Effective Application of Blended Learning in ESP Courses

Maria Momchilova

Abstract: **The real challenge for education worldwide comes from the velocity, scope and impact of technological innovation, and more specifically the rise of Artificial Intelligence (AI). The unprecedented technological development introduced new forms of multiple communication and cross-action spaces. AI and ICT (Information and Communication Technologies) have had quite an impact on teaching methods and learning experiences, and have changed the way learning environments are perceived and organized. To start with, there has been a shift of focus from knowledge recall to competencies and skills for lifelong learning. In addition, the implementation of blended learning which supports sustainable motivation and encourages the mastering of skills has created positive learning environments through personalization and differentiation of the learning process. The present paper discusses some theoretical issues relating to blended learning and its application in teaching English for specific purposes (ESP). The research methodology is based on qualitative methods including a brief terminological overview, critical review of secondary data, comparative analysis of empirical data, and discussion of topic-specific findings.**

Index terms: integrated learning experience, key competencies, lifelong learning skills

I. Introduction

E-learning is a concept that has appeared following the enhancement of learning environments. Its potential in providing borderless education and its importance for the future development of global society and economy were first duly recognized by the Council of Europe, which supported the use of ICT with a project focused on modern languages education, "Language Learning for European Citizenship" (1989-1996), and further stressed upon in the Education 2030 Framework for Action (FFA) "Towards inclusive and equitable quality education and lifelong learning for all". The FFA specifies the new Sustainable Development Goal 4, SDG4, Education 2030 agenda as "a well-established, properly-regulated tertiary education system supported by technology" [1].

The use of technology in education has been the focus of academic research for more than twenty years. However, a unanimous definition of the concept is still missing. Online learning, web-based learning, web-based training, and e-learning are all terms that have been used alternatively to describe the "distant way of learning". Presumably adhering to pragmatism, the American Society for Training and Development defines it simply as e-learning, that is the entire group of technology-based learning, covering a wide set of applications and processes including computer-based learning, web-based learning, virtual classrooms and digital collaboration.

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Recently e-learning is perceived as a new "ecology of learning". Garrison [2] describes it as the technology transforming educational institutions and the comprehension of teaching and learning experience. According to him of utmost importance in the process of e-learning are the control and responsibility for self-learning. Students are being encouraged to consider their learning goals and pursue them at their own pace. Another major factor is the improvement of critical thinking skills. Immersed in an online learning environment students work with various sources and come to realize how to evaluate their relevance. Furthermore, the use of technology allows for independent time and task management, which assist the self-learning process. Finally, the process of e-learning accelerates knowledge construction and interaction. Students collaborate with their peers and teacher in a friendly and tenable environment to acquire fundamental skills and knowledge**.**

On the topic of the use of technology in education Dudeney and Hockly [3] agree that certain terms associated with e-learning are often used interchangeably and thus lead to confusion. First, the term online learning, which is learning that takes place via the Internet, is understood as a facet of e-learning. Second, open learning which concerns the degree of learner independence is comprehended as one aspect of distance learning. Yet another term, which is highly context-dependent, is blended learning (BL). Although it is used to denote the synergy of traditional face-to-face (F2F) learning environment and online resources and activities, blended learning is not about the combination of the virtual and physical ecosystems of education. It is a complex method which, on the one hand, focuses on incorporating technology in a meaningful way to ensure the quality and sustainability of the process of education and, on the other, aims to develop intellectual and creative learner potential.

In spite of the lack of unanimity of opinion among researchers on the definition of the concept, all of them assent to the fact that e-learning environments facilitate both synchronous and asynchronous communication hence the potential of such environments is believed to be multidimensional. Most importantly, practical experience demonstrates that the integration of social, cognitive and teaching environments contributes to the development of enhanced qualities among which:

- connectivity, or simply put, the access to information;
- flexibility, i.e. the opportunity to learn any time and at any place;
- interactivity, which relates to the immediate assessment of learning;

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- collaboration, or the implementation of discussion tools to support collaborative learning;
- extended opportunity, that is the potential of e-content to reinforce and extend classroom-based learning;
- motivation, or the power to delight in learning.

II. Terminological Overview

Blended learning (BL), as empirical findings prove, means different things to different people. When asked to define the concept of blended learning the ESP instructors at the Technical University in Sofia who chose to participate in a mini survey described it as the synergy of traditional face-to-face learning environment and online resources and activities.

As previously pointed out there is no consensus on a coherent definition of the concept of e-learning. Likewise, the application of the Boolean research method[1] reveals absence of agreement on how to define blended learning. To some blended learning is an amalgamation of traditional face-to-face and online learning processes. The instruction is delivered to all students in the classroom and online, and the online component transforms into a natural extension of traditional classroom learning [4]. Others regard blended learning as an important building block of the new schoolhouse. The new learning structure offers greater flexibility and convenience for learners, which is of importance when it comes to teaching working adults who have decided to pursue postsecondary degrees [5].

