https://repository.uaeh.edu.mx/revistas/index.php/investigium/issue/archive

Boletín Científico INVESTIGIUM de la Escuela Superior de Tizayuca

Publicación semestral, Vol. 6, No. 11 (2020) 8-15

InvESTigium

ISSN: 2448-4830

Implications of the use of technology in tourism education

Implicaciones del uso de la tecnología en la enseñanza turística

S. Gayosso-Mexia [a], F. Benitez-Leal [b], A. Carrizal-Alonso [c], C. Torres-Rangel [d]

Abstract:

Educational Technology (TE) is the incorporation of information and communication technologies (ICT) in the field of education, focusing on that case specifically on ICT applied to teaching tourism. The use of technology in higher education is becoming increasingly important, considering the generational changes and the digital gaps manifested between students and teachers. This article seeks to identify the challenges faced in teaching tourism in higher education institutions by recognizing the ICT applied in the teaching-learning processes.

A documentary investigation was carried out based on the analysis of the different teaching methodologies using ICT in educational centers for the teaching of tourism. The analysis resulting from the different documents addressed, show that the implementation of technology in the teaching-learning processes in the tourist area allows students to be provided with an experiential education by simulating real contexts; Thus, familiarizing the student with his future professional field.

Finally, the door is left open for future research derived from the identification of the challenges that arise in tourism education through the use of ICTs and how these tools allow the development of necessary competencies in future tourism service providers in your professional field.

Keywords:

Education, technology, tourism, ICT

Resumen:

La Tecnología Educativa (TE) se traduce como la incorporación de las tecnologías de la información y comunicación (TIC) en el campo de la educación, enfocándonos en ese caso en específico a las TIC aplicadas para la enseñanza del turismo. El uso de la tecnología en la enseñanza a nivel superior toma cada vez más importancia, tomando en cuenta los cambios generacionales y las brechas digitales manifestadas entre alumnos y docentes. En este artículo se busca identificar los desafíos que se tienen en la enseñanza del turismo en las instituciones de educación superior mediante el reconocimiento de las TIC aplicadas en los procesos de enseñanza aprendizaje.

Se llevó a cabo una investigación documental partiendo del análisis de las diferentes metodologías de enseñanza mediante el uso de las TIC en los centros educativos destinado a la enseñanza del turismo. El análisis resultado de los diferentes documentos abordados muestra que la implementación de la tecnología en los procesos de enseñanza aprendizaje en el área turística permite proveer a los estudiantes una educación experiencial mediante la simulación de contextos reales; familiarizando así al estudiante con su futuro campo profesional.

Finalmente, se deja la puerta abierta para una futura investigación derivado de la identificación de los desafíos que se presentan en la educación del turismo mediante el uso de las TIC y cómo estas herramientas permiten el desarrollo de competencias necesarias en los futuros prestadores de servicios turísticos en su campo profesional.

Palabras clave:

Educación, tecnología, turismo, TIC

[a] Autor de Correspondencia, Universidad Autónoma del Estado de Hidalgo, https://orcid.org/0000-0002-5428-872X, email: sonia_gayosso8990@uaeh.edu.mx

[b] Universidad Autónoma del Estado de Hidalgo, https://orcid.org/0000-0003-1111-5340, email: fernando_benitez10121@uaeh.edu.mx

[c] Universidad Autónoma del Estado de Hidalgo, https://orcid.org/0000-0002-2001-1001, email: aide_carrizal8989@uaeh.edu.mx

[d] Universidad Autónoma del Estado de Hidalgo, https://orcid.org/0000-0003-4452-5741, email: christian_torres7198@uaeh.edu.mx

Fecha de recepción: 17/03/2020, Fecha de aceptación: 23/04/2020, Fecha de publicación: 05/07/2020

Educational technology in tourism education

The contributions of learning theories are regulatory, adaptive and more intuitive measures, in this way the subject becomes active, participatory and evaluative, with all this, the learning of the student is conditioned. [1]

