MASTERS OF ARTS' INTERDISCIPLINARY ENGLISH-LANGUAGE TRAINING: DIGITAL TECHNOLOGIES AND FINANCIAL CONTROL

Tatiana Victorovna Emelianova

Assoc. Prof., PhD, Peoples' Friendship University of Russia (RUDN University), Law Institute, 6 Miklukho-Maklaya Street, Moscow, 117198, RUSSIAN FEDERATION, emtv@mail.ru

Abstract

This research covers the issues of interdisciplinary English-language training of masters of Arts, in particular, the implementation of digital technologies and artificial intelligence (DT and AI) in the field of financial control together with a deep study of the used terminology and terms. The study aims to determine that widening law-students' knowledge of these issues enlarges their chances to promote in career after graduation from Law Institute, RUDN University. The relevance and novelty of this article lie in the interdisciplinary teaching the English-language professionally-focused skills necessary for Law Institute non-immigrant students to effectively interact within the processes of financial control with the usage of digital technologies and artificial intelligence. The article analyses the interconnection of financial monitoring and digital economy, the influence of DT and AI on a financial controller's daily routine highlighting cognitive technologies' opportunities in the field of financial control; it touches some risks that a financial controller of the new era experiences, and provides law-students with some instruments to overcome possible difficulties. The study conclusions highlight the necessity for the law students to widen their knowledge of DT and AI implementation in the field of financial control together with the adequate usage of appropriate terminology and terms; pair and group classroom activities made lessons more learner-centred; the implemented learning strategies and techniques while teaching masters of arts helped them when learning new terms and using language, deducing the meaning of words from context, and predicting content before reading. The presented results can be used by researchers of law and linguistics.

Keywords: artificial intelligence, digital technologies, English-language interaction, financial control, interdisciplinary training.

1 INTRODUCTION

Innovations in artificial intelligence and digital technologies, like Machine Learning, Robotic Process Automation (RPA), and Natural Language Processing and Generation (NLP/NLG) play a sufficient role in finance, law and education in today's technology-driven world. These technologies help to process information, to gather bits of data from multiple sources and assemble them. As it was stated by Virtual Financial Controller (2018), the rationale behind the automation mirrors the evolution of the typesetter: humans are relieved of tedious and repetitive work, while still guaranteeing a uniformly high-quality end product. The potential to automate financial controlling processes like highly repetitive tasks is getting greater due to the increase of digitalization processes. Cognitive computing and artificial Intelligence process data as if it was done by human intelligence. All these cause a complete reconfiguration of financial controlling tasks among which are reporting and analytics, internal control and risk management, planning, as well as closing and consolidation (Virtual Financial Controller, 2018).

This raised the interest to research and cover the issues of interdisciplinary English-language training of masters of Arts, in particular, the implementation of digital technologies and artificial intelligence in the field

of financial control together with a deep study of the used terminology and some settings of their application. The study highlights the necessity for the law students to widen their knowledge of digital technologies and artificial intelligence implementation in the field of financial control together with the adequate usage of appropriate terminology and terms.

The article also presents some of the applied learning strategies and techniques like pair and group classroom activities, project-based learning, etcetera; the implemented learning strategies and techniques while teaching masters of arts helped them when learning new terms and using language, deducing the meaning of words from context, and predicting content before reading. This made lessons more learner-centred.

1.1 The Objective of the Paper

The study aims to determine that widening law-students' knowledge of digital technologies and artificial intelligence implementation in the field of financial control together with a deep study of the English-language terminology enlarges their chances to promote in career after graduation from Peoples' Friendship University of Russia (RUDN University). The relevance and novelty of this article lie in the interdisciplinary teaching the English-language professionally focused skills necessary for Law Institute non-immigrant students to effectively interact within the processes of financial control with the usage of digital technologies and artificial intelligence.

2 METHODOLOGY

The article analyses the interconnection of financial monitoring and digital economy, the influence of digital technologies and artificial intelligence on a financial controller's daily routine highlighting cognitive technologies' opportunities in the field of financial control; it touches some risks that a financial controller of the new era experiences, and provides law-students with some instruments to overcome possible difficulties.

The methodology of teaching the professionally focused English language in a non-linguistic University is based on the specifics of the specialization both in the subject and in the operational content of training: lexical content and a special format of texts, skills to be formed and abilities to be developed. The methodological bases of the study are the provisions of Russian and foreign researchers in the field of jurisprudence, theory and methodology of teaching foreign languages and vocational training, with a special viewpoint of artificial intelligence and digital technologies including blockchain (Barbary, 2018; Effah & Nuhu, 2017, Martino & Schaffner, 2019; Reinsel, Gantz, & Rydning, 2017; Srinivas, Ramsay & Lamm , 2019), etc.

