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The Application of Digital Technologies in Teaching a Foreign Language in a Blended Learning Environment

Olena Ihnatova

Vinnitsia Mykhailo Kotsiubynskyi State Pedagogical University, Vinnitsia, Ukraine

Kateryna Poseletska

Vinnitsia Mykhailo Kotsiubynskyi State Pedagogical University, Vinnitsia, Ukraine

Dmytro Matiuk

Vinnitsia Mykhailo Kotsiubynskyi State Pedagogical University, Vinnitsia, Ukraine

Yana Hapchuk

Vinnitsia Mykhailo Kotsiubynskyi State Pedagogical University, Vinnitsia, Ukraine

Olena Borovska

Vinnitsia Mykhailo Kotsiubynskyi State Pedagogical University, Vinnitsia, Ukraine

Abstract---Currently, many different approaches to higher education are being discussed with the requirements of the educational authorities. The importance and necessity of meeting the educational needs of the population, ensuring access to quality education and integrating education and science and technology are usually emphasised. Purpose of the study: to identify the specific features of the use of electronic textbooks (interactive publications) for teaching a foreign language on different online platforms in a distance learning environment. A systematic review can be explained as a research method and process for identifying and critically evaluating relevant studies and for collecting and analysing data from identified studies. Educational materials need to be used on time and the spot. The Pinboard method can be used to increase the efficiency of the lesson. The word "pinboard" comes from the English language and means "pinboard backing", "pin board". The essence of this teaching method

is that discussion and learning dialogue are connected practically. Its strengths are its developmental and educational functions. Students will develop a culture of communication and discussion, the ability to express themselves not only orally, but also in writing, and the ability to think logically and systematically.

Keywords--distance learning, electronic textbooks, foreign language teaching, foreign language, interactive publications.

Introduction

Currently, many different approaches to higher education are being discussed, considering the demands of the Ukrainian Ministry of Education and Science and other education authorities. The importance and necessity of meeting the educational needs of the population, ensuring access to quality education and integrating education and science and technology are usually emphasised. Reforming the scientific field and stimulating innovation as crucial sources of sustainable economic growth is closely linked to the introduction of electronic learning technologies (also distance learning or distance education) into the educational process. Nowadays, the vast number of digital resources provides variety and usefulness to the learning process and adds a lot to the experience of learning and teaching. Technological capabilities affect education: with online courses, a professor or specialist can teach 60,000 students at a time, rather than 50 or 200 students in lectures by academics in one auditorium (Öztürk & Çakıroğlu, 2021).

The development of new information technologies and their introduction into the educational process of providing knowledge and developing competencies is an integral part of our times. Information and communication technologies are effective means, methods and techniques for solving major problems and attaining educational purposes. The study of foreign languages as part of the humanisation of higher education is essential, as it contributes to the development of a holistic view of the world, the nurturing of values, the building of communicative relations, relationships and mutual understanding between different people, nations and cultures. Modern information and communication technologies provide invaluable support to this process (Hosseini et al., 2020). Information technology is modifying the social and communication space and establishing new conditions for the development of heuristic dialogue. A special role is assigned to internet communication (web forum, audio/video conferences, chat, blog, email, internet file sharing, whiteboard, etc.) which enhances cognitive-communicative interaction. The Internet allows actual opportunities for modelling learning and information environments, with certain communication connections and relationships.

This specific nature of Internet communication can be implemented in the process of teaching foreign languages. Certainly, online communication cannot replace personal or face-to-face interactions, but at the same time, social media significantly complements the conventional educational process by transferring it to the Internet (Turan & Akdag-Cimen, 2020). Current students today are special

- they need dedicated teachers who are responsible for encouraging them to learn the language and develop a love of it. The use of digital resources helps students learn at university, stimulate their minds and allow them to learn through discovery. English teachers, working with today's students, admit that such students think and behave differently from previous generations. The digital generation is significant, and these young people are about 20 per cent of the world's population (Zheng et al., 2020). It is presumed that many of those who learn a second language belong to this group, and they require our close attention and understanding.

