

University Education for Sustainability: Topics of Foreign Language Teaching

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An effective and novel way to evaluate the quality and amount of work done towards Education for Sustainable Development is to examine the conversational topics offered for students in English as a Foreign Language [EFL] textbooks. The considered problem includes educational material presented in EFL university textbooks published in Russia over 2010–2020. The research aims to reveal how much EFL textbooks have changed towards sustainability. Using content analysis of the topics and methodological analysis of exercises presented in EFL textbooks for university students, we revealed three undecided problems: (1) the EFL textbooks published in Russia have not overcome the problem of enriching textbook content with sustainability topics; (2) the topics presented in the analyzed books do not cover the whole range of sustainability issues; (3) the variety of exercises used in EFL textbooks for university students is limited. The obtained results may be used to improve EFL textbooks. The methodology and research approach provided in the paper may be useful for further investigation of textbooks in many other disciplines.

Keywords: education for sustainable development, English as a foreign language, foreign language teaching, conversational topic, textbook content

INTRODUCTION

Sustainability issues have become a point for discussion since 1992 when the UN adopted the concept of interdependent development of society, economy, and environment (United Nations, 1992). However, these three essential aspects of human life may be united into a common stream only if people of the Earth can communicate and find mutually beneficial solutions despite country borders, cultural diversity, and language barriers. It means that sustainability issues include many more aspects of interaction and should be taught. Consequently, education for sustainable development [ESD] refers not only to ecology and connected fields but also to art, culture, and language study. This paper aims to analyze English as a Foreign Language [EFL] textbooks for Russian university students based on their conformity to the sustainability approach. We decided to study higher education textbooks because teaching English is targeted at different conversational topics at each level of education. More attention is paid to personal interest topics to enable students to speak about themselves and their basic needs at the first stages of education. In contrast, higher education levels focus on the environment and social problems. The main problem under consideration is the conversational topics of EFL textbooks and methods for engaging students to discuss sustainability issues. The idea to explore the content and topics of EFL textbooks from the ESD standpoint is new for Russian studies of foreign language teaching since most investigations in the field are mainly theoretical

and are done within the pedagogical approach rather than teaching methods and content. The analysis of textbook content enables recommendations on the appropriate choice of teaching materials aimed at ESD.

Sustainability Issues as Multidisciplinary Field of Study

Topics of EFL textbooks are chosen as the research subject because experts (including higher and secondary education teachers, methodologists, researchers, and public activists) consider sustainability topics embedded in various teaching subjects to be more efficient tools than separate subjects themselves (Ermakov, 2016). For students major in English, it can be more interesting to learn about ecological problems during English classes while discussing ecology as a conversation topic rather than having a lecture in ecology. This idea coincides with the thesis claimed in the “Final Report on the UN Decade of Education for Sustainable Development,” “Every student, regardless of discipline or career focus, should learn to contribute to a more sustainable world” (UNESCO, 2014, p. 119). Since the article aims to analyze the topics presented in EFL textbooks, it is necessary to describe the sustainability problem field to denote the topics identified as ESD topics in student textbooks.

Research of sustainability issues has recognized the connection between the three original pillars of sustainable development (economy, society, and environment) and culture and language. The principle of integrating culture in sustainable development was adopted by UNESCO in 2005 and became the main principle of ESD conception for the decade of 2005–2014 program (UNESCO, 2005, p. 30). The UN new Sustainable Development Agenda adopted in 2015 for 15 years includes 17 goals which present the fields mentioned above in more detailed items such as (1) poverty, (2) hunger, (3) health, (4) education, (5) clean water, (6) clean energy, (7) decent work and economic growth, (8) industry and innovation, (9) reduced inequalities, (10) cities and communities, (11) responsible consumption, (12) climate changes, (13) underwater life, (14) life on land, (15) peace and justice, and (16) partnership (General Assembly of United Nations, 2015). All these critical goals are discussed in a multitude of studies. A brief examination of research articles devoted to ESD helps to determine other related topics such as (1) information and communication technologies in education and development (Paas, 2008); (2) family (Sakk, Veisson & Lukk, 2009); (3) ethical values and social behaviors (Holland, Mulcahy, Besong & Judge, 2012); (4) responsible citizenship (Bell, 2016); (5) emotional competence and psychological issues (Suleimenova & Ivanova, 2018); (6) intercultural understanding; (7) HIV and AIDS; (8) governance; (9) rural development; (10) corporate responsibility and accountability (Makrakis, Larios & Kaliantzi, 2012; Makrakis & Kostoulas-Makrakis, 2012), and many others.