The main scientific methods like analysis, synthesis, systematization of research material, were applied. The conducted in-depth study of numerous resources helped to single out the main information suitable for the programme syllabus; among these resources are the following:

- Blockchain, Cryptocurrencies and ICOs: The Emerging Regulatory Framework, (2019);
- Blockchain: a practical guide to business development, law and technology solutions, (2018);
- Bringing digital to the boardroom. The impact of digital transformation on companies' boards, (2019);
- Financial Services Technology 2020 and Beyond: Embracing disruption, (2016);
- Impact of digital transformation on Banking Operation Models, (2019);
- Institutional barriers to digitalization of government budgeting in developing countries: a case study of Ghana, (2017);
- Law & Technology: Risks and Opportunities from the Tectonic Forces at Work, (2018);
- New General data Protection Regulation (GDPR) of the European Union, entered into force in 2017 (Regulation (EU), 2016/679);
- Virtual Financial Controller, (2018);
- The impact of smart technologies in the municipal budget: increased revenue and reduced expenses for better services, (2016).

Following the view presented by Virtual Financial Controller, within controlling activities and digital technology we single out strategy, risk and compliance, planning, reporting and analytics, closing and consolidation; among process steps there are data collection and preparation, data validation, information processing, creation of reports, analysis and interpretation of results, derivation of steering implications,

prioritisation and review of measures, coordination of required actions, communication and alignment with mgmt., quality assurance. It is obvious that cognitive technologies excel at analysing literally millions of data sets; achieving a level of computational power humans simply cannot match, these technologies can take over various repetitive, high-volume tasks (Virtual Financial Controller, 2018).

Opportunities of cognitive technologies in the field of financial control were also payed a serious attention in the above sources as well as in this paper; overview of major digital technologies helped masters to better understand the studied issues. Thus, we identified the following major digital technologies: cognitive agent, data visualization, deep learning, expert system, information extraction, Natural Language Processing and Generation (NLG/ NLP), predictive planning, robotic process automation (RPA).

Cognitive technology means the application of several technologies that can help financial controllers meet the emerging challenges and be well-positioned in the career; by combining internal financial information and operational data with external information. Cognitive technologies optimize the finance departments' work, for example, the budgeting and forecasting processes or model future scenarios with predictive analytics, etcetera. Cognitive technologies application actively supports, replaces, automates, and facilitates the key tasks of the financial controller (Virtual Financial Controller, 2018).

Thorough study of these issues helped to realize that, basically, there are two main views regarding the extent of technologies' effect on humankind in the future. Those who are judged as technology doubters are nervous about the developments in AI, Big Data, the IoT and other areas as they think these technologies will somehow replace human interactions and decision-making, eventually, rob us of what it means to be human. There are some risks that a financial controller of the new era experiences. The so-called technology idealists believe that the advances of digital technologies and artificial intelligence will benefit humanity and help us to solve numerous problems that we currently experience and that would otherwise be worse in the future (Law & Technology: Risks and Opportunities from the Tectonic Forces at Work, 2018).

3 RESULTS AND DISCUSSIONS

As a result of this study and in order to develop productive and perceptive skills necessary for professionally focused English language interaction, authentic materials were selected, assignments and exercises were developed to expand the vocabulary, professional terminology. Assessment criteria for judging masters of arts (Law) and a fund of evaluation tools were formed.

When introducing new information from syllabus to masters, it is typical to start with the basic concepts and terminology, the proper understanding of which is necessary for the correct comprehension of the studied specific information. Thus, the students are motivated to make use of various dictionaries like Legal Dictionary for Businessmen (1994), English-Russian Comprehensive Law Dictionary (2008), Collins English Dictionary & Thesaurus (2015), Explanatory dictionary of the Russian language (2006), Collins Russian Dictionary & Grammar (2013). They pick up useful words and terminology like the following:

- *Artificial Intelligence* - искусственный интеллект, искусственный разум;

- *Cross-functional communication* - межфункциональная коммуникация;

- *Digital/ digitalization* – цифровой/ цифровизация;

- *Forecasting process* – процесс прогнозирования;

- *Fraudulent transactions* – мошеннические операции/ транзакции.

- *Malicious intent* – злой умысел, злонамеренно;

- *Outstanding payments* – просроченные платежи;

- *Preventing violations* - предотвращение нарушений;

- *Possible threats* - возможная угроза, потенциальная угроза, возможная опасность.

Active usage of various dictionaries helped masters to find not only the translation of numerous terminologies but pick up their synonyms, for example:

- *Accountant* – бухгалтер, счетовод. Synonyms: *bookkeeper, accounting officer, auditor*;

- *Cognitive* - когнитивный, познавательный. Synonyms: *educational, perceptive*;

- *Computing* - вычислительный, компьютерный. Synonyms: *calculating, computational*;

- *External control* – внешний контроль. Synonyms: *outside control*;

- *Environment* – среда. Synonyms: *surroundings, milieu, climate, ambiance*;

- *Internal control* - внутренний контроль. Synonyms: *internal check*;

- *Processing* - обработка, переработка. Synonyms: *handling, pre-treatment*;

- *Treasurer* – казначей. Synonyms: *purser, bursar, paymaster*;

- *Validating* – проверка. Synonyms: *approve, confirm, certify*.

