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Limitations of mobile technology in the teaching-learning of the English language

Limitaciones de la tecnología móvil en la enseñanza-aprendizaje del Idioma Inglés

Limitações da tecnologia móvel no ensino-aprendizagem da língua inglesa

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ABSTRACT

Mobile technology has found a way into the classrooms; students have added to the school materials a wide variety of mobile devices of their liking therefore, so that teachers have lost protagonist. The purpose of this work is to disseminate the limitations in achieving the integration of mobile devices within the teaching learning process within the classroom to carry out a specific task, use certain app to favor motivation, snap a video among friends while speaking the language in a given situation, carried out with the students of first year in agronomy major from the University of Pinar del Rio. Theoretical methods as the historical analysis, induction-deduction; the systemic approach and analysis and synthesis were used in the research besides empiric methods such as document analysis, survey and observations to the student's performance in class, statistical techniques as percentage analysis were also used. Limitations in the use of technological devices of the students were detected and stated here while using m-learning as well and so invigorating the lessons with technology is also provided.

Keywords: applications; mobile devices; protagonist; limitations; mobile technology; m-learning; tasks.

RESUMEN

La tecnología móvil se ha abierto camino hasta nuestras aulas, los estudiantes han incluido en sus útiles escolares una amplia diversidad de dispositivos móviles que le son de su agrado y los docentes hemos perdido protagonismo. El objetivo de este trabajo es comunicar las limitaciones encontradas sobre cómo lograr integrar estos dispositivos al proceso de enseñanza-aprendizaje dentro de la clase para desarrollar una tarea dada, trabajar con una aplicación favoreciendo la motivación, filmar un vídeo con su más cercano amigo y sobre todo emplear el idioma que se utiliza en esa situación

determinada en los estudiantes de primer año de la carrera de Agronomía de la Universidad de Pinar del Río. Se emplearon en su elaboración métodos teóricos como el análisis histórico-lógico, la inducción-deducción, el enfoque de sistema y el análisis-síntesis; métodos empíricos como el análisis documental, la encuesta y la observación a estudiantes en clases; y técnicas estadísticas como el análisis porcentual. Se identificaron limitaciones en el uso de los medios tecnológicos en manos de los estudiantes para la solución desde el aula y con la utilización de la tecnología móvil o m-learning, logrando los resultados deseados de que los estudiantes elaboren textos de producción y comprensión con el uso de aplicaciones que fortalecen las clases integrando la tecnología móvil.

Palabras clave: aplicaciones; dispositivos móviles; limitaciones; m-learning; protagonismo; tecnología móvil.

RESUMO
A tecnologia móvel chegou às nossas salas de aula, os alunos incluíram uma grande variedade de dispositivos móveis de que gostam em seus materiais escolares e os professores perderam destaque. O objetivo deste trabalho é comunicar as limitações encontradas em como integrar esses dispositivos no processo de ensino-aprendizagem dentro da turma para desenvolver uma determinada tarefa, trabalhar com um aplicativo que favoreça a motivação, filmar um vídeo com seu amigo mais próximo e sobre todo uso a linguagem que é usada nessa situação particular nos alunos do primeiro ano da carreira de Agronomia da Universidade de Pinar del Río. Métodos teóricos como análise histórico-lógica, indução-dedução, abordagem sistêmica e análise-síntese foram utilizados em sua elaboração; métodos empíricos como análise documental, levantamento e observação dos alunos nas aulas; e técnicas estatísticas, como análise percentual. Foram identificadas limitações no uso de meios tecnológicos nas mãos dos alunos para a solução a partir da sala de aula e com o uso da tecnologia móvel ou m-learning, alcançando os resultados desejados que os alunos elaboram textos de produção e compreensão com o uso de aplicativos que fortalecem as classes integrando a tecnologia móvel.

Palavras-chave: aplicações; Dispositivos móveis; limitações; Aprendizagem móvel; Liderança; Tecnologia móvel.

INTRODUCTION

The adoption by the Ministry of Higher Education of our country, Cuba, of the Common European Framework of Reference for Languages; teaching, learning and evaluation (Council of Europe, 2002), it is considered the common base that guides the national policy regarding the design of standards, face-to-face or virtual foreign language courses, evaluation instruments, teaching methodologies and didactic materials such as referents that make it possible to teach and evaluate progress in learning English as a foreign language compared to other countries and introduce international measurement parameters and alignment to the national context ; There , it is written in an integrative way what students can do when using a language to communicate, as well as the knowledge and skills to develop in order to act effectively.

With the implementation of the language policy of the Ministry of Education for Cuban universities, it is implied that Higher Education must necessarily adopt its own measures and actions as soon as possible to gradually graduate professionals who are competent in English language.