Russian professors are aware of sustainability issues. However, in 2014 (at the end of the Decade of ESD), the research of D. S. Ermakov showed that most interviewed teachers answered that in Russia, the ESD approach was still at the beginning stage (Ermakov, 2016). It is proved by the fact that the term “sustainable development,” obtained by Russian teachers from English, is frequently mistranslated from Russian back into English as “stable development” (Abdurahmanov et al., 2010). More recent research has shown that all education levels in Russia, including higher education, are subject-oriented, which prevents the interdisciplinary interaction necessary for ESD conception (Grishaeva, Wagner, Tkacheva, Lugovskoy, 2018). A similar concern was expressed by the Association for Advancement of Sustainability in Higher Education (AASHE) back in 2010 because, as the paper suggested, students were taught such a narrow understanding of disciplines that impeded understanding the interactions and interconnections of actions and decisions (AASHE, 2010). Therefore, we can conclude that Russia is almost ten years behind the ESD agenda. Russian researchers in the field of education for sustainability focus mainly on ecological education, teachers’ competence, and reflection over sustainability (Khaludorova, 2019), and security (Ilyin, A. Ursul, T. Ursul & Andreev, 2017).

The given short review shows that Education for Sustainable Development is a multidisciplinary field of study formed by several interconnected topics. The wording of the topics may vary. Nevertheless, we can notice several related items that can be taken as primary markers of the sustainability approach in EFL textbooks: (1) ecology and environment (including climate change and natural resources), economy (poverty, work, industry), (2) society (inequality, justice, peace and security, partnership, family, values, behaviors, government, and citizenship), (3) education (competence), (4) culture diversity (language and

identity), (5) city and rural development, (6) human life and health. Moreover, health problems have been included in sustainability conception not long ago and are mainly associated with HIV and AIDS. COVID-19 situation has shown how much health issues may influence all pillars of sustainability. In this respect, the matter of language and intercultural communication plays a significant role. Reading information written in another language may help one take the necessary measures before the official media reports.

EFL Textbook Topics for Sustainable Development

Foreign language teachers strive to contribute to the Education for Sustainable Development. Foreign language teaching methodology in Russia is based on three interconnected aspects, introduced by G. V. Rogova and widely developed by her followers: (1) linguistic aspect, (2) psychological aspect, and (3) methodology aspect (Rogova, Rabinovich & Sakharova, 1991; Yazykova & Makeeva, 2018).

The linguistic aspect indicates the necessary language teaching materials (ceratin vocabulary and grammatical structures for discussion in classrooms depending on the age of learners, their language proficiency, and setting); the psychological aspect distinguishes skills and competencies that should be formed at each level of language education; the methodological principle demonstrates the ways of teaching for successful learning. If we compare this approach with the sustainability conception, foreign language teachers' responsibility is to choose sustainability vocabulary and conversational topics for discussion, considering useful language skills, and define teaching tools that may encourage students to reflect on sustainability issues.

Teaching foreign language serves the idea that quality of life, responsible citizenship, and peace depend on respect for culture and language (Gorenflo, Romaine, Mittermeier & Walker-Painemilla, 2012), which is a subject of indigenous education (Jacob, Cheng & Porter, 2015).

ESD concept is created to develop students' ability to understand the essence of sustainability and teach them critical thinking to change their behaviors for a future prosperous society. Of course, teachers' personal, professional, and communicative skills are crucial in this respect, but teaching materials are not less important. It must be the materials that present sustainable issues that motivate students to take steps towards sustainable development even without the inducement imposed by teachers. It has become ever more momentous with the development of information and communication technologies and e-learning. With asynchronous distance learning (arranged without active teacher-student simultaneous interaction in the educational process), content topics and practical exercises are the basis for student involvement.