The Collaboration for Online Higher Education Research (COHERE) consortium defines blended learning as the best of both worlds. The application of blended learning allows students and teachers to benefit from and enjoy the advantages of online and face-to-face learning experiences. A definition of blended learning built on COHERE includes the determination to provide every learner with the opportunity to learn in their best choice, within particular resource constraints [6]. This commitment stems from understanding learners' preferences and the advancement of enhanced learning (the use of AI in education).

The application of blended learning strategies provides learners, instructors and course material designers with a comfortable non-threatening environment in which they can acquire the set of skills and knowledge necessary to fully function in technology-enhanced learning contexts. Accordingly Driscoll [7] states that blended learning, by its very nature, guarantees a swift transition of teachers and learners from traditional classrooms to e-learning environment. The embracement of face-to-face and online learning aspects makes teaching and learning efficiently adjustable to deliver high quality content and optimize learning.

Notwithstanding the lack of a universal definition, for all parties concerned, blended learning indicates the transformation of approach to teaching and learning. It is a rethink and redesign of educational environment and learning experience. According to Garrison and Vaughan [8] it is a coherent design approach that evaluates and integrates the strengths of F2F and online learning to address meaningful educational goals.

[1] Scope limited to papers originally published in English.

III. Critique of Principles, Objectives and Challenges

All arguments presented below are built around the researcher's own working definition of blended learning which reads as follows: *blended learning is the thoughtful integration of F2F and online educational environments to create a unique asynchronous (mastery-based) experience*. Indeed, blended learning is part of the ongoing convergence of two different learning environments. On the one hand, there is the conventional F2F learning environment. On the other, the multiplication of distributed learning environments guarantees peer and community support with no time or place restraints.

The implementation of blended learning strives to achieve three strategic objectives. First of all, secure learners' active involvement. Learners need to realize the practical implications behind BL. Second, motivate for success. The impetus for instructors and learners alike is intellectual achievement and enhancement of knowledge. Third, derive satisfaction from learning. Actually, this objective directly relates to the previous for satisfaction can be seen as a function of success. Other important/significant objectives to touch upon are:

- the promotion of active self-directed learning through effective combination of in-class teaching and online learning;
- the use of reduced tutorial time to focus on material that is more effectively presented in F2F environment;
- the opportunity for learners to complete online learning activities at times that best suit individual weekly schedules and learning preferences;
- the enhancement of learner self-confidence in a non-intimidating and less stressful educational environment;
- increasing learner self-awareness and self-esteem through stimulating active initiation and supervising independent learning activities;
- improving perception and memory;
- developing learner soft intelligence[2].

The conditions for successful realization of the strategic objectives of blended learning are presented in Table 1 below. Analysis of data collected from second year students at TU through specially designed questionnaire shows that personal motivation comes first and foremost. The psychological readiness to use ICT in foreign language learning environment comes second, followed closely by the access to contemporary quality learning resources which can be meaningfully integrated in authentic subject-related tasks. Another essential condition is the mastery of skills and knowledge and the competence to apply them in target language interaction.

Other preconditions for the success of blended learning, which have not been graphically presented, include effective

[2] Soft Intelligence is any human emotional feedback which can be used for the benefit of an organization and/or individual. Human emotional feedback would consist of but not be limited to: thoughts, feelings, observations, ideas, suggestions.

and efficient (online) time management; integration of technology into the subject discipline through collaborative learning, problem-and-project based teaching; preparing students to take responsibility for their own learning; designing individualized information input; granting assess to content, i.e. providing content openness; initiating contextual learning; implementing modularity in course design.

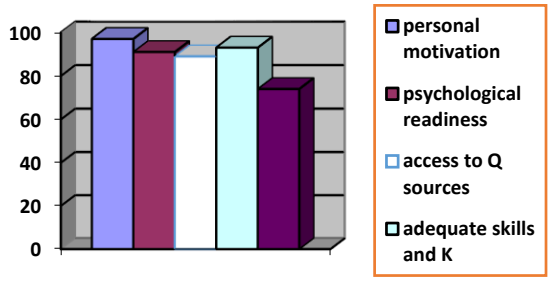

Table 1. Conditions for attaining BL objectives

Besides opportunities, blended learning poses challenges of various kinds. To begin, technological issues can be really demotivating especially for those who constantly experience slow internet connection or don't have state-of-the-art devices. Furthermore, some students, and not only, have limited or none time and content management skills. In addition, there is certain unwillingness to do reading and writing tasks (critical analysis and summary of texts) as compared to the enthusiasm for analyzing and summarizing visuals (video, movies). Last but not least, there is still a lot of skepticism towards the efficiency of self-study among students and instructors. There isn't as yet conclusive evidence to support the coveted and much-trumpeted productiveness of self-study.