From Cabero's research in 2015, it is important to highlight the learning rhizomatic, ubiquitous and self-regulating; 1) the rhizomatic learning requires a context in which the curriculum and the learning community are dynamically reformed, and where knowledge is not linear, knowledge is considered chaotic, a diversity of media that are not homogeneous is required and is also multidirectional and personalized; 2) self-regulated learning is in which the student applies the learning strategies he/she considers appropriate for his/her own learning, uses corrective goals, which will enable him/her to achieve the learning goals that are considered important; 3) ubiquitous learning refers to learn outside the box, classes not only given in the classroom, it can happen in a work center, in the student's home, in cultural centers, in parks, and others. The above leads us to deduce the fact that learning is not square and that it can be contextualized and led to real scenarios. 1

The technologies have allowed students to play an active role in the learning process, this role they play allows them to have access to information: they analyze, evaluate, make decisions, and discard information that does not serve and search for new; the important thing, according to Cabero, is that students must have self-regulated behaviors, in order to, an impact can be made in education.
Some of the advantages of Educational Technology (ET) is that exist tools that most of the time are provided by the school and have no cost, these allow for synchronous and asynchronous communication between the different roles of those involved in the process of education available to everyone. The disadvantages that could be considered as the most important are that many times the information is not analyzed, that means that is not verified the veracity of the information read. In addition, students can make a misuse of technology, that is, that students do not use technology for educational purposes but to socialize. [2]

One of the aim objectives is to provide to the actors involved in the process of teaching-learning, strategies that allow them to know the advantages and disadvantages of the use of educational technology, which will allow them to make guided and knowledgeable decisions so that the results of these are visualized in the acquisition of the different content taught through digital media and materials. [2]

There are different comparative models of resources, in questioning what is the medium used frequently and also analyzing the result of students benefiting from the use of a certain technological medium, therefore, it is recommended to know whether the new resources used in the educational context are functional and on the other hand it is intended to know whether the means used are more efficient than the teachers to transmit the information. [3]

In contrast, the ET incorporation in tourism education is analyzed from the perspective of tourism innovations; Castillo & Castrillón talk about the curriculum transformation in the tourist area, which, according to this author, one of the problems of tourism educators is the lack of the combination of requirements of the tourism sector with the needs of students and, this leads the coordinators of tourism educational programs to meet the needs of universities. [4]

Continuing with the previous author, it is important to consider, as Cabero does in his research in 2015, to make use of simulations of real contexts, making use of simulators that allow students not only to acquire theoretical knowledge, but also to develop job skills. [1]

In 2012, Azim comes to a conclusion where he mentions that students whose training has been based only on experiential education, in different practice processes and who have had permanent training in their training, will be better prepared to face in the field of work. [5]

Concluding with these authors, it can be said that students in the tourist area must be constantly in contact with tools that allow them to not only contextualize the environment and make use of simulators, but that they must face the field of work through permanent trainings throughout the professional training. [5]

Since 2014, higher education professionals have used different methodologies, tools, materials, among others, which are directly associated with technology innovation.

Following Dóniz, it is necessary to add that he demonstrated that the methodologies and teaching materials used, are effective when knowledge of the subject is acquired. In addition, Dóniz refers that the practical knowledge of the subjects should be done through continuous training of the skills to be developed.

Finally, it is important to communicate that the elaboration of digital material by the teacher, so that practical learning can be detonated, is through the realization of inventories, cataloging or interpreting tourist resources, to name a few examples; some others that may be useful are the

elaboration of Learning Objects and the use of educational platforms. [6]

According to the United Nations Educational, Scientific and Cultural Organization, an education is of quality if it promotes the development of the skills needed to participate in the different areas of human life, face the challenges of today's society and develop the life project in relation to others. [7]

Based on the study on the inclusion of Information and Communications Technologies in education, conducted by the Organization of Ibero-American States, for Education, Science and Culture (OEI), it mentions that in the last 30 years Information and Communication Technologies (ICT's) have impacted on various activities that have a direct relationship with education, ranging from the way we communicate and access to information for learning. Learning has changed, so now we must face the new paradigms. This study indicates that the total number of internet users has tripled from 1 billion in 2005 to 3.2 billion around the end of 2015; more than 40% of the population has access to the internet and new users are added every day; in 7 out of 10 households, located in the poorest sector of the population, equivalent to 20%, there is a cell phone. This means that in one day 207 billion emails can be sent, 4.2 billion Google searches, 152 million Skype calls and watch 8.8 billion videos on YouTube.