Many current papers address the issues of foreign-language distance learning. Therefore, this topic remains relevant and requires a detailed study because spoken communication is the fundamental principle of language learning. The language is the natural semiotic system of acoustic signs; consequently, the spoken form is its "natural sphere" (Saussure, 1959, p. 21). Teachers tried to develop online discussion assignments and estimate their effectiveness, but asynchronous communication skills are rarely made explicit (Delahunty, 2018). Besides, the discussion exchanges are often incomplete and fragmented (Lander, 2014). Therefore, in terms of distance learning, written practices dominate over spoken communication due to the challenge of providing a natural spoken mode of communication in the e-learning environment. Development of information and communication technologies for online courses of foreign languages (including Massive Open Online Courses [MOOCs]) as well as specific exercises and assignments which may improve students' spoken skills, should be examined in a separate paper as one of the most important and urgent tasks in modern foreign language teaching methodology.

Simultaneously, there may occur a situation when we vitally need to use the distance mode of language teaching, as during the COVID-19 quarantine. With the situation we faced in Russia in early 2020 when well-developed EFL distance courses could not withstand students' overflow, the obvious way out was to use electronic libraries and available online textbooks. That is why the topical and methodological content of textbooks for students has gained paramount importance from the sustainability perspective.

My 20 years' experience of teaching English in Russian institutions of secondary education and higher education allows me to hypothesize that secondary education textbooks published in Russia are more sustainability-oriented than English ones. The reason lies in the tradition of foreign language teaching in Russian higher education institutions aimed at professional language competence. Most higher education

textbooks focus on professional vocabulary in a particular field connected with a student's major. Thus, we can assume that university students whose major is connected with ecology, environment, economy, and social processes are more likely to gain ideas about sustainability issues than the students whose majors are not related to sustainability, like music or archeology.

MATERIALS AND METHODS

Textbook content may tell a lot about the author's (teacher's) view on the problem which topics should be presented in the textbook to make it suitable for higher education curriculum and efficient for students. However, the author's view may not correspond with the dominating education trend and students' demands. Thus, it is necessary to examine textbook topics to improve the quality of learning content.

The material of this study is formed by a corpus of EFL textbooks for higher education students developed mainly by Russian authors (sometimes in collaboration with British or American teachers) and published in Russia from 2010 to 2020. During these years, according to the National Strategy of Education for Sustainable Development in the Russian Federation (UNECE, 2005), Russia should have developed the plan of necessary steps for ESD and begun to realize them (consequently, the textbooks printed in this period should contain sustainability issues).

The research material includes only English textbooks available online in the most popular Russian electronic libraries for higher education students: e-library "Lan" (official site URL: <https://e.lanbook.com/>), e-library "University library online" (official site URL: <https://biblioclub.ru/>), e-library "Urait" (official site URL: (<https://urait.ru/>), and e-library of Altai State University [ASU] since the study is done in ASU (official site URL: <http://elibrary.asu.ru/>).

In the libraries, the selection of the books was made with the help of search filters "English language" in "Subject and Major" and "Higher Education" in "Level of Education." The systems showed over 800 books appropriate to be used for university classes of English. Using more detailed search filters, we selected only the textbooks which contained conversation topics as the headlines of units – the books for speech practice classes.

It is necessary to define what is meant by the conversation topic. It is one of the main terms of the Russian theory and methodology of foreign language teaching. It refers to a teaching block that usually includes a text and several exercises connected with the text content to develop students' comprehension, speaking, and writing skills. The students' purpose within a topic is to achieve successful communication (conversation exchange) on the given topic.

Exercise books, directories, or books intended for grammar teaching were not included in the examination because they have different structures and teaching purposes. Consequently, only 181 textbooks were selected for further examination.

To reveal specific features of university English textbooks, we compared the content presented in the books with the books' content for high and vocational school students. It is important to mention that both high and vocational schools in Russia refer to the final stage of secondary education. Therefore, in this respect, they involve the same level of education, and EFL textbook content should be similar). For this purpose, we changed the search filters and selected 69 more books.

To evaluate the books' content from the sustainability approach, we examined the titles of the units, texts, and vocabulary and studied the types of exercises and tasks given in each unit. From the ESD approach, we believe that the most efficient tasks and exercises should be those aimed at thinking and reflecting on the sustainability problems besides English grammar, vocabulary, and word use. Assignments involving discussion and essay writing are probably the most suitable in this respect.

