THE USE OF ELECTRONIC RESOURCES IN THE PROCESS OF FOREIGN LANGUAGE TEACHING/LEARNING

Roxana Ştefania BÎRSANU 1*

ABSTRACT

The educational process has benefited greatly from the technological progress, which is constantly reshaping the dynamics of the teaching-learning context. The computer, mobile devices and the Internet have become constant aids to instruction in many parts of the world, for a wide range of disciplines and learning objectives. This paper refers to the formal teaching/learning context and focuses on the use of the Internet and ICTs as resources in foreign language classrooms. By resorting to these valuable resources, teachers undertake a secondary role and encourage learners to exert a higher level of independence and collaboration, which actually increases their creativity and autonomy. We will take a closer look at the main components of the teaching/learning environment (the people, the tools and the environment) and will highlight a series of advantages, but also potential drawbacks and/or problems related to the management of these resources in language classes.

KEYWORDS: language teaching/learning, Internet, web-based content, learner autonomy

1. INTRODUCTION

One of the things of the present that nobody can deny and ignore in the teaching/learning environment is that all the aspects and actors involved in the process are exposed to a number of pressures that drive constant changes. Such changes envisage mainly two coordinates of the educational process: delivered content – or, more precisely, the methods and practices of delivering the information –, and trainers' approach to the learners' needs, which are constantly shifting focus. During recent decades, the so-called information revolution, which actually meant the insertion of computer technologies in almost all fields of human activity, has also reached the classroom and, similar to any other form of revolution, it has brought along challenges and advantages. But, undeniably, technology is of great assistance for both ends of the educational process, i.e. for teaching, and for learning. "Technology is becoming an integral part of pedagogy. When educational objectives are clearly defined, the place and role of technological tools used appears to be natural and appropriate. It can be said that the existing problem of technology integration into the educational sphere has been turned into a greater one – realizing the learning process and pedagogy in a new way" (Geladze 2015, 68).

^{1*} corresponding author, Lecturer PhD, Romanian-American University, Bucharest, birsanu.roxana.stefania@profesor.rau.ro

Nowadays huge amounts of money are spent by educational institutions and governments on research related to the effective use of digital technologies in the teaching process. The process consists of three important components, which, in order to ensure the success of the process, have to strike a balance between newer pedagogical methods and the accurate and inspired use of conventional ones. These resources are: the people (the trainers and the students), the tools (materials used in the classroom; in this particular case, we will focus on the Internet as a source of information) and the environment (the actual location where educational activities actually take place) (Luckin et al. 2012, 10). These components make the focus of this paper from the perspective of the broader electronic context of the teaching/learning continuum. In respect of the electronic resources mentioned herein, "electronic" is to be considered in the meaning provided by Oxford Dictionary as "carried out or accessed by means of a computer or other electronic device, especially over a network".

The advent of the Internet has completely remodeled the manner in which computers can be used in language learning. "Part library, part publishing house, part telephone, part interactive television, the Web represents one of the most diverse and revolutionary media in human history. It is already starting to transform academia, business and entertainment; there seems little doubt that it will eventually have a profound impact on education as well" (Warschauer & Healey 1998, 64). The authors were visionaries, since, ten years after this prediction, language teaching and learning rely heavily on the availability and richness of the Web and on the plethora of electronic devices for effective outcomes of the educational process.

Thus, in 2005, UNESCO published a report called *Integrating ICTs into the Curriculum:* Analytical Catalogue of Key Publications, which mainly deals with the successful integration of ICT in education. The Catalogue is extremely useful for researchers in the field of ICT use in the classroom, but also for teachers who are interested in discovering new technological devices, approaches and methods to integrate them in the traditional classroom. The Catalogue is organised into chapters covering topics such as technology integration into specific subjects, suggestions and strategies for the integration of ICT in education or obstacles to effective ICT integration in a learning environment. The works reviewed in the Catalogue range from books to book chapters, online articles and slide shows of relevance for the above-mentioned topics.

Foreign language teaching has undergone a number of changes in the last thirty years. Focus was shifted from mere linguistic proficiency to personal, customised instruction, the authenticity of materials, a more pronounced learner-orientation and the development of communicative skills. Technological advances have also greatly impacted the acquisition of foreign or second languages. In this context, computer-assisted language learning (CALL) is of great relevance, as is computer-mediated communication (CMC). CALL is an innovative use of pedagogy which differs from the traditional approach to language teaching in the meaning that it makes use of the web and of computers for designing language tasks.

