Abstract: in the article there is described the use of information and communication technologies (ICT) in the process of teaching English at the Faculty of Mathematics and Informatics (FMI) at Plovdiv University “Paisii Hilendarski”. ICT is used for grading, assigning project tasks and communicating with students. However, by using ICT, undergraduates learn not only a foreign language but also competencies useful for their future careers such as accessing information efficiently and effectively, evaluating information critically and competently and using information accurately and creatively. English language learning at FMI is assisted by a dedicated website, which contains information about the language classroom policy, English classes schedule, tasks and deadlines for project assignments and others. Communication between teachers and students is achieved through announcements, email and discussion forums as well as online debates and real-time chats. The need for intensification of the learning process is explained in the article and the meaning of the term is specified. There is an outline of the blended learning approach applied in the education of English at FMI in which the basic structure of the traditional course is retained and technology resources are used to supplement traditional teaching in the classroom. This approach makes the process of learning interactive and caters for students’ different needs and learning styles so students develop a greater interest in the subject matter of the course. The learning environment is more flexible and the teaching methods are responsive to the diverse needs of students so they become more motivated and active in class. Also, there is defined the use of tests in English for self-study, which are developed on the basis of every textbook unit studied in class, with the purpose of obtaining long-term knowledge and skills in the foreign language. The results of a survey conducted with students from FMI are analyzed regarding the use of ICT in the learning process.

Keywords: information and communication technologies (ICT), intensification, blended learning, self-study tests, interactivity

Introduction

Nowadays computers are so omnipresent in our lives that we cannot imagine our daily routine without them. They are a source of information and a major means of communication and entertainment, especially for young people. Students at the Faculty of Mathematics and Informatics (FMI) at Plovdiv University use computers not only for their hobbies and in their studies but also in their current jobs or as a preparation for their future careers in the ICT sector.

Information technologies are not only a subject area but they can also be used to enhance the learning process in other subjects studied at university. As well as this, they have a positive impact on student achievements in terms of their knowledge comprehension and practical skills for solving problems and making presentations. The educational appeal of ICT is not only in their novelty and attractiveness, but also in the potential chance for improving the effectiveness of teaching and learning. [7, 29]

Besides first-class computer skills, students at FMI also need to possess excellent language knowledge and fluent communication skills to make a career in the fields of technical innovation and economic development or in science where English is widely used.

The large amount of learning material that needs to be covered within a limited time in order to make students competitive employees brings forth a demand for an intensification of the learning process to achieve long-term memorization and provide practice in English to master the language.

Intensification of the learning process

The concept of intensification is closely linked to the use of information and communication technologies which offers new possibilities for the process of learning English including, among others, the following:

– Increasing the speed of the process by providing a greater amount of study material for a short time.

Here attention must be paid to the danger of excessive speeding up the process of learning. As the capacity for producing information is far greater than the human capacity to process it, it is more important to help students to work smarter, and not so much faster. Too much information is being created, stored and presented all the time so instead of trying to teach students all the language knowledge they might require in their future jobs, teachers should work to encourage students to become lifelong learners. Students need to develop the skills and understanding they would need to access information efficiently and effectively, evaluate relevant information critically and competently and use information accurately and creatively [5].
– Interactivity: Information technologies provide the opportunity for immediate feedback to both the teacher and the student;

When students sit for an online test upon submitting their work they can immediately see the results they have obtained as a percentage from all the correct answers or as points scored out of the maximum number. Thus, students can check whether they have made any mistakes and do extra work in order to correct them, and teachers can make the necessary corrections in their syllabi. As stated by Cheng [2], “a well-developed test can encourage students to apply their knowledge and skills in order to perform a certain language task and if students receive adequate feedback, this test can serve as a valuable learning tool”;

– Partial or full automation of the process of evaluating student projects and generating tests;

Parameterization of tests can be realized through the Distributed E-Testing Cluster DeTC, wherein on the basis of preset options a large number of different test items are generated randomly [6].

– Continuous monitoring of the process of learning a foreign language.

In the learning process a number of educational ICT tools can be used such as input (PC/laptop/tablet, application software, etc.), output (monitor, projector, whiteboard), or other (digital camera, digital recorder, etc.). Some of their advantages are that images, graphics and audio and video materials can be used for visualization and illustration of the learning content. Besides, by using ICT tools teachers can explain complex instructions, grammar rules, etc. and ensure students’ comprehension. In addition, instructors are able to create interactive exercises and make their lessons more interesting which would improve students’ attendance and motivation to study. However, technology should not just allow teachers and students to do things in a more engaging way but it should support them to do new things that would not be possible in traditional learning confined to paper books and notebooks. Teachers have to carefully select and structure what ICT is used for so that it becomes truly educational [4].