IV. Blended Learning in ESP

Blended learning environments are characterized by flexibility, control and ownership of time, place, settings, path, and pace at which learning takes place [9]. Therefore, to successfully integrate blended learning in ESP instructors have to weave their awareness of the dynamic nature of educational environments into the pedagogical strategy. In other words, the blended learning models one adheres to should be flexible and easily adaptable to emerging learning environments. That will assure the sustentation of the quality of learning. In addition, as achievement models move away from time-based to competency-based ones, an evolution of roles is manifested as the learner becomes the prosumer [10]. In other words, blended learning experiences transform the learner into active and responsible collaborator to whom the creation of their own learning materials is granted. The change runs parallel to the empowerment and ownership provided by technology, which in turn is a function of the rebranded concept of knowledge.

The advance of intelligent adaptive learning technology allows for the enhancement of knowledge through differentiation and personalization of instruction. What is more, it increases the velocity of learning of students regardless of where they start. The adaptive engine is able to define the learner path according to performance with each path leading to mastery of the topic. Another attribute of intelligent adaptive learning technology (IALT) which optimizes the learning outcome relates to the potential of IALT to actively engage the learner into the process of mastering knowledge and making them feel successful. What is more, the use of intelligent adaptive learning technology provides for a supportive highly individualized experience and helps prevent real issues like stigmatizing and embarrassment.

Basic requirements in modeling blended learning courses in ESP are flexibility and agility. It is essential for a course to be adaptable to emerging developments in subject areas and at the same time quality-efficient as far as sustainability of education is concerned. The open pedagogy model [11], for example, is a flexible, convenient and effective format. What makes this model suitable for ESP courses is the opportunity to develop among other skills intercultural awareness and competence through shared multi-cultural online learning environments, which are essential for a career in multinational knowledge-based (industrial) companies. The most outstanding attribute of the open pedagogy model is the use of the 5Rs approach (reuse, revise, remix, redistribute, retain) of open educational resources (OERs). Instructors use open resources to streamline learning and provoke learners to share their work under the Creative Commons agreement. Apparently, the implementation of the model requires a change of attitude and the facilitation of a culture of openness. In other words, open pedagogy involves creating functional assignments that ask learners to create output which can be revised, remixed, reused, redistributed by others free of charge, i.e. to create value-added product that exceeds the goals of the course.

Allegedly, the need to rethink/reconsider the value of blended learning environments stems from the evolving nature of both technology and learners. Generation Y and especially generation Z have intrinsic motivation for e-learning guided by the constant use of smart devices. Being able to command their environment by touch has shaped their expectations about the learning process and has helped them establish their own patterns of learning. Autonomous learners all their lives they are more critical of the teaching methods and learning environments. Therefore, the convergence of traditional (instructor/teacher) and self-directed (student) instruction in a virtual learning environment ensures the effectiveness of the educational process. What is more, the use of blended learning in an ESP course aims to develop key competencies in students, such as:

- reading and understanding technical publications, handbooks, or journals for professional development;
- writing technical reports/publications;
- giving presentations;
- communicating with multinationals as partners, co-workers, employers;
- discussing and analyzing a range of technical issues.

Some of the merits of blended learning can be highlighted using Dale's Cone of Experience [12], which illustrates the different types of learning (see Fig.1):

- focus on productive skills;

- effective and efficient use of classroom time;
- use of technology for practice, review, recycle language and improve learning;
- support different learning preferences, pace and needs;
- technology adapts learning to learner;
- homework becomes extended classwork, it becomes integral to classroom learning experience.