The digital generation has emerged in developed countries, and they are increasing worldwide. Though much attention is given in the academic literature of many sectors, this is not yet the case in studies of English / foreign language teaching. This lack of attention is regrettable, as the majority of the generation is now learning English (Rasheed et al., 2020). That is why teaching strategies should be designed to involve such students in the learning process. Electronic learning, the field of English language teaching, continues to be of interest to both practitioners and students involved in the area. The design of electronic learning implementation platforms is usually based on the context of foreign language teaching, using webinars, video clips, audio scripts, forums, diagrams, Skype, online testing, interactive textbooks and whiteboards.

The methods of electronic learning technologies are divided into two broad groups of ways of implementing them:

- synchronous learning tools: chat rooms, interactive whiteboards, videoconferences;
- asynchronous learning methods: email, blogs, forums, Twitter, video and audio podcasts, online testing.

The asynchronous nature of network communications allows users to participate in a dialogue, forum or diagram at any convenient time, regardless of time or location (Alobaid, 2020). There are numerous advantages and disadvantages in both synchronous and asynchronous electronic learning and data transfer instruments. Purpose of the study: to identify what are the synergies of using digital technologies to provide foreign language teaching on different online platforms in a blended learning environment

Materials and Methods

A systematic review can be explained as a research method and process for identifying and critically evaluating relevant studies and for collecting and analysing data from identified studies. The purpose of a systematic review is to identify all empirical data that must meet predetermined inclusion criteria to respond to a particular research question or hypothesis. The use of explicit and systematic methods in examining articles and all available evidence can minimise prejudice, thus ensuring reliable results on which to base conclusions and decisions.

Meta-analysis is a statistical method of combining the results of different studies for weighting and comparison, and for identifying patterns, differences or relationships that appear in the context of several studies on the same topic. In the meta-analytic approach, each primary study is abstracted and coded, and the results are subsequently converted into a general metric for calculating the overall effect size. Therefore, to be able to perform a meta-analysis, studies should have general statistical measures (effect size) to compare results. It is therefore complicated to meta-analyse studies applying different methodological approaches.

After conducting a literature review and selecting the final sample, it is essential to consider how the articles will be used for the relevant analysis. That is, once the final sample has been selected, standardised means of abstracting the relevant information for each article should be used. Extracted data can be in the form of descriptive information, such as authors, years of publication, topic or type of study, or in the form of effects and results. It can also be in the form of a conceptualisation of a particular idea or theoretical opinion. Notably that this should be done by the purpose and research question of the particular review, and the form can vary. At this stage, it is essential to consider training reviewers to avoid any differences in coding and abstraction (if more than one), and to closely monitor data abstraction during the review process to ensure quality and reliability. Frequently, if the purpose is to publish in an academic journal, this requires a detailed description of the process or a reliability assessment between reviewers. Occasionally this is easy to do with interesting information, such as the general population, effect size or sample size. However, it becomes more difficult when the topics of interest are literature, perspectives or a historical timeline. Occasionally this is easy to do with interesting information, such as the general population, effect size or sample size (Ginaya et al., 2018; Rayuwati, 2020).

Results and Discussion

In all higher education institutions in Europe, modern information technology, multimedia complexes, modern textbooks and manuals based on interactive methods, audio-visual methodological guides, required teaching guides, etc., interactive whiteboards are provided. It will increase interest in the science field, especially in ways of enhancing knowledge and skills in foreign languages. A special feature of educational technology is that it develops and implements the learning process and ensures that the learning objectives are attained. The purposes and objectives of education should be defined in such a way as to ensure that the learning objectives of society in general and the specific purposes and objectives of each stage are connected. If we divide the purpose into two groups, the first group is the purposes established for educational activities and the second group is the purposes for students. The process of accomplishing both of these objectives will ensure the effectiveness of education. The conventional lesson is a model of learning over some time, the learning process being more teacher-centred, consisting of the introduction, illumination, reinforcement and completion phases of the topic. In these cases, the effectiveness of the conventional lesson is much lower and students become passive participants in the learning process (Chang & Hwang, 2018).