Language teaching can benefit in various ways from the use of the World Wide Web: for the use and access to authentic materials, for communication with native speakers, as a medium for making students' productions available to a larger audience and for supplementing language drills (vocabulary, grammar, etc.).

2. COMPONENTS OF THE LEARNING PROCESS

a. The people

Teachers have definitely become increasingly aware that, regardless of whether their classroom is a conventional or a virtual one, they should make full use of the advantages presented by electronic devices for the efficiency of their methods of imparting information to their students. For this, they need a certain level of technological literacy, which sometimes may represent a genuine challenge, especially for teachers who belong to a generation that prefers conventional teaching methods and practices. This suggests the need to train the trainers, who thus may become more knowledgeable in how they can use technology in order to meet the learning needs of their students. Once they acquire the skills necessary to employ the technological devices available at their institution, they need to establish how best to use them in a manner that is truly beneficial for the learning outcome.

Education institutions constantly encourage teachers to resort to Information and Communication Technology (ICT) in the educational process. Sometimes, although the organization or institution stimulates the use of such modern methods and techniques, the problem may reside with the trainers/teachers. Some of them may resist using ICT because of the rapid technological progress, which entails that they, too, have to be permanently updated with the most recent technological devices that suit the pedagogical purposes of their disciplines. There is also a psychological barrier; teachers manifest a certain degree of reluctance in using ICT because their students have a high level of ICT competence and they may feel outperformed by the students, the most obvious result being loss of knowledge-based authority in class.

Although the role of the teacher is diminished to a certain degree when the Internet is used in the classroom, his/her position as a guide and facilitator is not to be neglected. The amount of information and resources available online for class and independent activities would be useless unless the teacher assists learners in the process of selecting relevant information, monitoring the performance of requested activities and eventually assessing the learners' progress and the results of their work and research.

Student profile is also extremely important when using technology. One of the most challenging categories for teachers is represented by the so-called millennials, or Y generation, people who were born between the early 1980s until 2000. In the educational environment, a gap has been identified by researchers between learners' expectations and teachers' performance. With this generation of digital natives, the learner profile has changed considerably as compared to the previous ones. The main driver of this change is precisely their use of technology, which has become an embedded part of their everyday personal and professional life.

The learning style of this younger category of learners has undergone a number of mutations as compared to older generations, mutations that need to be considered both when designing teaching materials and when sharing the information to the class. Millennials have a preference for a variety of learning strategies and express greater interest towards materials that are mostly visual and auditory. In this respect, resorting to resources that are available on YouTube or on various digital platforms, PowerPoint

presentations or collaborative educational tools record the highest rate of success among these learners

Another aspect that should be taken into account is that, with the Y generation, a pragmatic approach to content delivery is of utmost relevance. They are no longer interested in information for itself, but in the broader context of its significance for their life. That is why authentic materials are best used in their case, and teachers may easily tap into what the Internet has to offer in terms of authentic materials. Newspapers, case studies and reports are readily accessible over the Internet and, given the fact that learners are technology savvy, trainers only need a good Internet connection and a laboratory where learners can access the indicated information. These materials can be successfully used as starting points for individual or group assignments.

In web-based language learning, traditional methods such as dictionaries and textbooks are successfully replaced by various other aiding materials such as online dictionaries, educational networks and various dedicated web pages, which are highly appreciated by learners due to their variety, saving of time spent searching for vocabulary and pronunciation and the fact that they are able to use multiple skills simultaneously.

Quoting M. Warschauer (1997), Wagle mentions a number of principles that teachers should consider when resorting to web-based activities for their class.

- One such principle refers to the careful analysis of the objectives targeted by the proposed activities. Before resorting to the Internet, teachers should first ponder on whether this resource is truly more useful than the textbook, for example.
- Integration is essential. No great progress can be achieved if learners are merely required to have computer and Internet literacy. Teachers should strive to integrate the practical activities in the general objectives and design of their course.
- Teachers should never underestimate the potential technical problems associated with the use of the Internet and of computers in the classroom. There are students with little knowledge on how to use the Internet, which means that teachers must train them first into acquiring this skill. Then there are the issues related to computer/Internet connection availability, equipment malfunction etc.
- Teachers should be constantly assisting their students with the proposed activities.
 Even when they use the Internet as a resource, teachers should also made available to their students printed materials, should organise brief training sessions and stimulate collaborative work in pairs or groups when solving webbased assignments.
- One final suggestion is to involve students in the decision-making process.
 Although using WWW can be stimulating and entertaining for learners due to a multitude of factors, the above-mentioned problems can generate frustration and confusion. That is why learners should be consulted in class on the progress they think they register and on the efficiency of activities performed with the help of ICT and the WWW.