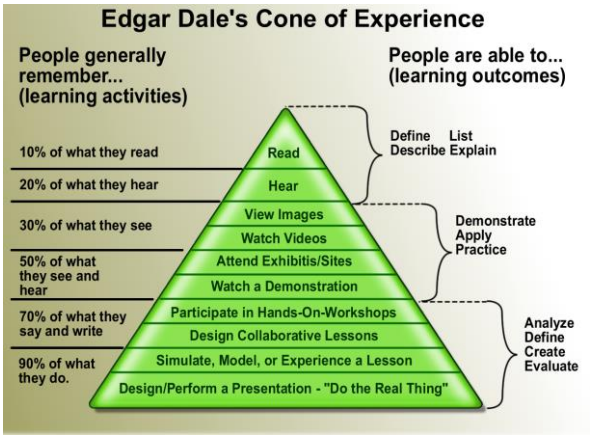

Fig.1. Edgar Dale's Cone of Experience

Since mobile access is becoming the first choice for learning materials and resources, m-learning should be considered as part of blended learning. It is expected that the potential of blended learning will be realized through the use of mobile technology either on its own or in combination with other ICT, to enable learning anytime and anywhere. Developers of resources for m-learning aim at granting among other functions reliability and ease of navigation. In addition, the length of modules is being limited. Furthermore, micro learning modules with instantaneous, integrated, and deep learning tools are on the rise, hence users of m-learning resources should reckon with bots in the processes of guiding, curating and filtering personalized content. It is anticipated that m-learning can further enhance personal and ubiquitous learning possibilities, thus responding to challenges in particular educational contexts. In addition, taking a global view on social and environmental issues, it is expected that m-learning will increase safety, accessibility, equitability, and flexibility of education for learners by blending time and place.

V. Lessons Learned/Takeaway Points

Personal experiences distilled from 2019-2020 blended ESP course are presented in a nut-shell.

First, the aim of designing a blended ESP course is to create a unique asynchronous (mastery-based) experience hence, an ESP instructor should be clear about the learning objectives and their attainment through the use of learning technologies online and in a traditional learning environment. Blended learning is a three-stage process where engagement comes first, followed by immersion, and a wrap-up stage which comes at the end. Consequently, the instructor has to plan carefully what they have to do and what is expected of the students, and design a syllabus with course schedule so that students can quickly understand where classes are held (F2F/in-person or online/Discord) and where content and learning activities are located (paper textbook and/or Moodle and/or open-access internet resources).

Second, it is essential for ESP instructors to understand that the mere addition of online activities to a brick-and-mortar course does not add up to blended learning. Technology reinforces course objectives and the blending of delivery modes synergizes the learning experience. ESP instructors should determine what needs to be achieved by using learning technologies in person or online. They should think about course content sharing, doing group work, practicing peer assessment, fostering community, having fun and letting off steam.

Third, technology befitting the instructor and their students' level of technical expertise has to be chosen. Instructors have to make sure they and their students know the ins and outs of the LMS used by the university. LMS doesn't just organize online course components; it stores materials for reference, keeps track of group and individual progress, and integrates data from F2F environment.

Some benefits of blending the learning environments:

To begin with, online collaborative tools such as online forum discussions and chat really give opportunities for collaborative learning.

Another point is that augmented accessibility allows for swift communication. Learning management systems offer lots of communication opportunities and it is close to impossible for anyone to miss out on some piece of information.

Finally, assessment is optimized. Assessing learning through activities which involve specialized knowledge application, problem solving and creativity fosters deep and meaningful learning. Assessment activities range from group projects to presentations, and structured academic debate. Most effective turn out to be group projects and structured academic debate. Most enjoyable are presentations. Peer assessment is not something that turned out to be viable.

Certain issues faced that need to be mentioned:

First of all, resource requirements can and do create systematic lack of access in which case technology tools fail to support learning in a meaningful way.

The next problem is to do with IT knowledge and skill, which are deemed vital. IT illiteracy is a real hindrance to quality learning experience. Same goes for the access to technical support, which is another bare essential.

Last, there are real student self-management concerns. As students participate in online learning with varying degrees of learning competence learning self-management should be addressed in all online learning experiences.

VI. Conclusion

It is universally acknowledged that language is a complex system and there is no one way of learning it. Different individuals approach foreign language teaching and learning differently. Hence, there is no one way of using blended learning, either, no such thing as best practices. Blended learning is all about creating learning opportunities and

offering a wide range of resources and experience. Blended learning facilitates appropriate artificial and human support based on learners' needs. The optimal conditions for an effective language learning environment should include but not be limited to:

- authentic audience interaction in target language;
- authentic task involvement;
- reception and production of varied and creative language;
- social interaction and meaning negotiation;
- no time constraints;
- prompt feedback reception;
- learner autonomy guarantee;
- anxiety and stress-free experience.

The application of blended learning allows for the holistic development of learners through effective instructor-learner interaction at all stages of the educational process. Blended learning supports sustainable motivation and encourages the mastering of skills. The method grants individual control, thus increasing self-awareness and self-esteem in learners. Blended learning creates positive learning environment based on the principles of clarity, adaptability and usability, as well as objectivity of assessment. It not only ensures the quality, satisfaction, and effectiveness of education but also supports deep and meaningful knowledge acquisition. However, a simple mix of technology with F2F is not sufficient to exploit the potential of blended learning as a method. The key is to find the most effective and efficient combination of learning modes and optimize the learning experience.

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