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ICT CHALLENGES AND BENEFITS IN ESP TEACHING\LEARNING PROCESS

Abstract. Existing problems in ESP teaching and learning were considered. Integrating the use of new technologies into teaching to increase student interest and motivation was offered. The ways ICT can be used in the process of ESP teaching and learning by students and teachers were justified.

Keywords: *Deep Learning, Classification, Convolutional Neural Networks, PyTorch, Multitask learning, Space Filling Curve, Geo-location Estimation.*

Introduction. Designing and implementing IT in the teaching and learning process is one of the most demanding tasks in modern education. The competitive nature of the economy and changing technologies has had a remarkable impact on education. Consequently, English for Specific Purposes (ESP) has become a leading trend in foreign language teaching. Nowadays the knowledge of English related to specific disciplines is a must in most working sectors. So far there exist some problems in ESP teaching and learning [1]. Teaching materials are often unrelated to the student professional needs and to the business requirements. Teachers of English are given insufficient support in technical subjects they frequently know little about which is mostly frustrating and decreases teacher efficiency.

It is quite obvious that, especially for ESP, the teaching system should be able to take into account different levels of student competence. If students are given the option of working at the same level it may very well prove discouraging, being either too easy or too difficult for some students. For language practice, many teachers would agree that some graded progression is needed, even for rather advanced students. An essential feature of a learner-centered approach is that it supposes active participation of learners. The student should be given as much autonomy as possible. The only necessary precondition is high motivation and identification of needs which results in students' higher degree of maturity. The material should be adaptable to different levels, offering more in-depth study for advanced learners and more support facilities for the rest. It should also accommodate varied learning patterns. The teacher should provide a democratic environment, where the learner can choose what best fits his learning style and necessary guidance when problems arise. Using modern technologies in the educational process helps to address these controversial demands.

Main content of the work. Traditional work in the classroom often resulted in low student motivation. Therefore, the possibility to provide them with effective activities, materials and, most of all, a link with the world of work is vital. New technologies can support the ESP teaching and learning. Integrating the use of new technologies into teaching even when there are some limitations is one of the most relevant ways to increase student interest and motivation.

New technologies joined with a practical ESP approach prove to be a very successful blend [2, p.4]. It helps to achieve the following objectives: promote language learning through practical activities, strengthen the link between the university and the world of work, stimulate learners' participation and teamwork, integrate a practical approach into the use of new technologies, familiarize teachers of English with new technologies, provide methods and materials which match the needs of teachers and students.

Internet can support teachers in finding authentic materials. The variety of activities based on materials downloaded from the Internet can be developed. Finally, the chance to create students' own materials (presentations, reports etc.) results in rising initiative and motivation. The overall students' response to these is usually positive. They participate actively and with enthusiasm to activities that involve the use of new technologies. It has proved to be an opportunity to demonstrate their skills in a field they are familiar with. Students enjoy working in a team and doing activities outside the classroom. The outcome in terms of learning, motivation and self-esteem is remarkable [3]. In particular, these activities facilitate the development of oral skills. It is especially helpful when the report on the work carried out during the course is presented by students outside their classroom e.g., on social media.

An emerging teacher strategy for student professional development fostering is providing the real-life tasks. The tasks should be focused more on production than the use of knowledge. The balance shift facilitates knowledge construction. Such an environment is the one in which students are challenged without being frustrated, and in which they are focused on intentional learning. The environment creates engaging and content-relevant experiences by utilizing modern technologies and resources to support unique learning goals and knowledge construction. Learning environment as a place where learners may work together and support each other as they use a variety of tools and information resources in their pursuit of learning goals and problem-solving activities. It is the environment where student-oriented activities develop problem-solving, critical thinking and creative skills [4, p. 8]. Modern ESP learning environment is mostly technology-based one where students are engaged in deep and meaningful learning.

Conclusions. The key challenge facing ESP teachers is to refocus their teaching strategies, adopt new approaches, and to incorporate technologies effectively and efficiently into the language learning process. Mostly in the process of ESP teaching and learning students as well as teachers understand that new technologies can be used in a huge variety of ways. They become more familiar with ICT and start to use new technologies on a regular basis even without a support. The teacher needs to maximize the potential of digital learning by using it efficiently and creatively, and to provide models and opportunities for practical work. It results not only in providing better materials both for classroom and self-study, but also in increasing motivation and empowering students to continue learning the language independently.

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ІНФОРМАЦІЙНА ТЕХНОЛОГІЯ РОЗПІЗНАВАННЯ ШТРИХ-КОДА EAN-13 СТІЙКОГО ДО СПОТВОРЕНЬ

Анотація. Описано процес модернізації алгоритму шляхом підвищення ефективності про роботі розпізнавання штрих-кодів з наявними дефектами зображення.

Ключові слова*: штрих-код, EAN-13, ПЗ, бінаризація, декодування, розшифрування, Python, PyCharm.*

Вступ. Часто беручи до рук будь яку упаковку зубної пасти, шампуня, миючого засобу або прального порошку можна зустріти набір паралельно розташованих чорних ліній різної товщини та довжини. Це так званий штрих-код.

Штрих-код використовується в торгівлі, бібліотечному чи поштовому ділі, при обробці документів, на виробництві, в охоронних схемах і т.п.

На сьогоднішній день товарообіг відіграє велику роль у суспільству. З розвитком технологій його ніяк не можливо представити без організованості, яка допомагає структурувати великі об’єми товарів, невеликою кількістю апаратних засобів. Такі апаратні засоби повинні в собі містити: мінімальні вимоги до системи, для збереження і обробки інформації про товари та сканер штрих-кодів для перевірки товару на співпадіння.

В сучасному світі майже в кожної людини є мобільний телефон. Багато мобільних пристроїв забезпечені влаштованими фотокамерами. Фотокамера дає можливість сфотографувати штрих-код товару, для подальшої обробки. Вважається штрих-код може позволити: