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GENERATING FOREIGN LANGUAGE GRAMMATICAL COMPETENCE ON THE BASIS OF BLENDED LEARNING

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Abstract

The paper studies the opportunities of blended learning as applied to generating and developing foreign grammatical competence of university students majoring in Economics in SPbPU. The integration of conventional full-time classroom language training and e-learning results in such benefits as increased flexibility and mobility, implementation of individual approach in learning, improved quality of education and its wider accessibility, better academic achievement and motivation of students, etc. The purpose of the research was to find the best methods for designing effective grammar modules of online component of General Foreign Language course. In the course of the experiments, the emphasis was made on the popular LMS Moodle platform and its potential in university foreign language teaching/learning. Practical grammar skills and assessment procedures were of our particular interest since we aim at introducing and maintaining user-friendly, accessible and effective educational frameworks in SPbPU. The paper describes the principles of developing grammatical skills in blended learning environment, the content and structure of grammar modules in online component of the course. The results of pilot training under blended learning in Institute of Industrial Management, Economics and trade (SPbPU) are provided.

Keywords: Blended learning, foreign grammatical competence, e-learning, foreign language teaching, grammatical skills.

1. Introduction

The priority in higher education today is a transition to new teaching approach based on computing environment technologies. Modern educational concepts treat e-learning as integral part of the Russian higher educational system. Designing and adopting electronic frameworks in teaching/learning are urgent so that the Russian education should meet competitive pressures, teaching methods should change and students' academic records should increase. To meet the requirements of emerging smart-society and smart-economy, the next development stage for higher education will be smart-education with its wide access to worldwide content, increased flexibility, personalization and interactive methods (Glukhov & Vasetskaya, 2017).

The Federal law of 29.12.2012 N 273-FL (as amended on 06.03.2019) "The Education Act of the Russian Federation" (article 13, paragraph 3) states the importance to apply various classroom technologies such as e-learning. Modern researchers consider e-learning as being quite effective in university education. In Russia, this educational approach is under development, which provides further conditions for university teaching and learning processes to be optimized through in-depth study and adoption of cutting edge methods in educational technology.

There are many diverse options to introduce e-learning into university educational environment. Online-learning is based mostly on student's self-directed study of on-line training materials (Fomina, 2014). Blended learning is another way to apply informational communication technologies (ICT). Under blended learning the conventional forms of full-time learning, including lectures, seminars or lab practicals, are integrated with e-learning (Albiladi & Alshareef, 2019). Blended learning is a more preferable model for the Russian education market as it allows taking full range of advantages of both conventional and technological approaches avoiding their weaknesses (Bekisheva, 2016).

Blended learning guarantees a common comprehensive educational process characterized by students' cognitive activities partly controlled by a lecturer in class, with some assignments given and checked distantly via university online platforms, the emphasis being made on individual students' activities and a small group cooperation (Veledinskaya & Dorofeeva, 2014; Volosyuk & Kazakevich, 2015). Moreover, students' online-learning is closely directed, supervised and controlled by a language instructor, which means that a student never finds the goals and ways to achieve them misleading or unclear.

2. Problem Statement

Effective blended learning in universities is based on three factors:

- Institutional factor – when a university strategy is aimed at online-learning introduction, with all the legislative documentation provided;
- Managerial and technological factor - when a university has ICT tools and facilities as well as maintenance service to support and control blended learning procedures;
- Pedagogical factor – a full-range design of course programmes focused on blended learning; software design for electronic component of blended learning (Fomina, 2014).

Under the current trends in the Russian education, St Petersburg Peter the Great Polytechnic University (SPbPU) is now switching to combine conventional education models with mobile online

learning. The University Senate at SPbPU has developed and adopted a regulation "The Provision on Online Learning Adoption and Practice and Distant Learning Technologies in higher Educational Programmes' Implementation". This regulation complies with the Federal Law № 273-FL from 29.12.2012 "The Act on Education in the Russian Federation", as well as with orders and instructions by Ministry for Education of Russia, with other regulatory acts specifying and developing this issue. Online-learning is to be adopted by SPbPU in order to achieve such goals as broadening students' perspectives, the disabled and invalids in particular; implementation of individual approach in learning; increasing the quality of education; cost optimization in educational process implementation (Krasnov, Kalmykova, Abushova, & Krasnov, 2018).

