Electronic Information Educational Environment as a Means of Learner Autonomy Development In Ihl

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ABSTRACT
The article is devoted to the issues of developing learner autonomy in the Institutes of Higher Learning (IHL) in Russia as one of the top priorities of higher education in Russia nowadays is to train graduates with a high degree of autonomy, which has been fixed in the state standards of higher education.

Foreign languages gain an ever-increasing importance within the framework of qualitative structural changes in the Russian system of higher education. Modern society urgently needs secondary linguistic personalities rather than graduates who merely speak a foreign language to a certain degree. Recent years have seen a growing demand for translators of vocationally-oriented texts, which is a result of globalization, improved cross-cultural relations, economic and political cooperation. Obviously, since students who learn English for specific purposes (ESP) have less time to acquire a foreign language in their curricula compared to those at linguistic universities, they need to develop learner autonomy and work persistently to become real professionals. To meet this demand, nonlinguistic institutes of higher learning are fully engaged in training of such translators.

The article is focused on the ways to transform existing techniques, methods and approaches to form the learner autonomy of would-be translators of vocationally-oriented texts. The authors provide the necessary steps to succeed in achieving this goal, a set of various exercises to teach grammar of science language, available elements and resources of the LMS MOODLE as well as the results of experimental training of engineering students.

The authors arrive at the conclusion that one of the most efficient and effective ways to succeed in achieving this goal is to build an electronic information educational environment in IHL and work out innovative teaching methods of developing learner autonomy.

1. Introduction
This study is made especially relevant by the changes in Russian educational policy in the 21st century: adoption of the paradigm of life-long learning along with the dynamic changes in all spheres of the Russian society
which resulted in the transformation of the system of higher education and the new demands for the graduates of the Institutes of Higher Learning (IHL) as individuals with a high degree of autonomy.

The State Programme of the Russian Federation on “Advancement of Education” for the years 2016-2020 [33] states that by 2020 all students will have a curriculum that is to a greater extent based on self-directed, autonomous learning with the help of information technologies (IT) and determines the implementation of a flexible, satisfying the demands of to the society, system of life-long learning as well as organization of up-to-date learning environment as its top priority. The State Standards of Higher Education of the Russian Federation stipulate the development of the following competences of the graduates: the ability to find, sort out, interpret, analyze, make a synthesis and use of the information obtained; to set goals and assign tasks independently and to make a choice of the best possible solution; to develop a self-development path for life; time-management.

In the current climate, however, the level of autonomy development of the graduates of Russian IHLs is at odds with the above mentioned requirements. With this context, one of the most topical issues is the introduction of new teaching techniques and methods for the development of learner autonomy, review of traditional approaches to the learning process, creation and implementation of electronic information and educational environment.

2. Methodology

The concept of learner autonomy has been in the focus of many scholars’ research both in the West (H. Holec, D. Little, L. Lier, L. Dickinson, L. Mariani, G. Allport, and others) and in Russia (Y.N. Kulutkin, Zh.S. Anikina, N.F. Koryakovtcheva, I.V. Luksha, E.A. Nasonova, E.N. Solovova, T.Y. Ternovykh and others) since 1979 when Henri Holec wrote Autonomy and foreign language learning [14] and defined learner autonomy as the “ability to take charge of one’s own learning.” Holec stated that this ability “is not inborn but must be acquired either by ‘natural’ means or by formal learning, i.e. in a systematic, deliberate way”, and pointed out that “to take charge of one’s learning is to have […] the responsibility for all decisions concerning all aspects of this learning […]” [14, p.3]

Defining autonomy is quite a complicated task because of its broad and abstract nature. Researchers and scholars add their own views to Holec’s definition, or alter it in the course of their arguments. For example, Little [24, p.435] writes that ‘learner autonomy is the product of interdependence rather than independence’, and Littlewood [25] introduces two levels of autonomy: ‘proactive autonomy’ and ‘reactive autonomy.’ Proactive autonomy regulates the direction of activity as well as the activity itself. Reactive autonomy regulates the activity once the direction has been set. It enables learners ‘to organize their resources autonomously in order to reach their goal. It is this form of autonomy that stimulates the learner to do their learning’ [25, p.75].