Students will develop a culture of communication and discussion, the ability to express themselves not only orally, but also in writing, and the ability to think logically and systematically. In addition, we can use the following methods and techniques to improve the effectiveness of lessons: discussions: study groups are divided into two groups in the form of an exchange of views on a particular topic; museum: Designed to remove the barrier between teacher and student (Al-Samarraie et al., 2020). Students focus their knowledge on practical objectives. Conversation: These are dialogic teaching and learning methods using question and answer methods. Interviews can be individual or group. Teaching others: In this way, students teach each other information and data about the problem. Round table – students sit around a round table and write answers to each other's questions in an envelope. (As it relates to electronic textbooks) There is a growing demand in Ukraine today to learn and teach foreign languages. The implementation of these objectives by young people will accelerate society's integration into the global community and develop economic and cultural relations between countries.

The effectiveness of a foreign language course depends to a large extent on the educational technology used in the teaching process. The effective use of modern educational technologies in foreign language teaching increases students' interest in the language and ensures a high level of their knowledge, skills and abilities in the language. The form of modern educational technology is free education, non-conventional learning and activation, method research, problem-solving, independent creative free-thinking (Bubak et al., 2011; Matsuda & Gobel, 2004). The application of modern educational technologies in teaching foreign languages in the learning process includes: the use of distance learning with the help of computer technology (Internet) in teaching foreign languages; organisation of group and completed work of students and computer control (performance of test assignments by computer) Use of technical resources (audio and video files) Use of visual materials (thematic drawings, diagrams).

A contemporary lesson should be tense in an aggressive manner. The teacher must keep abreast of the lesson and the times and even be one step ahead of the times. If the teacher arranges the lesson in the manner of the times, in line with the demands of the period, the lesson will inevitably be modern and full of innovations. The use of computer technology, modern information technology in the learning process while implementing the above requirements provides an opportunity for students to consistently comprehensively assimilate programme materials and apply their knowledge in practice. The purpose of computer-based foreign language learning is to improve the quality and speed of learning by making efficient use of language resources (Zainuddin et al., 2019).

The following statements apply in educational practice:

- Foreign language teaching occurs at a teacher training university and prepares future foreign language teachers in secondary and high schools. The training is therefore designed to be student-centred.
- Platforms on which students work remotely: Moodle, Collaborator, Google Classroom, Goethe-Lernplattform, Zoom.

- Use digital tools such as: Quizzlet, Quzzis, Kahoot, Padlet, Bamboozle, Learningapps, Mind map, Prezi.
- The education is blended learning.

The learning process is a complex one. The use of educational technology to introduce new learning materials into the minds of students is efficient. Innovative technologies are one of the factors that make education more effective. Classes based on innovative educational technology nurture young people's willingness to express their attitudes to crucial life achievements and problems and allow them to reflect, justify their views. For example, it includes such methods as Brainstorming, Pinboard, Sinkveyn.

Due to these methods, the students' level of knowledge is improved. In the modern world of technology, one of the most crucial objectives is to educate students to be contemporary, well-educated, intelligent and talented. The advantages of modern, innovative educational technologies are the development of students' cognitive activities, their all-around education and an increased interest in the following topics. The introduction of advanced educational technologies in foreign language lessons, their introduction into the teaching process and the discovery of new teaching methods will establish a basis for meeting the requirements of national educational standards (Amiryousefi, 2019). Therefore, every teacher should use modern educational technologies to improve the quality of lessons, their development and to contribute to the purpose of elevating our educational system to the level of world-class education.

