

E-LEARNING ENVIRONMENT

Стаття присвячена розгляду теоретичних та практичних питань використання мультимедійних технологій та технічних засобів навчання іноземній мові. Здійснюється аналіз переваг та недоліків цих технологій та засобів у середовищі електронного навчання.

Ключові слова: електронне навчання, системи контролю навчання, практична робота навчальних елементів, педагогічні підходи реального часу, освітня теорія.

Статья посвящена рассмотрению теоретических и практических вопросов, касающихся применения мультимедийных технологий и технических средств обучения иностранному языку. Проводится анализ преимуществ и недостатков этих технологий и средств в среде электронного обучения.

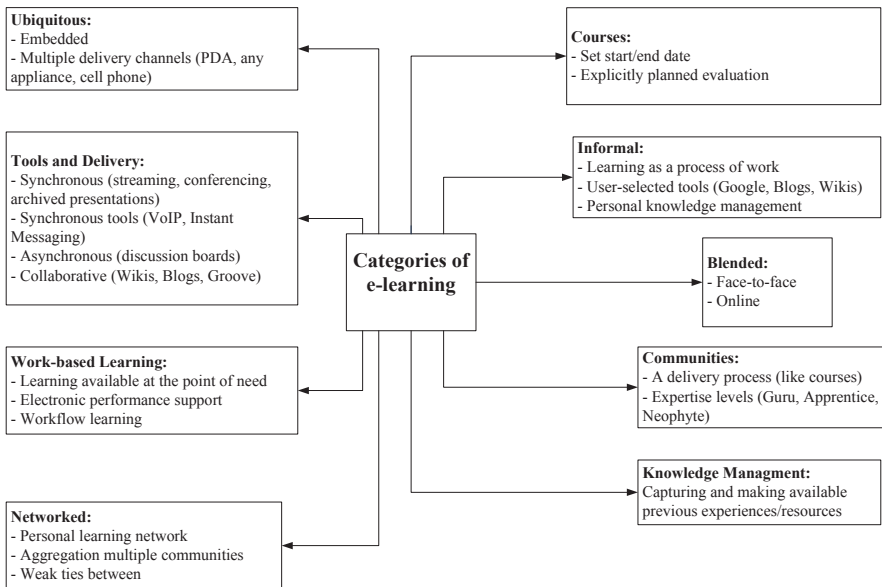
Ключевые слова: электронное обучение, системы контроля обучения, практическая разработка учебных элементов, педагогические подходы реального времени, теория обучения.

The article deals with some theoretical and practical questions of using multimedia technologies and special equipment for foreign language teaching. It contains the analysis of advantages and disadvantages of the technologies and means in electronic learning environment.

Key words: E-learning, Learning Management Systems, learning design, online pedagogy, educational theory.

New technologies rather than educational principles and philosophies have tended to dictate the shape of development in the world of e-learning. Giving educators an active and determining rather than a passive role in the development of learning systems is vital if e-learning is to realise its transformative potential in education in the 21st century. Many of the currently available learning technologies and systems, generally devised by technicians rather than educators, have offered limited room for creative or effective teaching [1: 17]. The limitations of these systems – their time consuming nature and their failure to adapt the technology to take account of educational contexts – need to be understood, acknowledged and overcome. Educators have long been at the mercy of the constraints of learning technologies and systems. In many cases the authority of the educator has been displaced by the corporate organisations that develop the commercial products used by educators to teach their students. Technological and marketplace concerns are driving e-learning, while educators remain in a subordinate position, adapting to the structures they are presented with. These structures tend to invite and accommodate a narrow and restrictive view of education which leads to pedagogically weak designs for learning. This upside-down order must be righted: educators need to play a more active, determining role in the development of the next generation of learning technologies to ensure that a richer learning environment for all students is at the top of e-learning agendas [3: 26]. E-learning has many different faces. It is useful to differentiate between e-learning which is

primarily driven by delivery imperatives and e-learning for learning, although both are inter-related. From a delivery perspective e-learning can be thought of as a continuum ranging from using technology in a classroom with a teacher, to learning in a virtual classroom where there is no face-to-face contact between student and teacher, as in distance learning. Creating learning experiences for students along this continuum involves using technologies of various kinds and in various ways [4: 18]. The nature of the delivery is an important factor to the teacher when selecting appropriate pedagogies and teaching strategies. The teaching strategies required in a classroom where students are working with technology is different in kind from the monitoring and behind the scenes support required of a teacher when students are independently carrying out a task at a distance, over a period of time, on a discussion board or in a chat room. From a learning perspective the methods and strategies employed to support learning will vary according to specific aims and outcomes. Disciplinary differences underpinned by different philosophical and epistemological foundations also influence pedagogical approaches and thus the nature and function of the e-learning technologies employed to support teaching and learning. While teaching strategies and methods may differ according to the philosophical underpinnings, the desired learning outcomes and the mode of delivery, a widely accepted approach to learning suggests several learning principles which could be considered common to most learning theories and teaching contexts: drawing on prior learning, building links between new knowledge and old, providing students with a variety of different kinds of learning experiences, and providing opportunities for engagement and interactivity (see picture 1).