Nunan [29] states that ‘Autonomous learners are able to self-determine the overall direction of their learning, become actively involved in the management of the learning process, exercise freedom of choice in relation to learning resources and activities.’ Benson [4, p.47] defines autonomy ‘as the capacity to take control of one’s learning, largely because the contrast of ‘control’ appears to be more open to investigation that the constructs of ‘charge’ or ‘responsibility’. Ur [42, p.19] regards autonomy as one of the three stages of the process of learning a skill, which is a three-stage course of instruction: verbalization, automation and autonomy, and explains that at the last stage learners continue to use the skill on their own. That is, they become ‘autonomous’.

In Y.N. Kulutkin’s view [22], learner autonomy has both outer (learning strategies and activities) and inner (self-regulation) manifestations. The learner is both the subject and the object of control, and to some degree he becomes a teacher.
In Russian-English terminological reference book under the editorship of L.I. Kolesnikova autonomous learning is defined as complete independence, self-sufficiency of learners, when the teacher is almost excluded from the educational process and it’s the student who determines objectives of his learning, the program and materials [18]. Russian researchers, who work at the concept of learner autonomy in the field of foreign language teaching, use the following terms:

- **Self-guided learning of foreign languages.** A.E. Kapaeva defines it as independent learning activity, induced by learning-cognitive motivation [15]. According to T.Y. Tambovskina it’s a specific sort of cognitive activity aimed at autonomous learning of a foreign language by means of independent development of the competence of foreign language self-teaching and building up one’s one model of self-teaching on the basis of acquired speech skills [35].

- **Independent learning activity.** K.V. Simonyan defines it as ‘a learning activity characterized by learner independence, his/her diligence, development of specific skills of learning organization combined with learner ability to commence his/her learning activity, capability to control this activity which will promote cognitive self-dependence, controlled, assessed and managed by means of computer-aided technologies [31].

- **Learner self-regulation** (Zh.S. Anikina, N.F. Koryakovtseva, I.V. Luksha, E.A. Nasonova, E.N. Solovova, T.Y. Ternovykh). According to I.V. Luksha the term means student’s awareness of his/her responsibility for the process and the result of one’s learning activity [26]. E.A. Nasonova considers that learner self-regulation means student’s desire and ability to be a responsible member of the educational process, to realize his/her learning activity and be engaged in self-development in learning and professional aspects [28]. From the point of view of N.F. Koryakovtseva, the term means a learner ability to perform one’s learning activity independently, to take an active stand and conscious control of this activity, to self-reflect and make corrections, to accumulate one’s own experience, to make independent decisions regarding one’s learning process in different educational backgrounds [20]. T.Y. Ternovykh is committed to the term in its narrow sense that is student’s intensive control of his/her learning process and his/her responsibility for it [36]. According to Zh.S. Anikina, learner self-regulation is a learner ability, who is a member of the educational process, to set goals independently, to plan one’s activity, to chose methods of learner activity and types of work, at the same time to self-reflect, self-control, and self-correct and to be fully responsible for the results of his/her learning activity and to transfer these results into a new learning environment [2].

- **Learner autonomy** (D.A. Khodyakov, T.K. Tsvetkova, E.A. Tsyvkunova). E.A. Tsyvkunova defines learner autonomy as ‘an ability, desire and readiness of the student to self-learn, to take a responsibility for his/her learning efficiency during his/her university studies, to acquire skills that will allow to self-study and self-improve after the graduation of the university [41]. According to T.K. Tsvetkova, learner autonomy is his/her ability to acquire new expertise and perfect foreign language skills independently [40]. D.A. Khodyakov believes that “learner autonomy is an integrative quality of the individual assuming his willingness to independently regulate his learning activities in accordance with his/her needs and abilities, together with the teacher or independently from him, selecting the goals, content and methods of his teaching and evaluating his results [17].
Analysis of the definitions of learner autonomy shows that the views of the researchers on the problem of determining autonomy can be divided into three groups: 1) autonomy is the learner ability (H. Holec, D. Little, L. Mariani, J. Trim, P. Benson, N.F. Koryakovtseva, I.D. Trofimova, T.Y. Tambovkina); 2) autonomy is not an ability or a need, but a learner’s responsibility (L. Dickinson, E.N. Solovova); 3) autonomy as willingness to manage one’s own learning process (O. Berg, D.A. Khodyakov).