We live in the 21st century, the century of computerised and automated innovative technology, where everything is there. Learning a foreign language together is no exception. There are many different programmes for all grades and ages, especially for young students. In this research, we want to introduce various computer programmes designed to teach foreign languages, which are easy for students to learn. Teaching students is not easy and it is a great responsibility. There are things to keep in mind: students learn and remember faster than the older generation, the sooner they start learning a new language, the sooner they become fluent; the programme should also include entertaining and motivational topics, based on their age and level. In addition, if you want your children to have a better starting point for learning a foreign language, you will need to use the internet and new technology, as they are the children of a new age - the digital age (Dörnyei & Malderez, 1997; Chilingaryan & Zvereva, 2017). Thus they can be called "digital children". There are many applications designed particularly for children.

However, there is one thing that must be emphasised, if the programme is not designed properly, without the necessary methodological approach, and if the children are not learning the language correctly at first, the programme will not work in the children's favour. Therefore identifying and selecting the right electronic application for children should be careful. The Brain Gym application is a well-known learning method, especially for young students. Its essential idea is that brain and body movement are interlinked and work best when the brain is provided with certain movement activities. Children learn naturally by resting. Cards are a great way to teach and watch vocabulary, and there are so many

different games children can play on such cards as Memory, Whose Game, Mother or Happy Family. There are many other types of games you can play with your children which may help them learn a foreign language (Liaw, 1998; Lochtman, 2002; Widana et al., 2020). Such as: board games, word games, online games and etc.

A new modern approach to the use of new technological processes and new modern teaching methods in the learning process. The purpose of teaching foreign languages is not only to educate the students and develop certain speech skills but also to develop their abilities, development, increase their interest in the foreign language they are learning, use their internal capacity of memory and build their students' confidence in their abilities. The learning process is known to be complicated. Foreign language lessons include stages in the development of relevant speech skills and competencies through the presentation of new learning material, its practice through various exercises and application to various speech situations. Several interactive methods can be used to enhance student engagement in the classroom. The term interactive method comes from the English word "interactive", which means increasing the internal activity of students (Zou et al., 2020). There are several types of this method, some of which are now widely used interactive methods such as brainstorming, business games, chalkboard, cluster, cinquain, cube technology, role-playing games designed to increase student's engagement in the learning process.

Small groups of 3-5 people are efficient in interactive and group learning. To summarise, it can be called "innovative technology". Innovative technologies are methods of improving knowledge acquisition through the use of factors that enhance the efficiency of education, the design and implementation of different educational processes. Its primary purpose is to introduce innovation and change in the activities of teachers and students in an educational process that requires the use of interactive methods (Lee & Wallace, 2018). Interactive methods are based on the active, free and independent thinking of each student taking part in the learning process. By applying these methods, learning becomes a fun activity. The use of interactive methods develops the ability to work independently. More than a hundred types of interactive methods are known to exist today, most of which have been tested and have given good results. The essential requirements for the introduction of educational technology in the learning process is: the development of free communication for each student in the acquisition of knowledge in the learning process; the focus of the learning process is to increase the activity of the learner, and the use of methods and modern learning tools that increase activity in the classroom (Zou, 2020).

Classes based on educational technology nurture young people's willingness to express their views on important life achievements and issues and allow them to think, to justify their views. Educational technologies are innovations and developments in the educational process and in the activities of teachers and students that make use of primarily interactive methods. In interactive lessons, the teacher guides the students' activities towards the purpose of the lesson. A specific feature of these methods is that they are only implemented through the work of teachers and students together (Biletska et al., 2021; Konovalenko et al., 2021). The process of such educational cooperation has its specific features, such

as ensuring that the student is not indifferent during the lesson, independent thinking, involvement in creativity and research, continuity of interest in science in the learning process, the teacher and ensuring that the student cooperation is organised regularly. The basis of educational technology is the teacher and student working together from a set purpose to a guaranteed result.

Every lesson, topic and subject have its technology. Educational technology in learning is an integrated process in a precise sequence, based on the needs and interests of the learner, oriented towards a single purpose, thoroughly designed and guaranteed results. Educational technology is generally based on reproductive (copying) learning, in which the learning process focuses on the mastery of students' actions in typical situations (Matus, 2018). A distinguishing feature of educational technology is that it develops and implements the learning process and ensures that the learning objectives are attained. The technological approach is primarily expressed in a practical learning structure that allows for the implementation of the developed results, rather than in a description. The main way to understand educational technology – to concentrate on precisely defined purposes, to establish regular interactions with the student, to teach through the student's behaviour – is the philosophical basis of educational technology. Interaction should be the basis of educational technology and should completely cover the learning process.

