KNOWLEDGE BASE AND E-LEARNING IN THE FIELD OF EDUCATION

Maja Stanojević Gocić
College of Applied Professional Studies, Vranje, Serbia majastanojevic30@gmail.com
Goran Petković
College of Applied Professional Studies, Vranje, Serbia goranpetko@yahoo.com

Abstract: Education and training are a prerequisite for a fully functioning "knowledge triangle" whose elements are education, research and innovation. One of the priorities is to find a way to mainstream e-learning and maximize its impact in the education as one of the elements of the knowledge triangle. Since more and more educational institutions have invested a huge amount of resources to implement their various e-learning platforms or environments, people are interested in Internet based e-learning. This paper aims to present the importance of knowledge base and e-learning in the field of education and training in academic and non-academic sector. The opportunities for their implementation in English for Specific Purposes (ESP) instruction that takes place at College of Applied Vocational Studies in Vranje (Serbia) are explored as a practical implication of the paper. The research shows that they use insufficiently e-learning, m-learning and online learning as methodological tools and means for contemporary pedagogy and modern educational system.
Keywords: knowledge, education, training, e-learning, ESP

1. INTRODUCTION

Knowledge and learning are seen as key drivers of social and economic change in Europe and in the whole global world (Kuhn and Remoe, 2005). Urgent questions are how education research should be driven globally, regionally, nationally, and locally, what scenarios are emerging from changing formations and practices of education research and how policy-makers and practitioners will be as users of new knowledge and partners in knowledge creation and management.

Nowadays, we need new policies that will expand existing knowledge base. Education and training are a prerequisite for a fully functioning "knowledge triangle" whose elements are education – research – innovation. This knowledge triangle has a critical impact on economic and social outcomes. Ineffective, misdirected or wasteful education policies incur substantial financial and human costs.

One of the priorities is to find a way to mainstream e-learning and maximize its impact in the education as one of the elements of the knowledge triangle. E-learning tools are available, but the problem is that students and faculties use them insufficiently, often because of ignorance. Indeed, practical and experimental knowledge of e-learning is too often scattered within and across institutions, so that even successful practices and interesting experiences have limited impact and visibility. Infrastructure and funding are among key barriers, but skepticism about the pedagogic value of e-learning and staff development are probably the most challenging issues. Another challenge is persuading current faculty members to use and develop e-learning. The general concept of "staff development" is widely seen as key to sustainable e-learning in tertiary level of education.

Building a community of e-learning teachers within and across institutions and building knowledge management processes related to e-learning are essential for further development of e-learning. Collaboration is a basic characteristic of e-learning. Collaboration could help institutions to share knowledge and good practices, as well as achieve benefits, such as new technologies and education quality improvement. There are institutions already involved in partnerships covering activities such as e-learning infrastructure, learning management systems, creating e-learning material, developing joint programmes of research collaboration, sharing best practices, and sharing costs of hardware and software.

In this respect, it is important to accommodate students with little prior experience by offering help. This could be in the form of a personal, face to face, session teaching students how to access and use e-learning courses and other IT resources, and could be supplemented with additional help such as some additional learning material as an electronic course material, providing students with direction and advice (O'Neill et al., 2004).

In order to get information on resources students of ESP use to improve their language skills, the research was conducted among students of College of Applied Professional Studies in Vranje, Serbia. They reported on their knowledge of language skills and means they used in learning ESP.

2. KNOWLEDGE MANAGEMENT AND CONTENT MANAGEMENT

Collective intelligence of one organization is a special type of resources that requires a specific management mode (Mack et al., 2001; Laugero and Globe, 2002; Wickramasinghe and Von Lubitz, 2007). Knowledge management is always related to the management of various types of electronic and physical content or content management. For this purpose, today web portals for specialized purposes or already made content management systems known as CMSs (Content Management Systems) are utilized.

Knowledge management includes:
• how knowledge (oral or written) affects business performance,
• how to use knowledge to improve business performance,
• how to measure the impact of different practices for managing knowledge on business performance.

Knowledge management is closely related to business results. It is not, and should not be treated as a separate discipline. On the other hand, content management involves several tactical technical things (tools, service, etc.) that influence the effectiveness of knowledge management. The latest technologies, including knowledge portal as a software system that has one point of access and provides easy and quick access to information, support the formation of knowledge sharing between workers, as well as wider community of colleagues.

3. ICT and e-learning

In the Internet and global networking era, it is impossible to imagine future learning environments that are not supported by Information and Communication Technologies (ICT). ICT has an important role in changing and modernising educational systems and ways of learning.