Picture 1. Categories of e-learning

Current learning management systems such as Blackboard and WebCT have been pivotal to the uptake of e-learning in the higher education sector in the past decade largely because of their capacity for online delivery. These, and other similar systems, when used creatively, are able to provide students with quite varied learning experiences, particularly in relation to the sequencing of content based, self-paced learning experiences. But more often than not, teaching within these systems can be like attempting to teach in a straitjacket. Learning environments are not tailored to meet the specific needs of an institution and require costly and time consuming adaptation to make them suitable. The availability of learning objects and the recent emergence of social software in the form of group work tools, Wikis and blogs provide a much needed addition to the armoury of technologies available to teachers offering more dynamic approaches to one-to-many (blogs) and many-to-many (Wikis) modes of communication. However, in practice, because they can be technically challenging to incorporate into existing learning management systems they are more likely to cater for the delivery of independent one-off activities rather than being seamlessly incorporated into a comprehensive electronic learning sequence that builds towards the achievement of particular learning outcomes. A greater focus on the learning, rather than delivery, aspects of e-learning is called for in the next generation of learning technologies and learning management systems. As educators work with developers it would be helpful if they were able to theorise the kinds of electronic learning systems they need to enable the provision of learning experiences for students that are comprehensive, cumulative and seamless and at the same time extend beyond the narrow transmissive models of learning to embrace interpretivist and critical models which value the learner as a co-contributor, not merely as an acquirer of knowledge [7: 52]. An attempt to suggest how such a theory might have application where learning principles loosely based on a constructivist epistemology are presented in relation to their implications for learning systems. There are many contextual factors that characterise the different educational sectors and their cultures, and these are likely to determine teachers' willingness to embrace e-learning. Nevertheless, one commonality across all educational establishments is that if the development of new e-learning resources or the customisation of existing ones for integration into lessons is too time consuming and requires a high level of technical expertise then many teachers are likely to reject the use of e-learning in favour of traditional approaches thus limiting the range of learning options for students. Many of the expressed concerns come down to the time consuming nature of learning and teaching online using current systems [6: 38]. It is clear that students lose motivation when they are frustrated by the difficulties of some multimedia systems such as being repeatedly required to navigate in and out of different software using different passwords, difficulties with downloading material, and the awkwardness of using a system which is designed to accommodate a one-to-all mode (i.e., individuals interacting with a class as a whole) rather than more collaborative approaches where small groups interact independently, with each other, and with the whole class [2: 35]. The range of tools employed in many of the currently available systems for displaying and managing content, communicating, providing feedback and monitoring students is fairly standard - usually encompassing content modules with predefined navigation, search and compile functions, email, discussion forums, chat, student homepages, quiz tools, tracking of student access and a marking management system. The creative ways in which these tools can be combined and used, of course, determines what the teacher is able to do and the kind of learning experiences that can be provided for students individually and as group learners. But

the systems themselves can be technologically ‘clunky’ and tend to promote information that is centralised and accessed in relatively static. While the use of these tools can allow for synchronous and asynchronous exchanges, too often the tools are placed as standalone elements in a course with little or no link to other learning activities - there is no concept of a coherent sequence of activities. Determined teachers can approximate a sequence of activities in these systems with instructions about what to do next embedded in each tool, but this process is often awkward for teachers and learners, and does not provide a basis for easy re-use and adaptation of the sequence in different contexts. However, designers of learning systems have made little provision for creating sequences of learning activities that involve groups of e-learners interacting within a collaborative environment using both text and audio-visual options [5: 21]. This, of course has important pedagogical consequences by limiting what teachers can organise for students and how students engage in the learning process. There are two crucial concerns for the designers of new systems - standardisation and the ability of e-learning systems and products to work seamlessly with each other. When constructing new systems, analysing the needs of people requires an understanding of who the people are that need to be considered, and from what perspectives, and in what relationships. The establishment of design parameters for materials requires an understanding of the nature of the materials, how they will be used by teachers and students, and the issues that will enable their reuse in different contexts. The learning activities that teachers provide for their students will vary across sectors and in accord with different philosophical and epistemological perspectives [8: 31]. Nevertheless, learning principles is a basis for developing experiences and activities that are pedagogically neutral and thus inclusive of a range of perspectives. The implications for learning systems that have been identified above are just some of the design parameters for consideration in future technologies and systems. Teachers need to experience what technology can do for their students, and be given exposure to the latest software tools to explore ways of improving learning.

LITERATURE

1. Adams S. Selected styles in web-based educational research. Hershey, PA: Idea Group Publishing, 2009. – 234 p.
2. Baddeley A. Recent advances in learning and motivation. New York: Academic Press, 2008. – 72 p.
3. Borich D. Educational psychology: A contemporary approach. New York: Harper Collins Publishers, 2009. – 127 p.
4. Clark R.E. Learning from media: Arguments, analysis, and evidence. Greenwich CT: Information Age Publishing Inc., 2008. – 158 p.
5. Clark R.E. The main principles of multimedia learning. Cambridge: Cambridge University Press, 2009. – 92 p.
6. Hannafin M.J. The design of learning environments. Saddle River, NJ: Merrill/Prentice Hall, 2008. – 113 p.
7. Mayer R.E. Multimedia learning environment. New York: Cambridge University Press, 2010. – 175 p.
8. Ragsdale R.G. Permissible computing in education: Values, assumptions and needs. New York: Praeger Books, 2007. – 94 p.