Blended learning has been introduced in the Institute of Industrial Management, Economics and Trade (IIMET) since 2016. The pilot online course "General Foreign (English) Language. Basic course" was launched at IIMET of SPbPU in 2019, and a complete transition of foreign language teaching to a blended learning scheme is planned for the coming academic year of 2019-2020. The pilot course was developed in accordance with the SPbPU Provision on online-learning.

In SPbPU, we have applied the platform of Moodle (Modular Object Oriented Dynamic Learning Environment) as a working informational and educational platform. Currently, this platform is the most popular online learning management system (LMS) and the only free of charge one. Moodle is focused on interaction of two classroom players, i.e. a language instructor and a student. This is the key benefit of LMS Moodle in implementing distance learning courses and online support of full-time programmes (Kravchenko & Volzhenina, 2012). Such a system meets all the requirements of state-of-the-art distance learning courses. Its user-friendly interface makes the work of students and the faculty easier. Moodle sections (Forum, Ask the Curator) make provision for continuous interaction between classroom players. Educational process participants get a chance to exchange files thus widening their communication potential. Diverse course elements allow implementing an individual approach in teaching and learning process. Testing (an element "Quiz") is completely automated, which makes it possible to cut students' work check-up-time. The Moodle distance learning platform provides a possibility for designing a course so that it could meet the programme requirements and the particular student group needs. In addition, the system enables the faculty to apply fundamental methodical principles such as session interactivity, easy access, modularization, self-study, personal approach to learning, and continuous revision of study material.

Language teaching has been based on the blended learning approach in foreign universities for more than fifteen years. There have been designed 6 key models of blended learning in accordance with an ICT integration level, classroom and distance work balance, and the range of control testing: Face to Face Driver, Rotation, Flex, Online Lab, Self-blend, Online Drive (Bonk & Graham 2006; Mijares, 2012; Fandei 2011; Yanchenko, 2016). In the SPbPU Management and Economics Institute, the Rotation model was adopted as being the most relevant option, since it allows for classroom work and online sessions swapping according to a schedule prescribed by their instructor, while classroom clock hours vs online self-study time is dispensed on 50% to 50% ratio. A leading instructor or a lecturer is responsible for time distribution because first or second year students prove to be quite unprepared to meet university curriculum requirements and may need tutor's support and mentoring.

As far as the subject-specific component is concerned, blended learning implies designing instruction materials on the basis of chosen informational and educational platform. A foreign language

instructor/tutor can take all the advantages of the blended learning model in order to manage teaching/learning process more effectively. In the Institute of Industrial Management, Economics and Trade, a learning content has been developed to provide online distance back-up on General Foreign Language for the learning package of Longman Language Leader Intermediate required by the Institute curriculum. 36 academic hours (50%) of the 72-hour English course is allocated for Moodle activities in each semester. Such an online course matches both the logic and the structure of the learning package including 12 modules to cover particular vocabulary and grammar aspects. Each module is divided into 4 sections: Vocabulary, Grammar, Writing, and Listening. All module sections include interactive exercises in test-run mode when academic results are assessed automatically and sent to students. The number of tries to do each exercise is unlimited, so students can make as many attempts to achieve a desired result as possible.

Many authors exploring blended learning practices in university framework (Eryilmaz, 2015; Fomina, 2014; Yanchenko, 2016) point out the advantages of this approach such as:

- an increase in student motivation to learn a foreign language
- personal approach to learning
- clear understanding of a student's individual educational path and its result assessment
- a student's responsibility encouragement
- common interest in final results of all educational stakeholders
- ICT skills development.

Blended learning techniques make university study more flexible and mobile while students get access to learning materials at any moment and environment convenient to them, task completion time being unlimited. Under this approach self-study is to dominate students' performance, whereas the role of instructor decreases and classroom student speaking activity is given preference to (Burimskaya, 2016). Academic achievement of students studying a foreign language in blended learning mode improves substantially compared to traditional face-to-face model (Zhang & Zhu, 2018). Moreover, blended learning widens the accessibility of education for students with specific needs who have been traditionally excluded from educational process (Jones, Man, & Lau, 2010).

The chance to apply personal approach to learning is no doubt essential. First year students show very diverse foreign language skills at language lessons. With full-time programmes of relatively few academic hours and with large groups, a language instructor cannot give due attention to every student offering an assignment that meets his/her individual specific learning needs. However, Moodle platform enables university instructors and lecturers to design tasks which develop communicative competence of students at different learning levels, building up their individual study plan to master vocabulary and grammar.