b. The tools

The Internet is an extremely valuable resource for teachers. It refers not only to content that they are able to access in order to prepare their own materials, but also to specialised sites dedicated to trainers and learners, which contain data that can be processed and organised so as to be used as drills and worksheets in the classroom. Because language teachers under a constant pressure of presenting fresh and interesting materials, they can successfully resort to web pages, which can prove to be a great tool for planning language classes and assignments attractive enough to raise learners' attention There are several reasons for which the Internet can be successfully used in the teaching activity. One is the relevance of the materials available, most of them up to date, which engages learners' attention precisely due to its actual connection with reality and everyday life. Another major advantage is the richness of resources; there are plenty of specialised sites to choose from, each offering something for a specific need of the classroom. Another aspect which is not to be neglected is the fact that the Internet has become increasingly accessible, it is a constant in learners' life and, since they are highly accustomed to use it in their free time, most of them face no difficulty in using it for professional purposes as well. Finally, the very nature of the Internet recommend it as a highly versatile and dynamic learning tool; the potential sources where specific information can be found and how to use it in a specified context encourages students' independence and assists the development of decision-making skills.

There is a variety of means through which foreign language teachers can use this highly useful resource. One is to enhance the visual nature of their lessons/lectures. Images and photos are valuable additions to any informative content and they are particularly effective in the case of learners within younger age categories. Since language classes also have an important cultural component, maps, images depicting local traditions and gastronomy can represent a good starting point for debates and comparisons with learners' own culture. To further tap into the visual component, videos can be used for a variety of purposes: to expose learners to various dialects and accents, to check pronunciation, to introduce learners to important figures in the culture of the language they are studying through interviews and short documentaries about their life and activities, and, why not, to liven up the learning process.

Another idea would be to invite people to interact with the learners remotely. This is actually one of the greatest features of the Internet, namely that it can allow live interaction among communicators spread all over the world. Depending on the age of the learners, the persons who have an online intervention can be young people of the same age from another country with whom to exchange ideas and impressions on a given topic or a guest such as a specialist in a particular field who could make a presentation or organise a workshop on a topic of interest for the learners. The plethora of applications available now – FaceTime, Skype, WhatsApp etc. – facilitates these interventions at no spectacular costs for the education institution.

The above-mentioned applications can also be used in order to create dedicated groups where members can discuss about their projects, assignments, extra-resources identified. It is a good means to foster collaboration among learning group members which also gives them the opportunity to work as a team, to brainstorm and share information that may prove valuable for all those involved. Finally, working over/with the Internet

provides trainers with the opportunity to share documents, files and materials with entire groups of learners and colleagues. Virtual staffrooms and message boards are spaces where teachers/trainers communicate and share their experience with colleagues from all over the world. Joining such groups is a great opportunity to interact with professionals who may be or may have been faced with similar problems and who are willing to share from their experience and knowledge, which creates a sense of belonging to a larger community upon which you can rely for advice and suggestions.

One important goal of the teaching activity is to foster collaboration among students, which helps them develop skills of great relevance for real world situations such as teamwork, leadership or effective communication. This objective can be reached with the help of a number of collaborative tools and applications. TalkBoard is a whiteboard application that allows users to write or draw on the board. It is of particular usefulness for persons with visual learning abilities and for foreign language learners. Padlet can be used as a form of digital bulletin which enables collaborative interactions. Teacher and students can add content on a topic (documents, videos, illustrations etc.) and everyone present can reply in real time. Through Google Apps for education such as Google Docs, learners can share content and work together on specific documents. Google Drawings assists learners in creating various diagrams collaboratively, while Google Slides allows them to design presentations together on a given topic. The main advantage for the teacher is that s/he can provide immediate feedback and keep track of students' progress in time. For learners, the main advantages of using such applications are that they can request further details on a topic, ask questions, express their opinions and share their productions.

In respect of the web pages that can be used in foreign language teaching (FLT), we should mention that there are web sites dedicated to teachers, where they communicate with colleagues and get information and suggestions on issues such as designing materials, devising assessment methods and strategies, drafting lesson plans, directions to other useful web pages, etc. On the other hand, there are pages with activities, exercises and drills that can be used both in the classroom, under the teacher's guidance and monitoring, and in an out-of school environment, as individual study.