The need for organization, planning and management of the English language teaching-learning process with the interactive use of mobile technology in language centers, which places the student at the center of the process, is imperative. Currently, it is a requirement for universities to use interactive platforms as virtual learning environments where they can use educational tools; in short, the educational software for the web that allows the student to participate in the construction of their learning during the training process (Frómeta-Quintana *et al.*, 2018, p. 809).

The training of professionals in the present millennium has as one of its objectives the development of the necessary skills to transform the education of present generations with the use of new technologies and conquer the third environment from a humanistic perspective (Frómeta-Quintana *et al.,* 2018, p. 808).

The technological advances of recent decades and the increasing access to mobile devices, regardless of age, have caused their use to become an addictive activity. Communicative spaces have expanded exponentially and therefore require adequate training for their correct use in a teaching context, if traditional forms of teaching are to be taken to a higher level with the integration of mobile devices into the teaching-learning process of university students, a sector in which the greatest use of these devices occurs.

The dilemma of using or not using the technology that students bring to the classroom is in the hands of the teacher, of the possibilities of improvement and updating in the new technologies that he undertakes to overcome.

Taking into account the addiction of the young and not so young to the use of mobile devices based on a wide range of activities that range from taking pictures, searching for information on Wikkies, communicating with peers and friends, texting with the use of applications, save information about certain aspects of classes and other activities that are beyond the observation of teachers, it is easy to assume that the use of mobile devices for learning is imposed.

According to Yýldýz *et al.* (2020, p. 176), changes in the understanding of access to information, communication and cooperation have shaped a new generation of students, who can create their own learning context. In a study conducted by Magda & Aslanian (2018), students reported accessing course documents and communicating with their professors through their mobile devices, especially *smart phones.* More than 40% say they search for reports using their devices to connect to online learning systems.

In Cuban Higher Education there is no ministerial prohibition that students cannot bring their mobile devices to the classroom, but the use of available technology in favor of mobile learning is promoted, especially in these times of COVID-19; In addition, it is considered a valuable tool for understanding knowledge and raising motivation for a given task when used rationally and based on specific learning, always bearing in mind that the student is the priority in this process.

In developing countries, mobile devices have been found to be a key area for language teaching. The development of communication skills in language and the development of communication skills through mobile devices and their various applications find common ground in the development and appropriation of life skills. According to cf. Teodorescu (2015) (cited in Klímová, 2018, p. 860), there are enough applications for Teaching English as a Foreign Language (TEFL). These applications can be used for specific language teaching purposes, closely linking the existing relationship between learners and technology. Klímová (2018, p. 860)

continues that, even when research on mobile applications arouses the interest of professionals in mobile learning, there is little research on the results of its application; what the author considers to be given by the lack of research oriented to the results that this technology could imply in the understanding of knowledge, in addition to the fact that the interest of students in applications for learning is already clear evidence of its effectiveness, by achieving interest students in a new way of acquiring knowledge, linked to their daily activities.

Language teaching has always been a pioneer in putting innovations into practice in the educational field. Warschauer and Meskill , (2000)(cited in Trujillo *et al.*, 2019, paragraph 1) reaffirm this relationship by stating: "virtually, each language teaching has had its technology to apply". Today mobile technology governs, in a certain way, human life.

According to Liu *et al.* (2018) "Current mobile applications have been taken up in numerous fields and areas", including language teaching.

COVID-19 pandemic led us to use mobile telephony as an alternative means to carry out cognitive and learning tasks in various situations or subjects, including language teaching and the new possibilities of autonomous learning and "recreational", which provide various applications with high acceptance by the university community. Technology is aimed at the real and near possibility of communicating from anywhere, at any time and with the whole world in an efficient and even effortless way, which turns each communicative interaction into a learning opportunity. It is these learning opportunities that demand an organization, a direction of the teaching process with the use of mobile technology or *Mobile Assisted language Learning* (MALL).

Mobile telephony, with the use of *smart phones,* has managed to occupy a significant personal and social scope in the daily interaction of individuals in the most varied spheres of life. Embracing it in the teaching-learning relationship is one of the facets in which this device is immersed; therefore, technological research places it as one of the most studied (Duman *et al.*, 2015; Bradley *et al.*, 2017; Liu *et al.*, 2018) without counting the expectations caused by its use for teaching (Trujillo *et al.*, 2019).

Therefore, prohibiting the use of cell phones, tablets and any other type of mobile technology in the classroom is not going to help the formation of new generations in a world where this is already essential to live, to communicate and establish new horizons. Incorporating them into the teaching process would give more life to our classes and turn our classroom into a real scenario of the daily existence of students.