Besides the books selected via the mentioned electronic libraries, we looked on the Internet for other available in open access English textbooks for school and university students. Special attention was paid to the textbooks published in Europe or the USA. We searched for original EFL textbooks intended for 15 to 18-year-old students at the intermediate and advanced English levels. There was no further division of the selected original textbooks into those for high school and university students because original textbooks of the intermediate and advanced levels are effectively used at both EFL education levels in Russia. University

students should not study only advanced EFL textbooks; it depends on the peculiarities of curricula provided in different high schools and universities). Unfortunately, the latter group of books was the smallest in this research because only a few books are available for free (16 textbooks). The total number of books examined for this paper is 287.

We examined the conversation topics presented in each book in terms of the ESD concept.

Essential analysis methods include (1) material selection, (2) content analysis of conversation topics (main texts within a book unit), (3) and methodological analysis of exercises and tasks. We have conducted the content analysis with an analytical reading by comparing the books' topics connected with sustainability revealed in the first paragraph of this paper.

The methodological analysis of the exercises included categorizing exercises into three classes: aimed at developing grammar skills, aimed at enriching vocabulary (such as to find synonyms, antonyms, word definitions, idioms, and set expressions, etc.), and aimed at comprehension and critical evaluation. Statistical methods were used to present the results of the study. Since the numbers of textbooks of different education levels were not equal, the results are presented in percent.

RESULTS

The first step of the research was to determine whether EFL textbooks for university students published in Russia in 2010–2020 contain any sustainability topics. The words which were used as markers related to sustainability in the content analysis of the selected 181 EFL textbooks for higher education students included: (1) “economy,” (2) “society,” (3) “environment,” (4) “culture,” (5) “poverty,” (6) “hunger,” (7) “health,” (8) “education,” (9) “nature,” (10) “resources,” (11) “work,” (12) “industry and innovation,” (13) “reduced inequalities,” (14) “cities and communities,” (15) “responsible consumption,” (16) “climate,” (17) “peace and justice,” as well as derivatives of these words or words of similar semantic fields. A topic was considered to be related to sustainability if the given words were used in section (unit) titles, text headlines, or keywords in the active vocabulary used in texts. It was found out that only 61 of the 181 examined textbooks (33.7%) contained at least one topic related to sustainability.

After further examination of the topics included in the 61 books, it was concluded that not all issues mentioned above are presented in the books with equal frequency. The comparative and statistical analysis allowed us to identify the sustainability topics presented in the books more frequently, less frequently, and rarely. The frequency of the topics can be described as follows (from the most frequent to the rarest):

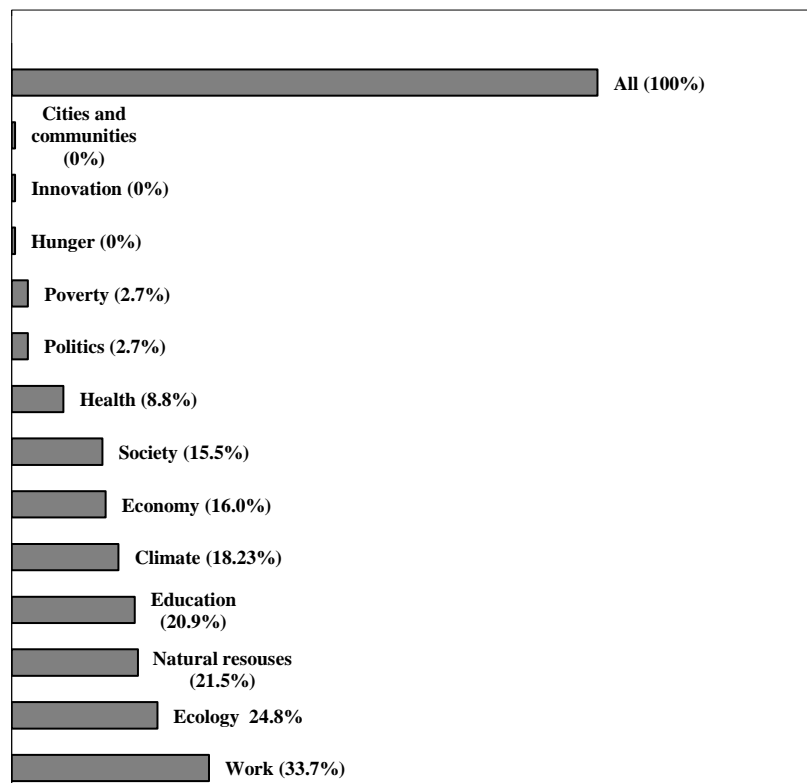
- Work and industry (presented in all 61 books, although in most of them this topic is rather connected with a future career in a particular field than with the sustainability approach);
- Ecology and environment (used in 45 books; in most of them, ecology and environment are considered as one topic);
- Natural resources (in 39 books);
- Education (in 38 books, again, connected rather with education in a particular major than sustainability);
- Climate (in 33 books);
- Economy (in 29 books);
- Society, inequalities, and problems of an individual in society (28 books, mainly for students of sociology);
- Health and care (in 16);
- Politics and peace (in five books, mainly for legal students);
- Poverty and social inequality (also in 5 books).