Warschauer [10] states that the opportunity for students to use technology in the foreign language classes highly increases their motivation to study. Also, ICT offers a possibility of exercising subtle, yet extensive control over students’ activities and an opportunity for rapid, honest and impartial feedback. There are, however, some dangers in the extensive use of ICT in the English courses. For example, it is essential to ensure the authenticity of self-study tasks. Thus, the use of technology has to be cautiously incorporated into the curriculum taking into account the technical availability and the students’ attitude just as it is in the blended-learning approach.

**Blended learning approach**

The use of ICT in the process of education at FMI enables the application of the blended learning approach. It combines face-to-face classroom methods with computer-mediated activities to form an integrated instructional approach. It makes the process of learning interactive and caters for students’ different needs and learning styles.

The purpose of incorporating face-to-face teaching in class with online instruction is to optimize the learning process as the number of in-class meetings is insufficient for students to master the language units that have been taught during the seminars and to practice the skills they would need in their future jobs.

In the English classes at FMI the chosen model of blended learning is the supplemental one which retains the basic structure of the traditional course and uses technology resources to supplement traditional seminars and textbooks.

The supplemental model of blended learning incorporates technology into the instructional approach of the course but does not alter its basic structure. Students at FMI are required to complete online readings and do various activities or prepare and deliver PowerPoint presentations and reports. However, there is no reduction in course meeting time and students are supposed to attend classes as per schedule – for four or five academic hours a week.

The blended learning approach combines online discussions with offline activities that students complete at their own pace, which proves beneficial for achieving the teachers’ learning goals. During the course of education using the blended learning approach students develop a greater interest in the subject matter of the course. The learning environment is more flexible and the teaching methods are responsive to the diverse needs of the students so they become more motivated and active in class.

**Language levels**

ICT is used in the classroom for various purposes from the first academic hour of studies at FMI. First, it is applied to determine the students’ expectations from their education in English by using needs analysis surveys and redistribution of students from administrative groups into language groups. In the administrative groups all the students from a given program, are assigned to groups 1, 2, 3, etc. depending on their faculty numbers. In contrast, language groups are formed on the basis of the students’ knowledge and skills in English and this redistribution is made by means of a placement test adminis-
tered online. The teachers at FMI use the multiple choice Quick Placement Test [8] which takes only 30 minutes and the scores are mapped against the Common European Framework of Reference for Languages (CEFR). In accordance with the CEFR, learners can be divided into three main categories: A – Basic User, B – Independent User, and C – Proficient User. These three divisions can be further subdivided into six levels as follows [3]:

A1 Breakthrough or beginner
A2 Waystage or elementary
B1 Threshold or intermediate
B2 Vantage or upper intermediate
C1 Effective Operational Proficiency or advanced
C2 Mastery or proficiency.

Conducted survey

Students’ language level appears to be directly related to their attitude towards the use of ICT in language classes and their motivation to learn English. According to an online survey with students from FMI concerning the use of ICT in their English classes, basic users of the foreign language are more reluctant to the use of ICT tools in the classroom and to being assigned individual project tasks probably because of lack of confidence in their own language abilities.

As previously mentioned, the lower levels show aptitude towards activities not connected with the use of ICT, and opt for textbook materials with emphasis on grammar and vocabulary. Students of levels A1 and A2 altogether would rather adhere to traditional teaching techniques such as completing grammar exercises and discussing and translating unfamiliar vocabulary. Very few of the students of these two proficiency levels chose the option of practicing their communications skills and self-study preparation. On the other hand, students with extensive language knowledge prefer English educational content focused on different forms of communication – oral presentations, discussions and case studies. Higher level students prove to be more motivated to practice their language skills in a number of classroom activities and are eager to demonstrate their progress in self-study tasks.

Figure 1 shows students’ preferences of classroom activities in answer to the survey question: What activities would you like to be involved in when studying English?

This can be explained with the fact that PPP assignments are usually on immediate and topical subjects and there is an abundance of related information online.

Figure 2

Presentations are interactive and involve computer literacy and a creative approach which students find motivating. IT or business case studies are also popular among lower-level students, while proficient students enjoy writing assignments and self-study tests. On the whole, the received answers to this question show that various activities and an interactive approach are needed to keep students motivated.
Self-study tests

One of the applications of ICT with the purpose of achieving an intensification of the learning process in blended learning is for self-study tests. These tests are based on the material covered in class and their objective is to give students an opportunity to consolidate their knowledge and review their own progress. Self-study tests are most effective when they comprise a comparatively small amount of learning material and they are conducted shortly after students have been exposed to it.

At FMI the self-study tests in English are non-standardized achievement tests. They are devised by the teachers on the basis of every textbook unit studied in class and students are expected to do each test at their own time and location within a week before their next in-class meeting.