Synchronous and asynchronous tools are also successfully used in language teaching, especially in e-learning environments. Real-time or synchronous communication is possible through the use of the Internet, via chat media such as Web chat programs or Internet Relay Chat or through software for local area networks. Students engage in exchanges with all the peers from their class or in smaller study groups. In these exchanges, the teacher plays a diminished role, while the exchange is not dominated by vocal students. Moreover, research has shown that computer-mediated discussions display a higher level of lexical and semantic complexity, which is due to the fact that students have more time to plan their interventions than in oral communication. (Warschauer 1998, 63). The transcripts of such discussions can be used subsequently for assessment of grammar analysis. Given the heightened level of complexity of the language used, language teachers find computer-assisted discussion a useful activity to complete oral debates.

In asynchronous communication, the channels of communication between learners and teachers (turned from educators into facilitators of the learning process) mostly occurs via email, but also through conferencing systems, bulletin boards or message board forums.

Asynchronous education makes use of elements such as audio, video and text messages through which teachers share content with their students, the greatest advantage being flexibility and the fact that teachers are not bound by constraints of time and location. For learners, asynchronous learning provides several advantages. One is that they can access the materials any time and since feedback is not requested instantly, they have enough time to formulate an elaborate and well-organised response. Learners set up their own learning pace and rely less on their memory and more on critical thinking. There are also emotional and technical advantages: "as there is less pressure than a real time encounter, the affective filter remains low and learners can respond more innovatively and creatively. The chances of getting irritated by technological problems, like low speed and non-connectivity —are the least, as ample time to attempt e-tivities is available" (Perveen 2016, 22).

c. The environment

Regardless of whether it is one-to-one, individual or one-to-many, the teaching/learning experience would be inexistent in the absence of a learning environment. In formal education, the "learning environment refers to the diverse physical locations, context and cultures in which students learn. [...] The term also encompasses the culture of a school or class [...] as well as the ways in which teachers may organize an educational setting to facilitate learning, e.g. by conducting classes in relevant natural ecosystems, grouping desks in specific ways, decorating the walls with learning materials or utilizing audio, visual, and digital technologies" (The Glossary of Education Reform). It is obvious that the nature of the learning environment, which is more complex than the mere physical space of the process, has a profound impact on the transfer of information and on how it is processed and acquired by learners.

A learning environment consists of a series of factors, whose degree of convergence governs its efficiency. These factors refer to teaching objectives and learning motivation, the activities that are meant to enhance learning, assessment methods and techniques necessary to quantify the registered progress and stimulate further learning efforts, but also the culture that governs the learning context. As we have already seen, the Internet can be used successfully in the traditional learning environment, with formal classrooms and unmediated teacher-student interaction. However, the Internet is an essential tool in the context of virtual learning.

In the current global environment, when information is needed fast in various professional contexts, people's mobility cannot pair the transfer of data. That is why the opportunity to access education services via the online environment is a great opportunity for institutions and learners alike. E-learning environments have become increasingly accessible due to the convenience they provide in terms of location and time restrictions that are bridged through this form of teaching/learning.

E-learning refers to "software communication environment which provides technological means to conduct the educational process, its information support and documentation in the Internet to any number of educational institutions, regardless of their professional expertise

and level of education". E-learning is increasingly resorted to both in companies and organisations, and in universities and other higher education establishments.

In the higher education environment, e-learning provides a number of advantages: it ensures instruction that matches the expectations of the newer generations of digital natives; it facilitates communication between different similar institutions around the globe; it facilitates the pooling of resources and materials that may overlap for distinct courses; it ensures the ability to reach a larger number of students, who cannot attend the physical classes; it represents a means to save time for the training staff and costs for the institutions involved and it is convenient in terms of flexibility for those learners who are subject to various time and location limitations.

Web-based resources can be successfully used to improve all language skills. Writing skills and vocabulary can be enhanced with writing assignments that can be shared on one of the above-mentioned applications, through collaborative projects and even blogs that peers and people from all around the world can access. Vocabulary can also be built online with the help of web pages that offer quizzes, word games and other drills free of charge. Listening skills can be improved through the use of videos, music clips, interviews, conversations, which expose learners to a wide range of dialects and accents, this being a great opportunity to for them to get accustomed to the characteristics of spoken English discourse. Based on these materials, teachers can design various types of exercises that aim at checking comprehension. Public broadcaster web pages such as BBC are an excellent resource of audio materials both due to the variety of topics approached and to the higher technical quality of the recordings.