Such topics as hunger, innovation, cities, and communities are not presented in the analyzed books. The problem of responsible consumption is not presented as a separate topic in any books, but resource consumption is discussed within such topics as the environment and natural resources. The most problematic for the statistical assessment topic is culture. Although preserving cultural traditions is mentioned in topics devoted to society and education, they are not emphasized as separate issues for discussion but connected with other, more relevant problems. Even for art students, neither textbook

underlines the problem of keeping culture diversity for sustainable development by identifying it in the title of a unit or a text for reading and thinking over.

Keeping in mind that the totality of the analyzed books makes 181 items, the frequency of sustainability topics in the examined EFL textbooks may be presented in percentage (Fig. 1).

FIGURE 1
FREQUENCY OF SUSTAINABILITY TOPICS IN EFL TEXTBOOKS



EFL textbooks for university students are divided into two main types:

- Textbooks for English classes in general (without connection with a particular major or field of studies); among them, there is a subtype of textbooks intended for humanities or art students, but there are no common books for students major in sciences;
- English textbooks for students of a particular major, for instance, “English for Legal Students,” or “English for Economy Students.”

All books of the first type contain at least one topic connected with sustainability issues. With the books intended for students of a particular major, the situation is different. On the one hand, the books entitled “English for Musicians” may not contain such topics as poverty, ecology, and other sustainability issues. On the other hand, it was a surprise that such topics are not included in textbooks for some economy majors. For instance, books entitled “English for Accountants” mainly cover such topics as financial statements, accounting principles, financial accounting, and others.

Consequently, we found out that sustainable development issues are not covered in EFL textbooks for musicians and art students in general, students of dentistry, psychologists, IT-specialists, and accountants. Textbooks for interpreters present some texts connected with sustainability issues. However, the main topics under consideration are language structure and interpreting techniques, as it is clear from the exercises given in the books. Textbooks that contain more than one topic related to sustainability (approximately from 70% to 20% of all topics in a book) include EFL textbooks for students of ecology and biotechnology, sociology, advertisement, and public relations, law, economy (other than accounting

majors), agriculture, veterinary science, medicine, tourism, transport (in decreasing order from 70% to 20%).

First, such topics as work issues, ecology, environment, and natural resources are at the top of the list of topics presented in university EFL textbooks. Second, EFL textbooks for students of ecology, biotechnology and sociology contain many more sustainability topics than EFL textbooks for students of other majors. These two facts do not only correspond to the most critical problems of the education for sustainable development but reflect the general research view on sustainability problems presented in Russian research papers (Demidova et al., 2017; Gruzdeva, 2015). There is a tradition in Russia to associate sustainability problems with such fields as ecology and society, leaving aside many other fields crucial for sustainable development.

After comparison of the content presented in the analyzed 181 textbooks for university students with the content given in the 69 books for high school students and vocational school students, it was revealed that practically all of them contain more than one topic related to the education for sustainable development, except for 15% of books intended for passing final school exams which contain texts about sustainability problems not as separate topics but as text material inside the examination papers. The key topics presented in these textbooks include (1) ecology and environment, (2) educational problems, (3) culture and national identity, (4) the role of family for an individual and society, (5) social problems of teenagers, (6) health, and (7) physical development issues. Not all topics connected with sustainability are presented in textbooks for school students (for example, there are no such separate topics as poverty, hunger, innovation, cities, and communities in the examined textbooks). However, the presented topics are more detailed and well worked. What is more important, they are targeted at teenagers' perception (sometimes, the reading materials in these books contain teen slang and colloquial expressions) and raise questions interesting for teenagers. Since practically all examined high school textbooks have more than two sustainability topics, further statistical research of the topic frequency is not necessary for this study. The presented results allow us to conclude that high school textbooks are more than twice as much sustainability-oriented.