Foreign language instructors often face a practical limitation when they are bound to work with the only learning pack prescribed in the university working programme. Blended learning is the approach that helps overcome this limitation and elaborate the very learning materials that a particular student or a group may require at a time. For example, the work with Language Leader learning pack has proved to be badly lacking grammar exercises to further develop various grammar structures, which the university instructors

particularly experienced at practical classroom. This forced them to use additional learning resources and student's books. Since the blended learning approach was adopted in the university, the faculty have got a chance to generate a range of exercises and tasks themselves and incorporate them as part into online course support. Interestingly, grammar exercises are based on the vocabulary of the particular module, which proves essential for students' foreign language competence because they are able to practice vocabulary skills while doing grammar exercises.

3. Research Questions

Against the background of the latest methodical concepts, for the recent 10-15 years dominated by competence approach, we must look into those foreign language teaching objectives that are deemed urgent in university environment, especially in a technical higher institution, in terms of communication competence development (Krupchenko & Kuznetzov, 2015). This sort of general professional competence is rather a complex combination of a range of more specific competences which enable university students to practice self-study via cognitive learning mechanisms. One of the most important among these narrower competences is the language or linguistic competence which in turn is largely dependent on the grammatical competence.

There is a necessity to clearly specify here that initially the grammatical competence was generally regarded (from the outset) as conceptional and practical knowledge of limited number of rules (or Chomsky principles) which help generate numberless grammatically correct sentences (Chomsky, 1965). Later on, some scholars addressed the grammar competence of students through the lens of cutting edge cognitive linguistic theories and computer semantic networks, comparing the process of written and oral speech reproduction by students in a foreign language with the computer programming process (Milrud, 2013). Hereinafter under the fundamental science line, the term definition of grammar competence was increasingly narrowed and spelled out in more detail. Thus, at the stage of foreign language competence generation, the foreign language teaching practical methodology views the grammar competence as comprising the following:

- ability to understand and convey necessary concepts, expressed in student's actual skill to construct a sentence according to actual grammar rules of the language;
- awareness of grammar rules which one follows to construct a logical coherent sentence;
- skills to use grammar structures and rules in various speech situations meeting communicative challenges within professional interaction (Izarenkov, 1990).

It is worth pointing out that grammar competence plays the priority role in terms of the wide-spread in foreign language learning intercultural approach, when the language is addressed to as both a means of communication and an instrument of scientific interaction within communication competence validation.

The English language is indeed a first rate preference in university curriculum owing to international economic integration and global Internet communication. Nevertheless, many analysts notice that the English skills level of applicants and students of bachelor and specialist degree programmes is not relevant for them to progress in their learning pursuit just because of inadequately shaped grammar competence at secondary school (Karpova, 2005).

Under present day technological advancement, university students worldwide face constant professional challenges in various fields which they have to monitor and adapt to immediately through reading, understanding and analyzing numerous information sources available. In order to succeed here their English language skills are bound to be practiced "until they become a second nature" to avoid 'blundering on' difficult formal grammar structures in academic style communication, and to be capable of catching on urgent scientific issues and the ways to tackle them. What is more important for the smart student today is foreign language fluency to report on his personal experience and research contribution into the given problem, while putting his ideas in a logically coherent, well-formed and understandable foreign language.

While teaching foreign languages at universities, the grammatical competence is shaped through several steps: observation over language phenomena with the goal to establish regular functional patterns (the step of reading and listening to authentic texts); generalizations of language evidence (comparing with similar cases in the mother tongue); discretionary assessment of a grammatical concept by a student, and, finally, grammar rule consolidation through regular meaningful speech acts in situations of intercultural communication (Glukhova, 2010).

Accordingly, the university foreign language course is to systemize evidence on generalized grammatical concepts, to revise and enhance morphological and syntactic usage in the English language derived from secondary school course, as well as consolidation of common conversational formulae and grammar patterns so that the latter could be easily reproduced by students in spontaneous speech. Today the baseline grammatical maturity can be viewed as satisfactory for the university level when students achieve B1-B2 level of grammatical competence in accordance with descriptors of The Common European Framework (2002) of reference for language learning, teaching and assessment, ensuring the ability to use correct standard grammar structures in most predictable speech situations.

4. Purpose of the Study

The purpose of the study was to research the opportunities of blended learning as applied to generating and developing foreign grammatical competence of university students majoring in Economics in SPbPU. We also aimed at finding the best methods for designing effective grammar modules of online component of General Foreign Language course. In the course of the experiments, the emphasis was made on the popular LMS Moodle platform and its potential in university foreign language teaching/learning. Practical grammar skills and assessment procedures were of our particular interest since we aim at introducing and maintaining user-friendly, accessible and effective educational frameworks in SPbPU.