Throughout the English-language classroom activities like disputes and deliberations, in order to practice the adequate usage of terms and lexical units in the process of professionally focused interaction, the students compiled and asked several questions, for example:

- What are the benefits of digitalization for financial control?

- What tasks can be automated by robotic process automation?

- What is the reason for the interest of business leaders in cognitive technologies?

- What are the types of financial control?

- Why are there opinions that the professions of accountants and auditors may disappear?

- Why digitalization entails increasing the responsibility of the controller?

- What is the essence of a high level of control?

- When will self-learning software and digital analytics become mandatory?

- What is Financial Conduct Authority?

- What can be the basis for the creation of a unified centralized system of state and municipal financial control in real time?

Having studied all the covered overhead issues, masters answered the above questions; there were the following statements among their most typical answers:

- The potential for automating financial control processes, especially tasks with a high degree of repeatability, is great in case there are more achievements in the field of digitalization.

- Data collection, preparation and verification, as well as information processing and reporting for operational and executive management are among the most repetitive tasks that can be automated with the help of a Robotic Process Automation.

- Business leaders require more timely and accurate information so that they can make faster and more effective decisions in this world that is increasingly dependent on data.

- The main types of financial control are the internal control and external non-state control, the internal state control and external state control.

- The opinions that the professions of accountants and auditors may disappear exist because their functions lend themselves to robotization.

- Talking about the increase of the controller's responsibility, it is reasonable to assume that, having in the Arsenal large amounts of data for analysis, even more accurate information should be provided.

- The essence of a high level of control is in reaching the desired target status of the object of control.

- According to the point of view of some researchers, a mandatory regulatory requirement for systems may become present within the next five years.

- Financial Conduct Authority is a legal regime in which new technologies are tested in real time, involving the release of the participant of the regulatory platform from administrative responsibility.

- Distributed database system (blockchain system) can be the basis for the creation of a unified centralized system of state and municipal financial control in real time.

Masters can get exposure to language outside the classroom by watching videos and movies in the English

language while getting ready with home assignment. They picked up various videos in YouTube, watched them and discussed throughout classroom activities, for example, this link to the video https://www.youtube.com/watch?v=hU2zyRKKZ5g on Digital Finance - Finance Transformation at «Deloitte» caused special interest and raised a discussion in class. The students searched the webpage of «Deloitte» https://www2.deloitte.com/ch/en/pages/finance-transformation/solutions/finance-transformation.html for more information which was followed by the classroom discussion and commenting within which masters activated gained earlier knowledge and made use of the studied vocabulary.

Another activity was reading various scientific papers on the covered issues in both English and Russian and answering comprehension questions. This activity helped to focus masters on skills development. Then the masters studying the English language within the master's program "Legal Regulation of Blockchain Technology", wrote their own papers, for example, "THE BLOCKCHAIN RECORD: TO BE DELETED OR STORED FOREVER", "ACTUAL PROBLEMS OF LEGAL REGULATION OF THE DIGITAL ECONOMY", etcetera. The author of this article was the scientific supervisor of the above-mentioned masters.

Thus, they participated in the students' annual conference "We speak Legal English, German, French, Spanish…" organized for the students; the papers presented for the conference are published each year. Being the assessor, the author of this article implemented assessment criteria for judging masters' writing like use of vocabulary, spelling, accuracy of grammar, layout and organization of ideas according to scientific style, punctuation, etc. This activity was also very effective to prepare masters for writing their Master's Thesis.

Through these activities the author of this paper helped masters develop their higher-order thinking skills and lower-order thinking skills. It is indispensable to emphasize that masters were sufficiently involved into the described above activities; their energy levels were high due to the actuality of the studied issues. The researched issues can be part of syllabus of the new interdisciplinary educational course in the English language for masters: "Financial-legal institutions amid digital technologies development".

4 CONCLUSION

Studying the issues of masters' English-language training in interdisciplinary context, in particular, implementation of digital technologies in economy, especially blockchain technology, brought to the following conclusions. Being prepared in these issues, masters are able to make economic and financial relations in the world market legally transparent and protected. New breakthrough technologies are essential and necessary to meet the needs of society to improve the economic and social situation of citizens. Therefore, it can be resumed that a solid foundation for the development of digital relations has already been laid. This means increased convergence of digital technologies and public administration methods, including financial control. Proper knowledge and usage of terminology in the English language enables masters to improve their own work and guarantees them positive achievements in professionally focused interaction in the described fields of activities. While practising speaking, masters learnt real-life patterns of interaction; by doing extra practice they consolidated extensive knowledge of these issues, thus masters became more proficient and prepared for factual communication. They felt more confident about their own ability to correctly implement the English language in the sphere of digital technologies and financial control. Widening law-students' knowledge in these fields of activities enlarges their chances to promote in career after graduation from RUDN University. The presented in this paper results can be of professional interest for the educators and researchers of law and linguistics.

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