Because of global application of ICT, there is no single concept of learning by virtue of ICT. Many different types can be envisaged: computer assisted learning, web-learning, computer-classes, online training, distance education, e-learning, virtual learning, digital training, blended learning, etc. Some organisations already have a set of e-learning development tools. Others will have to evaluate the numerous options available and choose one that best fits their organisation, both in terms of staff skill levels and ICT capabilities and requirements.

New e-learning systems implementation can be successful only with the right ICT components, such as:

- a media-rich ready network,
- live content authoring system, broadcast video and video on demand e-learning solutions,
- virtual classroom technologies including software for graphic and slide presentations, adequate new resources and properly provisioned and configured network infrastructure components,
- Learning Management System (LMS) to manage, track, delivery, report on, and serve up the e-learning offerings (both classroom and web-based),
- content authoring tools and services used within an e-learning platform.

There have been a plenty of LMS, such as Absorb, Schoology, Litmos, Atrixware, Moodle, D2L, Edmodo, Grovo, Canvas, SmarterU which have enabled many universities, organizations, and businesses to develop, assign, and track online learning. However, it is difficult to choose an LMS within hundreds of vendors. On the other hand, massive open online courses (MOOCs) have attracted pupils and students to use them. Some of characteristics that should be taken into account before choosing the right LMS can be bundled course content, instructor-led training support, Google Apps integration, developer API available, mobile access, etc.

E-learning has another aspect, known as Internet-based e-learning. It has become one of most popular ways for people to acquire their expected knowledge. Today, more and more educational institutions have invested a huge amount of resources to implement their various e-learning platforms or environments, among them Internet-based platforms. This is one of the reasons why people are interested in Internet based e-learning.

The Internet, as new multimedia classroom, can give us various ways for e-learning. Some of the aspects of Internet based e-learning are:

- Wikis. The features of wikis are:
    - hypertextual structure,
    - social authoring - collaborative production,
    - process log in “history”,
    - dynamic document - always under construction,
- Blogs. As the wiki is a form of deploying knowledge, a blog is a way of distributing news. Some of the key features are:
    - there are one or several authors that produce entries,
    - visitors can add comments,
    - new entries and comments do not substitute older ones,
    - it is possible to subscribe in order to receive news via email or through RSS readers,
    - entries usually include the source of information, thus validating it.
- Online Repositories. There are several sites that offer service of sharing documents and other learning material. Teachers and students are used to accessing multimedia presentation, written documents and images, for example.

- On-line multimedia. Some e-learning institutions have included online video as a resource on their websites.
- Social networks and group work spaces.

4. APPLICATION OF E-LEARNING IN LEARNING AND TEACHING OF ESP

Applying e-learning to English for Specific Purposes (ESP) courses is a way to improve traditional education, accompany it with e-learning and mobile learning options and to provide long-distance students possibility to acquire language skills outside classroom environment. Mobile learning (M-learning) means learning across multiple contexts, social and content interactions, using personal electronic devices. If mobile learning is combined with traditional instruction, a programme of blended learning can be organized. Blended courses (also known as hybrid or mixed-mode courses) are classes where some traditional face-to-face instruction is replaced by web-based online learning. In general, the reason for integrating e-learning into language learning process lies into maintaining the same level of language skills. Moodle, for example, can be used as a complement to teaching face–to-face practices such as to teach technical English or English in different engineering fields (e.g., computing, land-surveying engineering). Moodle is also a useful tool which includes collaborative learning through the integration of interactive tools, such as chats and forum that can enhance communication among students. These types of teaching and learning English can help students to better understand course content and improve English proficiency.

The research was conducted among students of College of Applied Professional Studies in Vranje, Serbia. The total of 90 students participated in the research, 56% male and 44% of them female. They reported about their knowledge of language skills and means they used in learning ESP. It was aimed at determining what helped them most in learning ESP. The similar research was conducted by Stanojević Gocić (2011, 2013).