We agree with the scientists who believe that learner autonomy is an ability and by this ability we mean an individually expressed peculiarity of a person that allows one to perform certain activities.

It should also be noted that in the methodology of teaching foreign languages there is no consensus on terminology to denote this concept: according to N.F. Koryakovtseva and T.Y. Ternovych, the terms "learner self-regulation" and "learner autonomy" are synonymous. T.Y. Tambovkina, I.D. Trofimova, O.V. Pustinina, Zh.S. Anikina prefer the term “learner self-regulation”, E.A. Tsyvkunova, T.K. Tsvetkova - “learner autonomy”, and for E.V. Apanovich and N.D. Galskova the concepts "independent" and "autonomous" are identical and interchangeable. The authors of this article share the point of view of those scholars [5;32], who believe that a learner autonomy cannot be equated to an independent learning activity. So, for example, E.N. Solovova does not deny the numerous common features of these terms, but differentiates them according to their purposefulness. The scientist says that the main difference can be considered that when working independently, students mainly determine the technology to perform a particular task (given by the teacher or the author of the textbook), while learner autonomy implies a choice of not only a strategy how to learn, but also the material to be studied to achieve the goal set by the learner [32].

The idea of K.E. Bezukladnikov is that the concept of "learner autonomy" is much broader than that of "independent learning activity", which necessitates its formation. Consequently, “autonomy arises at the moment when the student is aware of himself as a full-fledged subject of learning activity, ready to act actively, consciously and independently. Thus, autonomy cannot be equated with independent learning activity. Rather, it is the highest manifestation of creative independence” [5, p. 221].

After analyzing the definitions of learner autonomy proposed by Russian and Western scientists, we have found a great degree of similarity in their views. So for most researchers, learner autonomy is the ability to self-reflect, responsibility for the results of one’s learning activities, the ability to make independent decisions along with high motivation and learning in collaboration with other students and the teacher.

The points of view of Western and Russian scholars on the role of the teacher and the educational institution in the formation of students’ autonomy differ. Western researchers believe that a fully autonomous student is responsible for his/her own learning, which means that the teacher or the university is not involved. However, in our opinion, this approach cannot be applied to Russia, since it contradicts the mentality of the Russian people. In the process of forming learner autonomy, it is necessary to take into account that for centuries the subordination and authority of the teacher’s opinion have been laid and rooted in Russian educational system. Consequently, in our opinion, the process of forming learner autonomy of university students as members of learning activities should proceed with the participation of the teacher gradually and take into account the peculiarities of formal education. By formal education, we mean “an organization of educational process that meets five basic requirements: 1) in specialized institutions; 2) by trained personnel; 3) resulting in a generally recognized education certificate; 4) systematic; 5) characterized by the purposeful activity of the students ”[43, p.122]

On the basis of the ideas of Western and Russian specialists about learner autonomy, we define learner autonomy as an ability of an individual to consciously carry out his educational activities aimed at creating a personally significant educational product, self-reflex and adequately evaluate this product, accumulate positive experience,
interact constructively and creatively with the educational environment and members of educational activities, taking responsibility for the process and product of this activity.

Considering the question of the components of learner autonomy, it can be noted that in studies devoted to this problem, the following components were identified: autonomy components of younger schoolchildren (L.D. Thong); components of autonomous learning activities in mastering a foreign language (E.A. Nasonova, Zh.S. Anikina); components of student’s autonomy (G.I. Reznitskaya); parameters of the implementation of student autonomy in the educational process (E.V. Strelkova).

