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SHORT REVIEW

by Prof. Yovka Tisheva, PhD

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Sofia University "St. Kliment Ohridski"

for dissertation for the acquisition of the educational and scientific degree "Doctor"
Field of higher education: 2. Humanities, Professional direction 2.1. Philology (Bulgarian
language - Semiotics)

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Dissertation topic: "Psycholinguistic Aspects of Sign Systems Acquisition"

Author of the dissertation: Nikolay Shindarov, Department of Bulgarian Language, Faculty
of Slavic Studies, SU "St. Kliment Ohridski"

I.   Data about the author of the dissertation and the doctoral program

Nikolay Shindarov studied Slavic Philology at the Faculty of Slavic Studies of Sofia University "St. Kliment Ohridski" from 2008 until 2017. Since 2017, he has a master's degree in Slavic philology with a profile in Serbian and Croatian and a second major in Slovenian language. From 2010 till 2011, he worked as a programmer and developed websites and an ERP system at *VIB Solutions Ltd*. Since 2011, he has been the manager of *Shindarov NET Ltd*. and deals with programming and software engineering in the field of Python, PHP, SQL, NoSQL, Linux, Cordoba, PhoneGap, etc. He leads a project related to the topic of the dissertation, in the framework of which he develops an educational mobile game for teaching foreign languages. In 2015, N. Shindarov completed the first semester of a three-year bachelor's program in computer science (in Slovenian) at the University of Maribor.

From February 2020 until January 2023, N. Shindarov was full-time doctoral student in the Department of Bulgarian, Faculty of Slavic Philology with scientific supervisor Prof. Dr. Gergana Dacheva. During his studies, he increased his scientific and professional skills by taking part in the courses at the Doctoral School of the Faculty of Slavic Studies. He presented the results of his research at three international scientific conferences: XIV International Conference on Sociolinguistics "Urban Culture and Linguistic Diversity", Sofia, 2020; VIII International Conference "The Balkans - Language, History, Culture", Veliko Tarnovo, 2021; International Conference on Business, Economics, Law, Language and Psychology, organized by Social Science & Humanities Research Association (SSHRA), 2022.

The data for the period of his PhD studies show the good scientific preparation of the doctoral student and his advanced skills for research and applied activities. According to the documentation provided for the doctoral studies and the preliminary discussion of the dissertation, all the requirements of the Law on the Development of the Academic Staff in the Republic of Bulgaria, the Regulations for its implementation and the Regulations for the Terms and Conditions for Acquiring Scientific Degrees and Holding Academic Positions at SU have been complied. The documents comply with all regulatory requirements and prove the validity and legality of the procedure.

II. Data for the dissertation and the abstract

Nikolay Shindarov's dissertation "Psycholinguistic Aspects of Sign Systems Acquisition" has a total volume of 252 pages. Of these, 235 are the actual text, structured in an introduction, five chapters, a conclusion and scientific contributions. The list of cited 176 bibliographic units (mainly in English and Bulgarian) shows the in-depth theoretical knowledge of the doctoral student in the field of semiotics, foreign language learning, applications and development of the so-called "serious games" for educational purposes.

Relevance of the problem developed in the dissertation work

Globalization and dynamic contacts in all social domains impose new requirements on language competences regarding the first (native) language, working languages in foreign educational institutions or international companies, in various situations of official or informal communication. Language education is digitizing at a rapid pace, trying to catch up with technological invasion in other areas of human activity. Specialized applications and electronic learning resources are becoming an integral part of modern foreign language learning. By modernizing the conditions and means of teaching, the possibilities of applying non-standard methods, corresponding to the habits and attitudes of modern students and young people, whose daily life mostly takes place in a digital environment, are expanded. However, the availability of new technological means could not automatically influence the effectiveness of language learning. As N. Shindarov points out, "nowadays there is a need to build a system for foreign language training, which will form and maintain motivation for training in potential learners, thereby facilitating and speeding up the process of learning this type of sign system" (p. .4). The stated facts and conclusions determine the relevance of the developed problem in a scientific-applied sense and its importance for expanding theoretical knowledge in an interdisciplinary field between semiotics, language learning and computer science related to educational application software.