"The evolution of technology in a matter of months, not years, reminds us how important it is to keep our goals based on students as the center of the teaching-learning process" (Burns, 2018, p. 1). Knowing the interests of the students is paramount when selecting an application that proposes a desired and motivating result for the class. That is, do not use an application because it is new.

Mira-Giménez (2017) states that: " The current globalized world requires greater flexibility in teacher training programs for language teaching (Pérez, 2016) in all age groups, both in formal education and in lifelong learning through ICT" (p. 101).

To develop flexibility in undergraduate training, teachers are required to have appropriate preparation in the use of ICT, to reduce the possible digital gap between this technological generation and teachers, who in certain cases have a fairly short-sighted vision of the utility of appropriate technology

and do not have the skills required to teach through the use of these devices.

As active teachers of the English language, we must be prepared to face the changes that this brings. Communicate the limitations to integrate these devices into the teaching-learning process to develop a given task, work with an application favoring motivation, film a video with your closest friend and, above all, use the language used in that situation determined through the use of mobile equipment within the class is the objective of this work.

MATERIALS AND METHODS

In the present study, the dialectical-materialist approach to interpreting the phenomena of objective reality was taken as a basis, with the support of methods and techniques for collecting information: analysis-synthesis, inductive-deductive, hermeneutical-dialectical, and the survey; in addition to empirical ones such as bibliographic analysis, where a trend study was also carried out on the use of mobile devices in the teaching-learning process in the English Language discipline.

The historical-logical method was applied in the study of the evolution of the object and in the determination of the tendencies of its development, for the analysis of the previous ideas assumed about the teaching-learning process of the English language, with the use of the mobile devices to reveal the regularities that were manifested in this regard.

The induction-deduction method was used to determine the relationships established between the teaching-learning process of the English language and the use of mobile devices by students, which favored the interdependence between these elements.

For its part, the bibliographic analysis method was used to start from a search in the various sources of information, with the indicators m- learning (mobile learning), teaching-learning of the English language and proceeded to select those texts that, due to their relevance, and relationship with the research context were more appropriate to build the referential framework.

The study was carried out at the Faculty of Agronomy of the University of Pinar del Río "Hermanos Saíz Montes de Oca", with the written consent of all first-year students (31), whose ages range between 18 years for females and 19 for boys.

RESULTS

The results obtained with the sample showed progress in relation to collaboration, professional skills, communicative competence, cooperation and appropriation of the contents of the subject where the experience was developed.

The survey was applied to the students, with the aim of assessing the development of English language learning with the use of mobile technology in the Faculty of Agronomy, as well as their perception of the implementation of the methodology with the use of this mobile technology.

In the study carried out at the Faculty of Agronomy of the University of Pinar del Río "Hermanos Saíz Montes de Oca", of the 31 students surveyed, only three indicated that they do not use it for academic purposes, which represents 10% of the total; 42% of the total surveyed stated that they use it above all to store information and take pictures of the blackboard, 15 students claimed to use it in other classes in addition to language, for 48% of the total, and only one student uses the digital dictionary for the

processing of the data exposed by the survey that used the Excel application .

The table below shows the numbers of students and how they use mobile devices in class.

Table 1- Use of applications by first year Agronomy students

	Students	They use cell phones in class	Do not use it	Save whiteboard information and photos	Apps for learning
Féminas	14	13	1	6	0
Masculinos	17	15	2	7	1
Total	**31**	**28**	**3**	**13**	**1**

The use of applications to promote creative and lasting learning of the English language was not among the priorities of students and teachers. With the use of the methods and instruments mentioned above, it was in this context that the following limitations were identified in the use of technological means in the hands of students for teaching and learning the English language:

- Limitations in performing a diagnosis or removal of devices in the hands of students; not all support all applications that can be used.
- Limitations in the organization of the tasks to be carried out using mobile technology.
- Limitations in the existence of a guide for the development of these tasks.
- Limitations in teachers, digital immigrants, for the assimilation of the performance of some applications that they could be using in the teaching-educational process.
- Limitations for the student to assume their responsibility in the use of these devices for language learning.

various alternatives to face these limitations from the classroom, and with the use of mobile technology or m- learning, will be exposed in a future work on the solution to the problems detected and based on the

experiences accumulated during the COVID-19. pandemic period that prompted us to the mandatory use of communication technologies.

DISCUSSION

According to Sophonhiranrak (2021, p. 6) mobile learning is defined as "learning that connects online learning with situational learning where apps are used to push the boundaries of where and when learning can take place". The use of applications to which a didactic value is conferred taking advantage of their own characteristics, was one of the alternatives worked on in the investigation. The possibilities of these *offline applications* for the development of creative and lasting learning are in the orientation of the tasks, in their organization, maintaining the premise that the learning activities determine the applications to be used in the appropriate context of the English language.