In the test creation there are followed the principles and stages for test construction and evaluation as described by Alderson in [1]. The standards apply not only to testing instruments but also to test use, particular applications and administrative procedures.

Various types of test questions can be constructed in self-study tests for example multiple choice questions with one or more than one correct answers, matching tasks, short- or long-answer open questions, etc. Short-answer open questions require the addition of only a word or two so the questions can be scored automatically, while long-answer ones must be evaluated by the teacher after the test has been submitted. Students at FMI have excellent typing skills and they have experience working with computers for word processing and using spell- and grammar-checkers so they easily take advantage of the editing possibilities of the testing system when composing a long-answer text.

The biggest advantage of self-study tests is the immediate feedback that they provide and the possibilities to adjust the learning process accordingly. If an individual student has demonstrated gaps in his/her knowledge and skills, the teacher can include similar tasks in the following tests to assess their progress in the same area. In case a large group of test takers have manifested difficulties with the same language structures or communicative skills the teacher can choose to do additional activities and provide students with further instruction and related practice in class. The self-study tests taken during the trimesters increase the likelihood of achieving a high score on the final test which in turn improves the motivation of learners.

ICT is also used for grading, assigning project tasks and communicating with students. English language learning at FMI is assisted by a dedicated website [11], which contains information about the language classroom policy, English classes schedule, tasks and deadlines for self-study project assignments and others. Communication between teachers and students is achieved through announcements, email and discussion forums as well as online debates and real-time chats.

By using ICT students learn not only a foreign language but also competencies useful for their future careers. They define the tasks assigned to them and train their abilities to evaluate the nature and type of information they need to accomplish them. Also, students make use of information seeking strategies by evaluating information among potential sources. Next, students have to decide how to represent information as search terms and consider which is relevant and useful for their individual assignment. In addition, they need to consider the specific information to apply to the task and how the information fits together. Last but not least, students evaluate the quality of information in the final product and its effectiveness in the set task [9].

Conclusion

In conclusion it can be said that the use of ICT provides an opportunity for students to enrich their knowledge and practice the communication skills which are laid down in the curriculum. At the end of a course in English using ICT students will know how to learn and will have a critical mind that will adapt quickly in the age of change to use information effectively to accomplish a specific purpose.

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![Example of test results statistics according to the academic grading system in Bulgaria](image)

**Figure 3:** Example of test results statistics according to the academic grading system in Bulgaria
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Иванова В., Бойкова К.
Интенсификация учебного процесса при помощи информационных и коммуникационных технологий на занятиях английского языка

Аннотация: В статье описывается применение информационных и коммуникационных технологий (ИКТ) в процессе преподавания английского языка на Факультете математики и информатики (ФМИ) Пловдивского университета им. Пайсия Хилендарского. ИКТ используются для оценки обучаемых, определения задач и проектов и для коммуникации с ними. Посредством использования ИКТ, однако, студенты не только приобретают знания иностранного языка, но и накапливают ценные компетенции, полезные для их будущей карьеры. Таковыми являются, например, эффективное нахождение информации, ее критическое и компетентное отсеивание и творческое применение в нужный момент. Изучению английского языка на ФМИ помогает специализированный вебсайт, который содержит информацию о политике в аудитории, графики занятий по английскому языку, задачах и сроках самостоятельной работы, курсовых проектах и т.п. Коммуникация между обучаемыми и преподавателями осуществляется посредством сообщений, электронной почты и дискуссионных форумов, а также онлайн-дискуссий в реальное время и в чатах. В статье объясняется необходимость в интенсификации процесса обучения и уточняется значение термина. В ней описывается применение т.н. смешанного подхода при обучении английскому языку на ФМИ (blended learning), в котором сохраняется основная структура классических методов, а технологические ресурсы используются с целью дополнить традиционное обучение в аудитории. Этот подход делает процесс овладевания знаниями интерактивным и применимым для студентов, у которых разные потребности и стили овладения знаниями, причем с его помощью у студентов развивается больший интерес к предмету курса. Учебная среда более гибкая, и методы преподавания учитывают разнообразные потребности учащихся, в результате чего они становятся более мотивированными и активными на занятиях. В статье уделяется также внимание использованию текстов для самостоятельной работы на английском языке, разработанных на основе каждого урока в учебнике, по которому ведется занятия, с целью получения прочных знаний и умений на иностранном языке. Рассматриваются также результаты исследования, связанный с применением ИКТ в обучении английскому языку, которое проводилось со студентами ФМИ. Анализ этих результатов сконцентрирован на взаимосвязи между уровнем владения иностранным языком со стороны студента согласно Европейской языковой рамке и его интересом к применению ИКТ в аудитории.

Ключевые слова: информационные и коммуникационные технологии (ИКТ), интенсификация, смешанное обучение, тесты для самостоятельной подготовки, интерактивность.