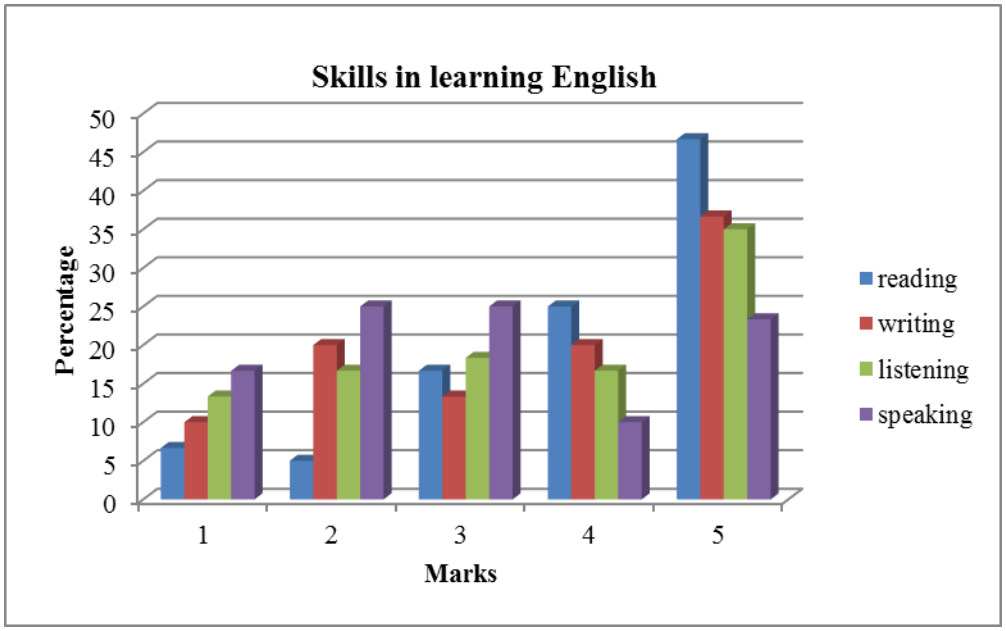

Figure 1. Skills in learning English

Students' skills in learning English are presented in Figure 1. A large number of students (46.7%) are good at reading skills. However, 25% of students think that their speaking skills are not satisfactory. Approximately one third of students think that they are excellent in writing and listening.

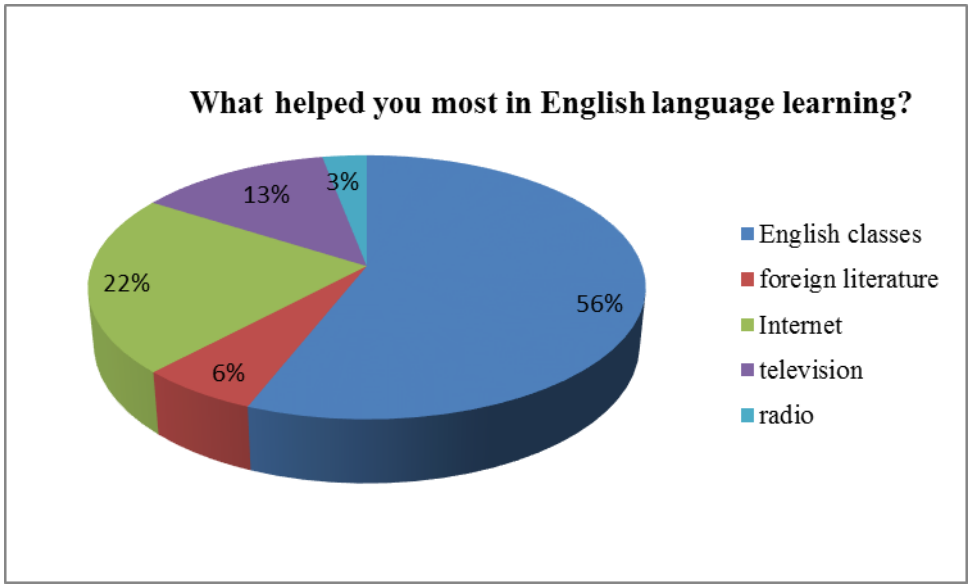

Figure 2. Percentage view of what helped students most in language learning

Percentage showing what helps students most in language learning is shown in Figure 2 implicate that 56% of students claims they learnt English through their English classes and 22% through the Internet. Therefore, ESP teacher should improve the course by using multimedia content and e-learning systems in general to present language content to ESP students.

5. CONCLUSION

The results of the research show that more listening and speaking exercises should be offered to students as a part of their ESP course activities, and that ESP course activities should include online resources as a part of blended learning. As a matter of fact, a blended learning course could be integrated into ESP course, such as using online dictionaries for vocabulary learning and other relevant referential materials (thesaurus, glossaries, etc.), attending webinars or video conferences, watching video tutorials, writing blogs, creating distance learning courses, etc.

E-learning is modern, up-to-date, easily accessible way of learning; however, it requires digital literacy and may even be expensive. In that sense, deliberate practice for faster knowledge building are evolving, e.g., businesses can create a case for using mobile learning to help their staff build expertise.

Existing knowledge management systems are large software systems located in computing centers and huge databases. In the future, these systems are expected to evolve into large system networks where the necessary data and knowledge will be stored and processed. It is envisaged to develop large structures that will represent the structure of large world networks and will connect various computer centers enabling users of various types of services better flow and use of data, information and knowledge.

Knowledge and other non-material assets today play a key role in the educational world. Management of data, information and knowledge, as well as their dissemination, processing, storage, reproduction and application, increasingly represent the basis of economic development in the modern world.

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