Taking into account the directions of learner autonomy formation [21], we have identified the following components in the structure of learner autonomy: motivational, personal and competence-based. The motivational component includes the motives of autonomous learning activities: the need for self-education with the help of electronic educational resources; the need to master the skills, abilities and ways of autonomous activity.

The personal component includes: adequate self-esteem; mental properties that are the basis of learning activities; qualities and habits aimed at improving the effectiveness of independent activities (hard work, time management, etc.), mental personality characteristics (memory, attention, etc.) necessary for the effective fulfillment of autonomous work.

The competence-based component depends on the specialization of students and includes professionally significant skills.

In our study, we considered vocationally-oriented language learning (VOLL), i.e. the training of would-be engineers, who receive an additional qualification “Interpreter in the field of professional communication”. With regard to these specialists, the competence-based component includes expertise, skills and abilities to set goals and independently find ways to achieve them, to plan and organize their autonomous work; to know the ways of working with information; to use e-learning resources for autonomous work; to speak a foreign language at least at level B1; to know techniques and methods of translation; to be able to switch between the source and target texts, to forecast, self-control, self-analyze and correct their activities.

In our study, we took into account the fact that learner autonomy has a multi-component structure, with four levels of formation of each autonomy component identified: A (creative) - high, B (productive) - above average, C (reproductive) - medium, D (factual) - low.

To organize the process of forming the autonomy of students, in our case - translators in the field of professional communication, the effective use of e-learning resources and the realization of the goals of electronic education, namely: the development of the student’s personality, implementation of the social procurement of modern society in the conditions of electronic communication development, globalization and mass communication; the intensification of all levels of the educational process [19, p. 25] it is necessary to create an electronic information educational environment (EIEE) at the university, which will help increase the efficiency of the educational process based on its individualization and intensification, aimed at developing each student’s ability of constant self-improvement; expanding opportunities for personal and professional growth; creating effective conditions for the development of students' motivation, formation of their values-based attitude to the subjects being studied and preparation for life in the conditions of the information society; fostering skills of productive self-organization of the educational process.

Under the electronic information and educational environment, we, following I.B. Gosudarev, understand the system of electronic educational resources providing conditions for access to educational content, as well as language and electronic information tools for access and management of these resources.
The initial conditions of EIEE are specified if: 1) educational content is available in the form of e-learning resources, and they are available in the environment of a certain electronic educational platform, 2) language means are determined that ensure communication in the environment and its development [13, p. 124].

Learning Management System (LMS) is an informational platform in the Internet, created to put online educational content and provide communication between the teacher and students, as well as between the students themselves [10].

Such platforms provide an opportunity to carry out the educational process, both in and outside the classroom. They allow you to automate various administrative tasks, such as administering users, organizing their interaction, providing learning content, organizing control of the learning process, reporting. To select an electronic platform, it is necessary to know their typology (closed, partially open, open), functionality, advantages and disadvantages of each type of platform, as well as be guided by the goals and objectives of the educational process, the level of skills and abilities of teachers and students to work with e-learning resources.

The Russian University of Peoples’ Friendship, as well as many leading universities in Russia and in the world, use the LMS MOODLE, which allows to take into account the individual style of each student, organize individual and group learning activities, apply various pedagogical approaches, with a wide range of tools for constructing a training course that includes not only standard modules, but also additional ones, with an unlimited number of installations and the number of users, it is distributed free of charge, etc.

3. Results

The authors developed a methodology to form the learner autonomy of would-be translators of vocationally-oriented texts based on the LMS MOODLE, based on axiological, personal, activity, competency-based and modular approaches, including the following steps: self-diagnostics, cognitive-creative and evaluative, incorporating the content of educational material (six professional modules divided into lexical, grammar and translation parts), consecutive work aimed at the formation and development of autonomous activity skills, realized through tests, questionnaires, polls and a set of exercises (language, pre-verbal, speech; training exercises and tests), teaching aids (teaching aids, LMS MOODLE).