The same is true about the 16 original EFL textbooks printed in the UK or the USA available in free access. They all contain more than one sustainability topic. The presented topics include the issues absent in the Russian textbooks: innovation, technology, and hunger. There is a topic "Quality of life" which deals with the problems of city and community.

The analysis of tasks and exercises intended for developing comprehension and conversation skills shows that not all assignments are equally useful for developing such skills as reflection and motivation for action. For example, in all analyzed books, some exercises aim to enrich the knowledge of English vocabulary. Of course, these exercises are compelling and necessary since the main purpose of English classes is to learn more words and how to use them in speech. However, from the ESD approach, practical exercises aim to provoke a discussion on sustainability. These are assignments with questions, discussion, essays, presentations, role-plays, reports, projects, and group work. With the help of the statistical method, it is easy to figure out which tasks are most commonly used in the textbooks and evaluate the sufficiency of the exercises from an ESD standpoint. So, the most commonly used by the authors of EFL textbooks for university students published in Russia are:

- Comprehension tests;
- Comprehension questions on the reading section (questions on the texts);
- Questions for discussion (additional questions on the posed problem appealing to students' life experience, personal views, etc.);
- Essays (or other written tasks to develop the topic);
- Role-plays;
- Games;
- Group work.

Some textbooks contain only reading material without any tasks and exercises.

Comparison with exercises used in high school textbooks issued by Russian and European or American publishers shows the opposite approach to the techniques that should be used to make students think about

sustainability problems and react to them. Besides games and role-plays, there are such tasks as presentations, reports, and projects.

The results of the analysis are presented in Table 1.

TABLE 1
MOST COMMONLY USED EXERCISES IN SUSTAINABILITY TOPICS

Types of exercises and teaching techniques	Higher education textbooks published in Russia, %	High school textbooks published in Russia, %	Textbooks produced by foreign publishers, %
Comprehension test	15	20	50
Comprehension questions	60	50	25
Questions for discussion	25	30	30
Essay / written task	4	20	70
Role-play	20	25	45
Game	5	15	20
Presentation	-	5	5
Report	-	5	10
Project	-	5	15
Group work	10	10	40
Neither	15	-	-

The figures indicating percentages overlap because most books contain several types of exercises in each conversation topic. As we can see from Table 1, the most frequently used tasks in higher education and high school textbooks published in Russia are comprehension questions mainly focused on developing language comprehension and speaking skills instead of critical thinking and evaluation. While European or American publishers usually focus on essays. Unfortunately, the number of foreign textbooks studied for this paper is too small to make any sound conclusion. Nevertheless, it is clear that the authors pay more attention to other types of tasks than comprehension questions and, all in all, strive to use various tasks.

It is hard to deny the importance of comprehension questions in developing conversational and communication skills. The study suggests using some other tasks to develop a topic. At the same time, Table 1 shows that Russian high school textbooks contain the same variety of teaching techniques and exercises as foreign ones.

DISCUSSION

The results of the research address the following issues:

- Only 30% of EFL textbooks for university students contain conversational topics connected with the ESD approach;
- Textbooks which contain sustainability topics concentrate mainly on ecology and environment problems and lack discussion of cultural problems;
- Some textbooks do not pay much attention to the assignments motivating students to lead a sustainable life.

In 2010, AASHE formulated a problem: disciplines indirectly connected with sustainability were focused on narrow discipline issues without connection with global issues and did not pay sufficient attention to EFL university curricula. Simultaneously, the ability to realize global issues and feel responsible for the situation is probably the main factor that should mark higher education from other education levels. EFL textbooks reflect a broader situation observed in many disciplines because EFL textbooks are designed to meet the demands of teachers and students. It seems that ESD goals were not entirely clear or have not been heard by Russian teachers of the English language. EFL textbooks should

be concentrated on the main field of student study because the purpose of foreign language teaching is to introduce a student to a broader range of resources and professional opportunities connected with a student's major. However, focusing only on this goal brings away from the current educational trend.