In reproductive education in educational technology, the lesson is divided into specific sections, each of which shows the outcomes that students need to know. Modern educational technology cannot be seen as a separate branch of teaching science or as a system designed only to optimise educational practice. Educational technology represents an activity within a combination of theoretical and practical research in the field. Currently, with the development of science and technology, the limits of human activity are expanding exponentially and new technologies are being introduced (Cabi, 2018). Qualitative changes demonstrate that there are new technical, informational, audiovisual, audio-visual tools that require new methodologies and introduce a particular feature of it that becomes an integral part of the learning process. It's becoming a reality. Modern educational technology is essentially on an equal level with other technologies, as they, like others, have their field, methods and means. But educational technology, as a branch of knowledge related to the human mind, distinguishes itself from production and information technology in that it represents a complicated and incomprehensible technological process. Its specific feature is that it merges the components of education.

These methods enhance the interest of those who learn the language. Then the topics, methods and technologies change and become more complicated. In this case, the extensive use of games such as debates, interviews and competitions develop free, independent, logical thinking in the student and prepares them for oral communication and free participation in dialogues. It is an efficient way to develop students' thinking, reasoning and skills. Practical exercises, of course, are essential for the reliable and perfect learning of foreign languages. Notably, if this process is based on new, modern educational technologies, students' interest in language and teaching will increase. The teacher should test the students' knowledge using the "Brainstorming" method after the organisational part, before

proceeding to the topic. This method involves question and answer sessions to draw students' attention to the topic of the lesson, a process that can take 5-10 minutes, based on student engagement. By brainstorming lessons, students do their best to solve suggested problem situations, thinking of different solutions to the situation, which results in their interest in the lesson, activation. The answer given by each student is considered (Arnold, 2007; Rahimi & Hassani, 2012). These answers may not be correct or may be close to accurate.

The most significant thing is that every student is encouraged to defend their response. This method can also be used to repeat a previous topic. It teaches students how to think, how to be sensitive. This method requires not only the learner but also the teacher to be active. Use of the brainstorming method can be expected to have the following results: the student becomes more active in class; Each student attempts to express their opinion to demonstrate knowledge and skills acquired in the foreign language; Grammar rules of the foreign language studied are stated orally and applied in practice; The students become more interested in foreign languages (Lau et al., 2018; Tsou et al., 2006). When teaching a foreign language using the brainstorming method, students' speech is developed, topics are reinforced and, as a result, students can think fluently. As a result of experience and observations in continuing education, it is proposed for all disciplines to enhance the efficiency of foreign language teaching by: increasing interest in foreign language teaching from childhood, teaching, ensuring continuity in continuing education; strict adherence to a logical connection between the use of modern information and educational technologies in teaching; extensive use of movement games in practical lessons; to reach each teacher to establish their methodology and use it in the teaching process. The teacher should explicitly define education and upbringing by the order of the state educational standard, and at the same time implement the didactic objective with educational mastery (Lin & Hwang, 2018).

It requires a connection between disciplines based on new and modern educational technologies (Chuang et al., 2018). It is also essential to manage students' activities properly, use time efficiently, guide students to use activities in and out of the classroom, allow them to develop their free and creative thinking skills, and learn foreign languages with enthusiasm - a required factor to ensure learning and their activities (Shih & Huang, 2020). Student engagement concerns several issues, both creativity and independent thinking. The quality and efficiency of reading will be positive if the following activities are implemented in the new educational technology: assigning homework and selecting topics that students are interested in and like; discussing task materials with the objective, completing and reviewing strengths and weaknesses; establishing student responsibility and accountability; Connecting knowledge with practical work, teaching creative activities; establishing a sense of national pride and friendship; developing computer literacy; extensive use of handouts, visual materials, modern methods and techniques in foreign language lessons. The more educational technology is implemented in the classroom, the better the quality of teaching will be (Leatherman & Cleveland, 2020).

