Complementing content of English courses for enhancing communication of IT-professionals for sustainable development

Svitlana Symonenko*

Dmytro Motornyi Tavria State Agrotechnological University, Department of Foreign Languages, Melitopol, 72312, Ukraine

Abstract. The paper deals with the issue of English language training for IT-specialists at Ukrainian universities. Understanding the importance of studying foreign languages has been confirmed by a number of normative documents. Peculiarities of professional training of IT-specialists at higher education institutions with the focus on foreign language training are considered. Pedagogical conditions for formation of communicative competence of IT-specialists are analysed. The content analysis of existing English language course books and textbooks for IT-specialists has been conducted to find out the content of foreign language training. It is stated that English language teaching aids in information technology, computer engineering, computing and software engineering can be used in the learning process, however, their use requires thorough refinement and modification. The series of guides and manuals for teaching English for professional purposes are presented.

1 Introduction

Education institutions have always been the space for implementation of new ideas, venues of progressive events and places for changes and new discoveries. It comes as no surprise universities around the world have become main promoters of sustainable development ideas and goals. Education for Sustainable Development (ESD) emphasizes the necessity of "equipping students with the knowledge and understanding, skills and attributes needed to work and live in a way that safeguards environmental, social and economic wellbeing, both in the present and for future generations" [1].

Modern realms prove that much more attention is given to environmental and economic spheres of life, while the socio-cultural area remains untouchable [2]. Languages, communication, human interaction are essential parts of human lives, and they cannot be disregarded in this respect. In addition, the question arises of why languages are missing from the Sustainable Development Goals (SDGs), as these are precisely languages that can deliver the SDGs correctly and accessibly. Moreover, "99% of negotiations on the SDGs were done in English, and 100% of negotiation outcomes were written in English" [3].

Nowadays. foreign language training is an integral component of all stages of secondary and higher education, and this process becomes even more significant under the conditions of ESD. The high level of the language proficiency, certainly, fosters career promotion, the increase of the intellectual and cultural levels of specialists, and easy adaptation of them in a foreign language environment. Employer requirements for engineering and technical knowledge, skills and competences are constantly being complicated. This happens due to the accelerated evolution of technical skills, the emergence of new engineering professions and the penetration of technology in all the areas of human lives. This fact also imposes an imprint on the foreign language level requirements. The significance of the sufficient foreign language level for IT-professionals is even more crucial, as they often work in international companies or teams, therefore the foreign language knowledge impacts on the result of their individual or joint work.

The objective of the paper is to carry out the analysis of existing course books and textbooks for IT-specialists in the context of their training at higher education institutions.

2 Peculiarities of training for IT-specialists at higher education institutions

The analysis of scientific publications has shown that peculiarities of professional training of IT-specialists have been studied by O. Dubinina [4], A. Striuk [5], M. Sydorov [6], L. Tereminko [2] et al. Researchers V. Kruhlyk [8], V. Osadchyi [9] have been engaged in the analysis of professional qualities of software engineers. Certain aspects of communicative training of IT-specialists have been investigated by H. Babii [10], Ya. Bulakhova [11], I. Chirva [12], O. Kirilenko [13], V. Strilets [14] and other researchers.

A. Striuk [5] notes that a software engineering specialist must be familiar with computer hardware,

* Corresponding author: asimonenko@ukr.net

ducation-sustainable-development-Guidance-June-14.pdf. Accessed 05 Feb 2020

2. T. Zygmunt, Language Education for Sustainable Development. Discourse and Communication for Sustainable Education **7**(1), 112–124 (2016). doi:10.1515/dcse-2016-0008

3. W. Tesseur, Why are languages missing from the Sustainable Development Goals? (2017), https://research.reading.ac.uk/research-blog/why-are-languages-missing-from-the-sustainable-development-goals/. Accessed 05 Feb 2020

4. O. Dubinina, Dissertation, Kharkiv National Pedagogical University, 2016

5. S. Semerikov, A. Striuk, L. Striuk, M. Striuk, H. Shalatska, Sustainability in Software Engineering Education: a case of general professional competencies. E3S Web of Conferences (2020 in press)

6. M. Sydorov, I. Mendzebrovskyi, A. Orekhov, Software Engineering 2, 56–62 (2010)

7. L. Tereminko, Formation of readiness for professional mobility as an urgent professional training problem of future software engineers. Bulletin of National Aviation University 10, 139–145 (2017). doi:10.18372/2411-264X.10.12521

8. V. Kruhlyk, V. Osadchyi, Developing competency in programming among future software engineers. Integration of Education **23**(4), 587–606 (2019). doi:10.15507/1991-9468.097.023.201904.587-606

9. H. Chemerys, V. Osadchyi, K. Osadcha, V. Kruhlyk, CEUR Workshop Proceedings **2393**, 17–28 (2019)

10. H. Babii, Higher education of Ukraine 1, 162–170 (2012)

11. Ya. Bulakhova, Dissertation, Luhansk National Pedagogical University named after Taras Shevchenko, 2007

12. I. Chirva, Dissertation, Kyiv National Linguistic University, 2008

13. O. Kirilenko, Young researcher 3, 388–393 (2016)

14. V. Strilets, Dissertation, Kyiv National Linguistic University, 2010.

15. I. Viakh, Dissertation, Vinnytsya State Pedagogical University after Mykhailo Kotsyubynskyi, 2013

16. O. Kraievska, Scientific notes of the Ternopil National Pedagogical University named after Volodymyr Hnatyuk. Series: Pedagogy 3, 13–18 (2014)

17. I. Novgorodtseva, Dissertation, Volga State Engineering and Pedagogical University, 2008

18. O. Yefimova, Dissertation, National Pedagogical Dragomanov University, 2014

19. Z. Yermakova, Dissertation, Alfred Nobel University, 2015

20. S. Symonenko, Dissertation, Classical Private University, 2019

21. J. Jodoin, J. Singer, Mainstreaming Education for Sustainable Development in English as a Foreign Language: An Analysis of the Image-Text Interplay Found in EFL Textbooks in Japanese Higher Education, in *Universities as Living Labs for Sustainable Development*, ed. by Leal Filho W. et al. World Sustainability Series (Springer, Cham, 2020), pp. 545–565. doi:10.1007/978-3-030-15604-6_34

22. Ye. Goltsova, *English Language Guide for PC Users and Programmers* (Korona print, Saint Petersburg, 2002)

23. V. Vichugov, T. Krasnova, *English for Internet Technology Professionals* (Tomsk Polytechnic University, Tomsk, 2012)

24. E. Glendinning, J. MacEwan, *Oxford English for information technology* (Oxford University Press, Oxford, 2003)

25. E. Glendinning, J. MacEwan, *Oxford English for information technology* (Oxford University Press, Oxford, 2006)

26. E. Marco Fabré, S. Remacha Esteras, *Professional English in use: ICT* (Cambridge University Press, Cambridge, 2016)

27. D. Hill, *English For Information Technology* (Pearson Longman, Harlow, 2012)

28. T. Smirnova, M. Yudelson, *English For Computer Science Students* (Flinta, Moscow, 2017)

29. V. Evans, J. Dooley, S. Wright, *Career Paths: Information Technology* (Express Publishing, Newbury, 2011)

30. V. Evans, J. Dooley, W. Kennedy. *Career Paths: Computing* (Express Publishing, Newbury, 2011)

31. V. Evans, J. Dooley, E. Pontelli, *Career Paths: Software Engineering* (Express Publishing, Newbury, 2011)