The narrow view on the EFL textbook content causes the subsequent lack of cultural issues among the studied topics. Paradoxically, preserving culture and language diversity is the second essential purpose of foreign language teaching. A brief look at the spectrum of research papers in foreign language teaching proves that foreign language teachers are aware and concerned about the problem (Maslova et al., 2018) but away from scientific research, many of them keep working within the traditional approach.

Lack of assignments and exercises aimed at motivating for sustainability behaviors may be a consequence of the previous two problems. Orientation on the narrow field of student's study makes EFL teachers focus on exercises necessary to develop language communication skills in a particular area.

Comparison with high school EFL textbooks indicates that secondary EFL education in Russia contributes more to the problem than higher education. Besides, Russian authors created high school textbooks designed similarly to the original EFL textbooks created by native English speakers. Therefore, they offer students more opportunities to follow the global education trend. Leaving school, students switch to a particular professional field, which may prevent them from realizing the broader range of problems. The latest Federal State Educational Standards for Higher education are intended to solve the revealed problems by imposing requirements for developing cultural competencies among university students; thus, the situation will probably change soon.

CONCLUSION

The study provides an opinion on how to evaluate the quality and amount of sustainability work in EFL textbooks. It reveals three main problems of EFL textbooks from an ESD standpoint:

- Concentration on a particular field connected with a studied major with only a few opportunities to achieve ESD goals;
- Limited range of topics provided for discussion withing ESD approach;
- Limited range of exercises targeted towards solving ESD problems.

The obtained results may be used for the improvement of EFL textbooks being published in Russia; the methodology and research approach provided in the article may be useful for further investigation of textbooks in practically any other discipline.

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REFERENCES

- Abdurahmanov, G.N., Monahova, G.A., Murzakanova, L.Z., Abdurahmanova, A.G., Bagomaev, A.A., & Alieva, Z.A. (2010). Conception basis, realities and perspectives of the education for stable development in the Russian Federation. *South of Russia: Ecology, Development*, 5(2), 224–250.
- Association for Advancement of Sustainability in Higher Education [AASHE]. (2010). *Sustainability curriculum in higher education. A call to action*. Retrieved from https://interdisciplinarystudies.org/docs/Conferences/2010_Documents_A_Call_to_Action.pdf
- Bell, D.V.J. (2016). Twenty-first century education: Transformative education for sustainability and responsible citizenship. *Journal of Teacher Education for Sustainability*, 18(1), 48–56.
- Delahunty, J. (2018). Connecting to learn, learning to connect: Thinking together in asynchronous forum discussion. *Linguistics and Education*, 46, 12–22.
- Demidova, N.N., Koposova, N.N., Kiseleva, N.Yu., Kozlov, A.V., Kondrashin, B.V., & Sokolov, I.S. (Eds.). (2017). *Proceedings of the XIV International Science Conference: Ecological education*