A set of differentiated exercises, placed in the LMS MOODLE, is designed to teach grammar characteristic of science language; it involves a didactically organized structure of grammatical tasks, ranging from independent choice of the method of acquainting with grammatical material to be mastered, before it is learned through exercises aimed at repetition and correction of grammar skills, formed at the previous stage, organization of supporting training in order to prevent the loss of the learned material, the assimilation of new material through its repeated revision, expansion of the new material and its systematization, which combines ways of learning grammar “from particular to general”, “from general to particular”, providing students with a choice of methods and forms of autonomous work.

Of all available elements and resources of the LMS MOODLE, in our work the following were used:

- Elements: Poll, Test (for diagnostics), Task, Glossary, Test (types of questions: true / false, short answer, multiple choice, matching, with embedded answers, with a missing word, essay), Forum (for developing a system of exercises).

- Resources: Hyperlink, Book, Page, File (for presentation of the material).

In order to test the effectiveness of the proposed methodology, in 2018, on the basis of the Engineering Academy of Russian Peoples' Friendship University, an experimental training was conducted which included 78 second-year students of all engineering specialties who studied under the Translator in the Professional Communication program.
Before the experimental training, students were asked to answer the questions of the questionnaire, allowing assessing the formation of the motivational and personal components of learner autonomy, as well as be tested to determine the level of the competence-based component of autonomy.

The test, which includes 52 questions, is aimed at assessing the level of students’ knowledge of lexicis, including general scientific vocabulary, grammar, typical for science language, as well as translation skills after completing the basic foreign language course, implying proficiency in a foreign language at level B1.

At the stage of self-diagnostics, second-year students demonstrated the following levels of learner autonomy: A (27.06%), B (39.8%), C (23%), D (10.14%).

Thus, the diagnostics results allow us to draw the following conclusions: at the stage of self-diagnostics, most students have autonomous work skills formed at the productive and creative levels, but there are a number of students (10.14%) whose have skills are formed at the actual level.

According to the results obtained at the stage of self-diagnostics, students independently set goals and tasks for autonomous learning on the LMS MOODLE, make an individual work plan - chose 1, 2 or 3 modules for studying and mastering the material, and also determine the strategy of independent mastering a foreign language.

By strategy we understand the means that a user of the language uses to mobilize available resources, enhance skills and abilities in order to successfully accomplish a certain communicative task in the most complete and at the same time economical and accessible way according to the goal [6].

In the middle of the cognitive-creative stage, the students were to answer the questionnaire and be tested by means of the element Test, in which the system randomly selects 50 questions from the question bank on previously completed topics.

The intermediate results of the experimental training showed that 30.3% of students had learner autonomy formed at the creative level, 41.6% of students - at the productive level, 25% of respondents - at the reproductive level, and 3.1% of the participants - at the factual one, which indicates positive dynamics.

At the evaluation stage, at the end of the semester, formation of learner autonomy components was assessed with the help of the final testing (element Test), which includes 50 questions on vocabulary, grammar and translation skills with different weights from 0.05 points to 1 and questioning.

The results obtained during the final testing and questioning show that the level of learner autonomy of the vast majority of students is at the creative (48.7%) and productive (41.0%) levels, while no students demonstrated autonomous skills at the factual level.

The increase of the quantitative indicators of the proposed criteria for evaluating the individual results of students at each subsequent stage of experimental training allows us to conclude that the formation of skills of autonomous work were formed successfully and the proposed methodology is effective.

4. Conclusions

The experimental training which was conducted at RUDN University allows the authors to arrive at the conclusion that the proposed methodology is quite efficient and effective to build the learner autonomy in the electronic information educational environment of the institutes if higher learning and it can be successfully incorporated in training would-be translators of vocationally-oriented texts. The use of electronic educational platforms and e-learning resources in the process of forming learner autonomy allows to achieve higher results in a shorter span of time, increases students' motivation for learning, aims them at further self-improvement and professional growth throughout their lives.
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