Presentation of the state of the problem and the scientific literature

Nikolay Shindarov is well informed about the theoretical bases of semiotics, several aspects of teaching and learning a foreign language, the peculiarities of different methodologies in foreign language teaching and the specific components in the preparation of a project and the development of educational software. In the literature review made in the first chapter, current studies on the application of the semiotic approach in foreign language learning are commented. This is how the general theoretical framework of the dissertation is outlined, arising from the idea that learning foreign languages is the acquisition of new sign systems, however, and proceeding in a different way from the acquisition of the first language. In this context, video games have been convincingly defined as semiotic systems. The main goal of the development stems from the need to build a system for foreign language learning that forms and maintains motivation for learning, which facilitates and accelerates the process of learning the new sign system. By presenting the theoretical foundations of suggestopedia and the influence of psychological and emotional factors on the learning process, in the second chapter the doctoral student convincingly shows that after the analysis of the literature, he can highlight the main theoretical-methodological problems in creation of educational games and strategies for overcoming them. The review of theoretical sources is a reason to conclude that the developed learning product aims at learning a foreign language with less effort and stress, like a game, and the process of assimilating the material should be spontaneous and unconscious for the learners (implicit learning). The second chapter of the dissertation also shows the doctoral student's knowledge of the principles for compiling language corpora as a learning resource.

The conclusions of the experiment with the game prototype, presented in the last chapter, are systematic and objective. They motivated the author to enlarge his concept for full version of the game with short texts, as well as integrating a scheme for cyclical repetition of words at optimal intervals for easy long-term memorization. The list of lexical items has been optimized, taking into account not only the frequency, but also the level at which they should be taught and the subject area to which they relate.

Comment on the chosen methodology

The methodology applied in developing the prototype, the experiment on its effectiveness and the concept of the full version of the game are adequate to the scientific tasks. Its application leads to an objective and uncontroversial selection of lexemes to be memorized through implicit learning. The methodology for compiling the lexical corpus, as well as the specific methods applied in developing the design of the prototype meet the criteria for building language resources and applications. The structure of the game is designed to reduce the stress

associated with conscious learning efforts. The design and mechanics of the game aim to activate several senses; non-standard or unrealistic associations also support easy and effective memorization. As the PhD student considers the relationship between memorization abilities and emotions, the elements provoking emotional reactions are integrated into the game.

Brief description of scientific and/or scientific-applied contributions

The presented work shows the indisputable achievements of Nikolay Shindarov in solving a scientific-applied problem using methods corresponding to the modern achievements of science and practice. Significant scientific and applied contributions are the conclusions about the structural characteristics of video games as complex semiotic systems. Systematizations for the structure of texts in foreign language learning can be used to solve other private problems, e.g. in creating learning resources and tools for evaluating learning outcomes. Applied contributions are the creation of a video game prototype for implicit foreign language learning and a lexical database of 1,898 items that could be used in the compilation of educational texts or in the development of other scientific and scientific applied research.

The dissertation abstract comprehensively and accurately presents the structure of the work, the results of the studies, practical and experimental activities, as well as the scientific contributions.

III. Publications on the topic of the dissertation

The publications submitted meet the national requirements for obtaining the educational and scientific degree "Doctor". Nikolay Shindarov has published three articles on the topic of the dissertation. Two of them are in prestigious Bulgarian periodicals, and the third - in proceedings from an international scientific conference.

Conclusion

Evaluating the topicality of the dissertation "Psycholinguistic Aspects of Sign Systems Acquisition", the results achieved and the conclusions drawn, I propose to the respected Scientific Jury to award Nikolay Shindarov the educational and scientific degree "Doctor" in the field of higher education 2. Humanities, professional direction 2.1. Philology `Bulgarian Language – Semiotics).

March 27, 2023   Prof. Yovka Tisheva, PhD