- for sustainable development: Theory and pedagogical reality*. Nizhny Novgorod, Russia: Minin University.
- Ermakov, D.S. (2016). The willingness of teachers to implement education for sustainable development. *Pedagogical Education in Russia*, 2, 30–36.
- General Assembly of United Nations. (2015). *Resolution “Transforming our world: The 2030 Agenda for Sustainable Development”* (September 25, 2015, No. 70/1). New York, NY: United Nations. Retrieved from https://www.un.org/ga/search/view_doc.asp?symbol=A/RES/70/1&Lang=E
- Gorenflo, L.J., Romaine, S., Mittermeier, R.A., & Walker-Painemilla, K. (2012). Co-occurrence of linguistic and biological diversity in biodiversity hotspots and high biodiversity wilderness areas. *Proceedings of the National Academy of Sciences of the United States of America*, 109(21), 8032–8037.
- Grishaeva, Yu., Wagner, I., Tkacheva, Z., Lugovskoy, A., & Moro, P. (2018). Education for sustainable development today: A problem area for overcoming difficulties of pedagogical adaptation (On the example of a higher school). *The South of Russia: Ecology, Development*, 13(3), 159–166.
- Gruzdeva, N.V. (Ed.). (2015). Proceedings of the X all-Russian methodological seminar (with international participation). *Ecological Education and Education for Sustainable Development: Look into the future*. Saint-Petersburg, Russia: Christmas+.
- Holland, C., Mulcahy, C., Besong, F., & Judge, M. (2012). Ethical-values pedagogical model. *Journal of Teacher Education for Sustainability*, 14(2), 41–53.
- Ilyin, I.V., Ursul, A.D., Ursul, T.A., & Andreev, A.I. (2017). *Education for Sustainable Development in Russia: Problems and Prospects (Expert-analytical report)*. Moscow, Russia: Teacher.
- Jacob, W.J., Cheng, S.Y., & Porter, M.K. (2015). Global review of indigenous education: Issues of identity, culture, and language. In W.J. Jacob, S.Y. Cheng, & M.K. Porter (Eds.), *Indigenous education* (pp. 1–35). Netherlands, Dordrecht: Springer.
- Khaludorova, L.E. (2019). Education for sustainable development as direction for improvement teacher’s through environmental competence. *World of Science. Pedagogy and Psychology*, 5(5). Retrieved from <https://mir-nauki.com/PDF/71PDMN517.pdf>
- Lander, J. (2014). Conversations or virtual IREs? Unpacking asynchronous online discussions using exchange structure analysis. *Linguistics and Education*, 28, 41–53.
- Makrakis, V., & Kostoulas-Makrakis, N. (2012). Course curricular design and development of the M.Sc. programme in the field of Ict in education for sustainable development. *Journal of Teacher Education for Sustainability*, 14(2), 5–40.
- Makrakis, V., Larios, N., & Kaliantzi, G. (2012). ICT-Enabled climate change education for sustainable development across the school curriculum. *Journal of Teacher Education for Sustainability*, 14(2), 54–72.
- Maslova, G.G., Matsevich, S.F., Turunen, N., Shirokova, L.A., & Yakovleva, L.L. (Eds.). (2018). *Foreign Language and Culture in the Context of Education for Sustainable Development International: International collection of scientific-methodological articles* (Issue 6). Pskov, Russia: LOGOS.
- Paas, L. (2008). *How information and communications technologies can support education for sustainable development. Current uses and trends*. Manitoba, Canada: International Institute for Sustainable Development.
- Rogova, G.V., Rabinovich, F.M., & Sakharova, T.E. (1991). *Methodology of teaching foreign language in secondary school*. Moscow, Russia: Enlightenment.
- Sakk, M., Veisson, M., & Lukk, K. (2009). The quality of family relations in ensuring sustainable education. *Journal of Teacher Education for Sustainability*, 11(2), 51–63.
- Saussure, F.D. (1959). *Course in general linguistics*. New York, NY: Philosophical library LTD. Retrieved from https://openlibrary.org/books/OL23291521M/Course_in_general_linguistics
- Suleimenova, A., & Ivanova, O. (2018). Emotional competence and individual style of action of future teachers of higher education in the system of education for sustainable development. *Journal of Teacher Education for Sustainability*, 14(2), 44–63.

- UNECE. (2005). *National strategy of education for sustainable development in the Russian Federation*. Retrieved from <http://www.unece.org/fileadmin/DAM/env/esd/Implementation/NAP/RussianFederationNS.r.pdf>
- UNESCO. (2005). *UNESCO and sustainable development*. Paris, France: UNESCO. Retrieved from <https://unesdoc.unesco.org/ark:/48223/pf0000139369>
- UNESCO. (2014). *Shaping the future we want. UN Decade of education for sustainable development (2005–2014). Final Report*. Paris, France: UNESCO. Retrieved from <https://unesdoc.unesco.org/ark:/48223/pf0000230171>
- United Nations. (1992). *AGENDA 21*. Rio de Janeiro, Brazil: United Nations sustainable development. Retrieved from <https://sustainabledevelopment.un.org/content/documents/Agenda21.pdf>
- Yazykova, N.V., & Makeeva, S.N. (2018). Contribution of professor G.V. Rogova's scientific school to the development of the national concept of methodological training of foreign language teachers. *Prepodavatel XXI Vek, 1*(1), 9–17.