Reading skills can be improved by accessing authentic material such as newspapers, magazines or blogs. Learners can be guided towards various types of web pages (of public institutions, governments, commercial sites etc.) and asked to comment upon the content in terms of reliability, cohesion and coherence of information presentation, identification of various genres and assessment of content presented in a variety of ways. Development of speaking skills can be encouraged through the production of videos, interviews and real time conversations with peers and native language speakers.

3. ADVANTAGES OF USING THE INTERNET FOR FOREIGN LANGUAGE ACQUISITION

The increased level of accessibility of the Internet at institution level has triggered a heightened acknowledgment of the usefulness of this resource in the teaching/learning activity. Institutions providing educational services became aware that they can thus reach a wider number of learners, with the additional benefit of reducing costs. In turn, teachers realized the manifold advantages of this resource in terms of increased cohesion and communication with their students — most of them already proficient in the use of technological devices, higher accessibility and availability of materials and faster communication with peers from all over the world. The Internet also offers students and teachers alike the opportunity to access databases and libraries around the world

_

 $^{^1\} https://www.igi-global.com/dictionary/explore-the-possibility-of-recourses-and-elements-of-online-teachers-training-program/8794$

One of the above-mentioned advantages is the readability of the information, which fosters out-of-classroom instruction. Students can access data from their own houses and with no restriction of time, outside school hours. They can read information on topics that interest them most in the language they study and can thus increase their linguistic proficiency while doing extra-work. This is particularly relevant in the case of English as a foreign language (EFL), since most information available on the Internet is in English. Apart from reading authentic materials in English, they can also access a variety of web pages where they can practice grammar, pronunciation or listening skills online. The main outcome is faster second language acquisition and language use in and outside the formal environment

Via the Internet, learners may also come into contact with native speakers, which motivates them to use the language in real life situations, thus improving their communicative and linguistic experience, because when they communicate with natives, learners have to ask for clarifications, express their own views, try to persuade their interlocutors and request information. Research has also shown that in the e-learning environment, student participation is higher; this form of learning context is particularly effective in the case of learners who find it difficult to integrate in a conventional classroom environment. Also in the case of e-learning, there is a shift of the traditional focus on the teacher towards the student, who is thus empowered to search for information and be more actively involved in the production of content. The teacher becomes a facilitator, and the learner turns into a more independent researcher and user of the data s/he needs

As the mechanisms and manifestations of languages are deeply embedded in culture, it would be impossible to teach a foreign language disregarding the cultural component. Since unmediated contact is subject to all sorts of limitations (having to do with availability of time and financial means, mostly), the Internet provides the opportunity to access cultural information from home or from school. Learners can gain insight into a given culture by watching documentaries and videos about the customs, traditions, gastronomy, arts of that given culture, they can read informative materials and can engage in communication with natives and do their own cultural investigation.

An efficient means to use the web is to consider it a platform for sharing learners' own pieces of writing or multimedia productions in their native tongue and/or in the foreign language they are studying. In this way, they may receive feedback from peers and other learners with similar interests and thus feel motivated and encouraged to improve and continue practicing the skills that can eventually lead to a high level of foreign language proficiency.

Sayers, one the researchers who analysed the impact of the WWW and technological devices in education suggested the following benefits provided by web-based technology in the teaching/learning context (1993):

• **Increased motivation**. Computers and applications are highly popular among students and due to their use in class, learning activities become more entertaining. At the same time, students feel more independent in the use of resources to improve their skills.

- **Better learning outcomes.** Learners improve their linguistic skills through their network activities, which consolidates their self-esteem and assists them in identifying the learning strategies that are most suitable to their particular situations.
- **Authentic materials**. Students can access authentic reading and listening materials which are available to them round the clock, at low or no costs.
- **Customisation**. Learners with adaptability issues find collaborative learning more beneficial and stimulating. On the other hand, highly ambitious ones can take additional tasks which they can perform in their own rhythm.
- Multiple sources of information. Textbooks are still used in the classroom, but the Internet presents learners with an almost infinite number of other sources of information. An additional advantage is the opportunity of interdisciplinarity and heightened awareness of the rich cultural weaving of the world.
- Increased communication and interaction. Through the use of services and features such as online bulletin groups and the use of collaborative applications, learners have the opportunity to interact both with their peers and with other persons from around the world sharing an interest in the same topics and disciplines. Learners also receive real time feedback when solving exercises online, which are automatically corrected.

