Echo", "Free echo", "Chain of associations", etc.

New students and new technologies... Will graduates of translation schools be in demand in the labor market? How far will digital education go? What formats of training will be optimal for the training of translators? Can a machine replace them at all?

Obviously, the considered digital solutions that create a new translation paradigm should be taken into account when developing educational programs for training translators and interpreters of the 21st century, however, they can only be a way of applying the corresponding professional competencies, the basis of which is the ability to work with the meaning of the original message with the aim of transmitting it to another language.

We are deeply convinced that machines will replace only those "translators" who translate like machines, those who do not realize that *Non schola esed vitae discimus* (Latin translation: not for school, but for life), those who in the world of numbers cease to be Human.

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