It coincides with what was stated by Burns (2018, p.4), in committing to guide students to develop transferable skills, so that they are prepared for the unknown of the future; that it would be nothing more than the use of applications that facilitate the work that as professionals they will have to face, with a creative vision of the results to the social problems created by the productive development in which the Information and Communications Technologies will play a predominant role.

It is then about stimulating autonomy in the learning of foreign languages from the use of mobile phones in a social context and a new culture of language learning and teaching, insofar as "knowledge is produced through processes of interpretation socially conditioned and the student can activate certain met cognitive processes that affect the quality of the autonomy of their own

learning" (Frómeta -Quintana *et al.* , 2018, p. 812).

Students want to be more and better prepared for the current reality, therefore, it is decisive that universities have the latest technologies to be able to provide students with these advances, so that they can, by themselves, also be part of the new digital age.

The use of mobile devices in the teaching-learning process of the foreign language is an alternative to the use of specialized or computer laboratories that we use to access the Moodle platforms. In this alternative, the students do not need to have the laboratories to access the platform, since the resources placed in Moodle are available from the classroom itself.

In universities where we find a depressed technology due to economic conditions, the use of mobile devices is potentiated to effectively supply the English language teaching-learning process, not only with the replacement of computers and laboratories, but also with the use of applications to create learning situations in a real context of language use for communication.

One of the practical applications developed during the investigation is based on what was stated by Burns (2018, p. 6) . "Identifying your learning goals before a unit or lesson is essential", Knowing the objectives of the unit or classes is essential to know which application to use and how many students have the chance to really develop it, so that the acquisition of knowledge is effective.

We recommend working in groups when using applications to develop a digital product based on language learning. This helps the student with fewer possibilities of participation and motivates him to be part of the product that everyone in the group is developing; you can give opinions you wouldn't dare give in front of the whole bunch, the language apps.

There are various experiences in the use of mobile technology in language classes throughout Cuba, the objectives are also diverse. In some cases, it is used to save the performance of students in certain communicative situations involving the English language, to make a final product that collects said performance with the use of previously studied communicative functions, to carry out an interactive exercise in the classroom without the need for use a specialized laboratory, take photos of actions carried out in the classroom or videos of them, use of social networks for interaction (Vigil *et al.*, 2020, paragraph 4) ; but only on some of the occasions there is a methodology for the use of these means, which is what this research proposes.

The use of cell phones and tablets is appropriate, but only as a tool for a specific purpose or task. In this way, students can continue with their insistent and addictive use of the mobile. However, they will not be tempted to use their Android phones for any purpose other than academic use within the classroom and during class.

The use of mobile technology for language learning is an object of analysis due to the variety and number of possible applications to be used. The Language Centers are called to take on the challenge that this activity imposes on the direction of the students towards the achievement of their learning objectives and the organization of the process by the teachers. In this context, a guide for the management of mobile technology for learning the English language can become a way to direct and organize the teaching-learning process of the English language in language centers, which is unprecedented in the theory thus constituting a contribution to the process.

The preparation of this guide, based on the limitations found by researchers for the use of mobile technology integrated into the English language teaching-learning process at the Language Center of the University of Pinar del Río "Hermanos Saíz Montes de Oca", in which the student is at the center of the learning process, without ceasing to share the responsibility that the advisor and the student community have through its conscious and flexible use, which goes beyond the use of the most modern application for prepare them for accreditation-certification exams; With this guide, the tasks are structured by language skills, these being the ones that govern the entire process, taking advantage of the applications that are available. This, in turn, constitutes a novelty in the development of the teaching-learning process of the English language.

The conception of learning is identified with the use of available mobile technology, manifested in:

- The systematization of the theoretical foundations of this research, such as: developer learning and learning styles in the pedagogical order; ICTs as resources for mobile technology in use and the concept of taking advantage of this mobile technology through the application of the proposed methodology; and the concept of Near Development Zone of the Historical Cultural Approach in the psychological order; as well as the new culture of the teaching and learning of the English language and the communicative approach within the context of the special didactics of foreign languages.

The conception of a guide for the use of mobile technology in the teaching-learning process in the Language Center of the University of Pinar del Río "Hermanos Saíz Montes de Oca", expressed in:

- A methodology for the use of mobile technology in the teaching-learning process at the Language Center of the University of Pinar del Río "Hermanos Saíz Montes de Oca", as a way for its direction and organization.
- The use of technological resources in the hands of students, through the structuring for the use of mobile technology in the teaching-learning process at the Language Center of the University of Pinar del Río "Hermanos Saíz Montes de Oca".

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Conflict of interests

The authors declare no conflict of interest.

Authors contribution

All authors managed the information, reviewed the writing of the manuscript and approved the version finally submitted.