4. DISADVANTAGES/PROBLEMS OF USING THE INTERNET FOR LEARNING/TEACHING

Despite the numerous and clear benefits provided by Internet use in teaching and learning, tapping into this otherwise valuable resource is not devoid of obstacles and challenges. On the one hand, there are extra-pedagogical problems. These have to do with Internet accessibility, which is inexistent or limited in many parts of the world, and the availability of computers and of other technical devices. Another problem is the little familiarity of both teachers and students with the use of a computer and/or of the Internet. In students' case, this particularly applies to very young learners or to learners of a certain age, who do not have any technological training and skills (this is especially valid for organization-level training and higher education systems, which learners attend in order to complete their education). This usually generates some sort of computer anxiety, which may be a real obstacle in achieving an effective and positive learning outcome.

The drawbacks of using the Internet in the teaching/learning context also depend on learners' age. In the case of young learners, there are the serious issues related to inadequate content (violent materials, pornography, crime-related content etc.), cyberbullying (with extremely serious and lasting effects upon the emotional development of the victim) and cheating (the copy-paste 'solution'). In the case of more mature learners, there is still the issue of the vast amount of materials to be found online, much of them inaccurate, misleading or downright harmful. In this respect, teachers must also train learners on how to use the Internet responsibly and in a manner which is useful and helpful, without waste of time and with the discerning power to pick up the relevant information. This is the reason why teachers and trainers have to select the materials themselves for use in class and provide learners with suggestions of web sites and content that they can access with priority at home.

5. CONCLUSIONS

The pedagogy of foreign language teaching has undergone a significant number of changes in the last decades under the influence of technological advances and the pressure represented by the dynamics of learner profile and learning interests and objectives. In this era of digitalisation, the main components of the teaching/learning process – the people, the tools and the environment – need to adjust to the constantly changing context of 21st century education. Electronic devices and the Internet have been acknowledged as valuable resources for language training, with multiple advantages for both trainers and learners. In teachers' case, the Internet can be used successfully as a rich source of authentic materials and inspiration for course design, lesson plans and practical assignments, but also as a platform for professional collaboration and communication. For learners, ICTs and the web used in learning settings translate into classes that are more entertaining, more varied sources of information and the opportunity to communicate globally with persons sharing the same learning interests.

Although the benefits of the above-mentioned resources are numerous, they are counterbalanced by a number of difficulties that are, most of them, external to the instruction process per se (Internet connection limitations, availability of electronic devices, teachers' and learners' level of computer literacy etc.). Other obstacles to the effective use of these resources are connected with the variety and reliability of the information presented online and to the efficient time management of tasks and assignments involving web-based content and electronic devices. However, such obstacles can be overcome through teachers' careful planning of activities and monitoring of assignment performance, the ultimate objective of this teaching/learning approach being to foster learner autonomy in the use and generation of content.

REFERENCES

- [1] Aydin, S. The use of Internet in ESL Learning: Problems, advantages and disadvantages. Retrieved in November 2018 at https://www.researchgate.net/publication/274734328 The use of the Internet in ESL learning Problems advantages and disadvantages.
- [2] Geladze, D. (2015). Using the Internet and Computer Technologies in Learning/Teaching Process. In *Journal of Education and Practice* (pp. 67-69). Volume 6, No. 2.
- [3] Luckin, R., Bligh, B., Manches, A., Ainsworth, S., Crook, C. and Noss, R. (2012). *Decoding Learning: The Proof, Promise and Potential of Digital Education*. London: Nesta.
- [4] Perveen, A. (2016). Synchronous and Asynchronous E-language Learning: A Case Study of Virtual University of Pakistan. In *Open Praxis* (pp. 21-39). Volume 8, Issue 1, January-March.
- [5] Sayers, D. (1993). Distance team teaching and computer learning networks. In *TESOL Journal* (pp. 19-23). Volume 3(1).

JOURNAL OF INFORMATION SYSTEMS & OPERATIONS MANAGEMENT

- [6] Warschauer, M. and Healey, D. Computers and language learning: an overview. In *Language Teaching* (pp. 57-71). Volume 31, Issue 2, April.
- [7] Wagle, U. The Use of Internet in Language Classroom. Retrieved at https://neltachoutari.wordpress.com/2011/09/01/the-use-of-internet-in-language-classroom/ on November 10, 2018

Online resources

https://en.oxforddictionaries.com/definition/electronic

https://www.edglossary.org/learner/

https://opentextbc.ca/teachinginadigitalage/chapter/5-2-what-is-a-learning-environment/

https://opentextbc.ca/teachinginadigitalage/chapter/5-2-what-is-a-learning-environment/