In addition, one of the most interesting and motivating ways to learn a foreign language is through a song, in which the reader can learn new words and improve

their pronunciation. Songs with movement are particularly useful for learners as they can join in even online, and also if they cannot yet sing the song. The best way to demonstrate the meaning of words in a song is through actions and emotions. There are many cheerful programmes with songs about a variety of animals, in which children can not only look at coloured pictures but also sing with various sounds and animals. In addition, the thoroughly arranged pictures allow the student not only to learn the names of the various animals but also to pay attention to the beautiful world of animals and all that it offers (Wang, 2019). After the student has looked at the animal lanterns, fun and entertaining games await them to test how well the topic of the lesson is understood. Regardless of the number of correct answers, the player finds the stars and the young talents are rewarded with a round of applause and balloons! In the application, animals can be divided into four groups: "domestic animals", "forest animals", "insects", and "underwater animals" (animals found in Asia, Africa, the Arctic and Antarctica). The 3D full-size beautiful pictures look like real animals, which help young children easily remember their names and features (they look like in real life).

The game principle is quite simple: select a category, and the child looks at real photographs, pictures, animals in that category, what they are called and what sounds they make. In addition, your child will always have the opportunity to examine their knowledge with a fun checking system that allows them to play, learn and reinforce what they have learned while reading. Plus, the reward at the end with the correct answers will be a great encouragement. The child does not even need to know how to read with this application. Its simple interface and voice call allow even the youngest child to play and learn the names of the animals themselves. After the game, visit the zoo or pet shop - you'll be delighted as they exchange their new knowledge about all the animals they have seen. Experience demonstrates that for the majority of children, learning colourful, vivid images is a favourite learning time, and for them playing this game often enhances their knowledge. According to researchers (Liu et al., 2019), as few as 5-10 minutes of physical activity per day stimulates the development of various parts of the brain. It allows for the development of a photographic memory, which means that the child can develop their knowledge faster than their peers and be open to a broader worldview. This type of programme is also appropriate for older pupils in primary schools. The reason is that the more the game is played, the more challenging it becomes. This learning game will be helpful to them as well. In short, learning a foreign language through computer programmes can be more efficient and stimulating. It has been confirmed that playing these types of games with flashcards helps students learn foreign languages rapidly. They can develop skills in reading, speaking, writing and listening only while playing (Ng, 2018). In addition, they are able to impress their teachers and friends with their results.

Conclusion

Features of electronic textbooks (interactive editions) for teaching a foreign language on various online platforms in a distance learning environment are a set of texts complementing the content of the textbook. A chrestomathy may include documents, works of art and fragments of them. Methodological guidelines explaining the features of the texts included in the chrestomathy are essential for

the reader. These guidelines provide a connection between the text and the learning material and guide students in preparing for the practical. An electronic link allows the user to obtain the necessary information quickly and in a compact form at the right time. Generally, electronic links contain a list of terms, and each element in the list is hyperlinked, i.e. its activation leads to a hyperlink providing the meaning, translation or commentary of the term.

The first problem is searching for information. The following problem is to identify the relevance of the resources identified for educational purposes. The great variety of information available on the Internet complicates the choice of the software and hardware required to process it. There are many formats for the representation of text, graphics, audio and video information. Here are a few ways to solve these problems. It is also essential to identify the nature of the information, which varies in structure, type of presentation, purpose and form of presentation. In practice, it is advisable to use several search systems, as databases of these search systems vary from one to the other. Specific historical catalogues are available as part of a search, information or research resource, or as a self-standing resource. Compared to search engines, catalogues are more likely to meet users' expectations, as searches are performed within materials on a pre-selected topic. The role of basic multimedia devices in the teaching of foreign languages is significant. In implementing these processes, teaching materials and audio-visual materials further enhance the activation of the learning process.

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