5. Research Methods

The online course designed for the SPbPU IIMET provides for grammatical skills in a separate section of each module. Instructional material is selected in accordance with the grammar rules covered in the pack module, as well as with the students' language reference level and General Foreign Language course requirements.

Each grammar section opens with a video lesson ranging in time from 7 to 11 minutes depending on grammatical issue. A video lesson is designed as detailed explanation of the grammatical rules presented by a lecturer and a presentation of grammar patterns' use corresponding to the rule mentioned. The video lesson framework is advantageous due to the following factors:

- lecturer's work time economy;
- a wider audience coverage;
- convenience for students who can view a lesson many times whenever they might need.

For further consolidation practice students are offered some interactive tests. Tests and exercises are generally divided by foreign language teaching practitioners into two categories: preparatory (non-communicative warming up) and communicative ones. The former category comprises grammar and conventional speech exercises which Moodle tasks are focused on. The latter category of communicative exercises implies that students practice grammatical patterns in classroom speech simulation. As a result, students can learn basic practical grammar skills to manipulate grammatical models and patterns formed even before they attend classes. This enables the faculty to plan academic schedule in a more efficient way for students to develop speaking skills and master speech fluency, while the grammatical skills are practiced by students until they are automatic during their individual self-study.

In practicing Moodle testing assignments students achieve the following objectives:

- to motivate students to learn a given grammar rule
- to eliminate some linguistic and psychological difficulties
- to prepare students for emotional and logical interpretation of given grammatical material
- to introduce some grammatical structures
- to revise and consolidate vocabulary.

The Moodle platform offers students to fulfil assignments in the course element called "Quiz". This sort of element is the most convenient for students to train their grammatical skills. The course "Quiz"-element has the following advantages:

- automatic assessment by the system which saves time for a lecturer to cover more users;
- multiple task performance in order to thoroughly understand grammatical forms and patterns in use;
- immediate result is achieved since students are able to see and analyze their mistakes, go through the video lessons once again, consult some reference sources or ask a lecturer for advice on forums or through direct personal messages.

The LMS Moodle "Quiz" element allows the use of various question types, such as multiple choice, true/false, matching, short answer, drag and drop into text, embedded answers, select missing words. The assignments within each grammatical theme are structured according to the level of difficulty, starting from the easiest one; there are also activities of higher or lower difficulty to match foreign language competence levels of various study groups. For each exercise language instructors developed a bank of 50-60 questions.

The exercises use not more than 15-20 questions, which helps to avoid repeating the same questions when different learners do the quiz, make the learning process more varied and exciting, and use these questions for compiling the final test.

Control over generating grammatical competence on completing each module in on-line component of blended learning is conducted in the form of the final test. The test includes the tasks which were completed by students previously; however, the bank of questions enables teachers to vary the material and make the test less predictable. In blended learning mode the test is open to students only at a definite date and time, learners have only one attempt and limited time to complete it. Such conditions help students to focus their effort on the test and eliminate dishonesty. Generally, learners take responsible approach to the final test, practice and revise the material of the module, do the tasks repeatedly, which fosters generating stronger and more stable grammatical skills.

Another obvious advantage of blended learning is automatic students' assessment crucial for effective time and effort distribution of the faculty. For completing every assignment in LMS Moodle students are given their points automatically. The points are summed up after each module, and the language instructor can immediately see how successfully students are dealing with learning the material and acquiring language skills, which themes require some correction and revision, etc.

6. Findings

To check the efficiency of generating foreign language grammatical competence in blended learning the research of control and pilot groups was carried out in IIME of SPbPU in March, 2019. Within a month, 4 groups of the first year students were under the traditional classroom approach (78 students), while other 4 groups (81 students) studied in the blended learning environment. The groups were selected so that students should have the same language skills corresponding to B1- B2 Intermediate Reference Level. The course syllabus was based on the materials of "Advertising" module from Longman Language Leader. Intermediate. The grammar section of the module provides generating and developing the skills of using second conditional sentences and degrees of comparison in speech. The training of 4 control groups was given 12 hours of classroom work and some hours for doing homework. To teach this module, 4 pilot groups were given 6 hours of traditional classroom learning, 6 hours for working with SDO Moodle, and time for independent online work was unlimited.

The grammatical section of "Advertising" module based on the Moodle platform consisted of 2 video lessons to introduce themes "Second Conditional" and "Adjectives: Degrees of Comparison". To practice grammar skills students were offered to do 10 exercises on each theme. These were the exercises of the training type, for example, match the beginnings of the sentences with the endings, choose the correct grammar form to complete the sentence or the text, fill the gaps in the sentences or text on your own. All the tasks were specially developed on the basis of the module lexical material. After individual students' activities with grammatical material in LMS Moodle, students worked in pairs or in groups in class. They performed training communicative and communicative exercises to develop their grammatical competence (two exercises on each theme).

The materials of the specified learning package Longman Language Leader. Intermediate were used for teaching control groups. As the Student's book is not provided with sufficient number of training

exercises for grammar skills (only two tasks covering each theme), language instructors used additional manuals and Longman Language Leader Workbook.

After studying "Advertising" module, control and pilot groups were tested. 4 pilot groups of field of study "Economic security" (81 students) took the test on-line. 4 control groups of field of study "Economics" (78 students) did the test in the traditional paper form. The following requirements were established during the testing: students were given only one attempt to pass the test; the time of testing was limited to 45 minutes; students were not allowed to use any reference and training material.

As a result of testing the following data were obtained. In pilot groups taught in blended learning environment the average percentage of test implementation was 79.8%. In control groups with traditional classroom learning the average percentage of test implementation was 66.4%.

Table 1 shows the test results of pilot and control groups.

Table 01. Test results for pilot and control groups

The number of correct answers (%)	The data for pilot groups (number of students)	The data for control groups (number of students)
0-10%	0	0
10-20 %	0	0
20-30%	1	2
30-40%	1	1
40-50%	4	6
50-60%	3	12
60-70%	5	29
70-80%	15	9
80-90%	29	10
90-100%	23	9

The threshold for successful result was 60%. The test assessment scale was: 60-80 % of correct answers – satisfactory, 80-90% of correct answers – good; 90-100 % of correct answers – excellent.

- 6 students of pilot groups (7.4 %) and 7 students of control groups (8.9 %) failed the test, having received unsatisfactory grade.
- 20 students of pilot groups (24.6 %) and 38 students of control groups (48.7%) got a satisfactory grade.
- 29 students of pilot groups (35.8%) and 10 students of control groups (12.8 %) got a good grade.
- 23 students who studied in the blended learning environment (28.4%) and 9 students who were under the traditional classroom approach (11.5 %) got the highest score and an excellent mark.

Thus, comparing the number of failures in pilot and control groups, we can see that with blended learning mode there was a decrease in the number of students who did not acquire the necessary grammatical competence provided by the curriculum. As a result of pilot language training, the number of students who succeeded in learning the module and getting good and excellent marks increased almost three times.

Based on the results of experimental training, we can come to the conclusion that the blended learning approach for generating foreign language grammatical competence of students majoring in Economics in IIME of SPbPU has proved its effectiveness.

7. Conclusion

Blended learning can be considered preferred model of language teaching for generating foreign grammatical competence of students majoring in Economics, as it does not entirely substitute conventional teaching model and methods. Distance learning is integrated into traditional classroom training making the learning process flexible and mobile, giving students access to learning materials at any convenient time, focusing on students' self-study which is automatically controlled and checked. Thus, developing learners' grammatical skills with the help of language training exercises is conducted during the online stage of the teaching process, and students' speaking activity is placed at the center of classroom work.

Blended learning gives the opportunity to fully implement personal approach for generating foreign grammatical competence of various levels. This mode of teaching process allows designing a complex of exercises and assignments and integrating them into online component of the course aimed at students of different foreign language competence levels, helps to implement language competence approach for effective grammatical competence development. Applying a variety of LMS Moodle elements enables generating students' grammatical skills, providing a range of advantages to both students and the faculty. The main advantages for lectures are efficient time distribution, opportunity to design and combine grammar assignments in accordance with individual students' needs, automatic check-up. Students receive more flexibility and autonomy, the opportunity to plan their own individual study path.

In SPbPU we have conducted a pilot trial, where the first year students of 4 groups of IIME received foreign language training on the basis of blended learning. The experiment demonstrates the effectiveness of blended leaning for generating foreign language competence. The test results show a substantial increase in the number of students getting "good" and "excellent" grades, which also means a rise in students' motivation and interest.

Summing up, blended learning model is effective for generating foreign grammatical competence and enables adapting the teaching process to individual requirements of each student.

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