This data not only confirm why ICTs are considered a key element in reducing what is now known as the first digital divide, but also allow us to see the great potential they have for education, stressing that the use and incorporation of technology into education must be appropriate. [7],[8]

On the other hand, the National Association of Universities and Institutions of Higher Education (for its acronym in Spanish ANUIES), conducted a comparative study between 2016 to 2018 called 'Current State of Information and Communications Technologies in Higher Education Institutions in Mexico prepared in 2018', in which it mentions that ICTs have become a critical component of universities in all their fields (teaching, research and administration), so they are considered a tactical element that provides support to major university services, which had not previously been considered as a fundamental part of vocational training, but in the future they are called to become a strategic element for teaching in higher education.

Over the last decades the Educational Institutions have been incorporating technology to support and/or improve learning, being now part of its catalogue of services and contributing to improve the quality of education, from having their own educational platform that according to ANUIES, 20% of the Higher Education Institutions (for its acronym in Spanish IES) have them, while 47% have a product rented or purchased from a supplier, 28% is hybrid and 5% do not have any as shown in Figure 1.

However, it is not enough to have the resources but to make the most of them, with the main purpose of offering a quality education.

Figure 2 shows the number of education students who make use of virtual platforms for learning, that according to the population studied by ANUIES, 36% represents that between 500 and 2,999 students are the ones who use the educational platform for their education, while 5% represents less than 99 students that do not use it, so the use of IES teachers and researchers.

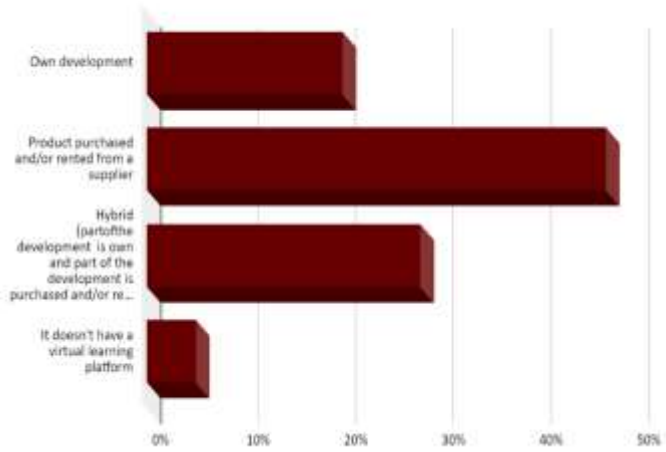

Figure 1. Type of Virtual Learning Platform that is used in IES

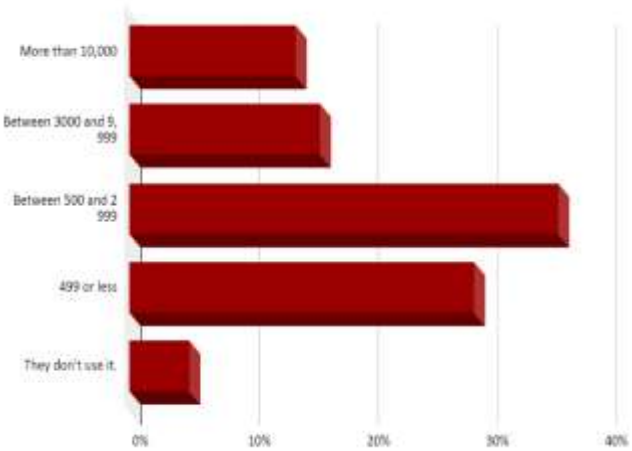

Figure 2. Number of students using the platform for educational purposes.

Meanwhile, Figure 3 shows, 47% of the total, fewer than 100 teachers are the ones who use them and 11% do not make use of these technological resources; according to the data mentioned in the study carried out by ANUIES, over the last three years there has been a 3% increase per year in terms of the use of digital platforms for higher education, so it is considered that the impact of technological tools on higher education has been supported by increasing resources in terms of academic knowledge as well as encouraging students to be self-taught in their vocational training. [9]

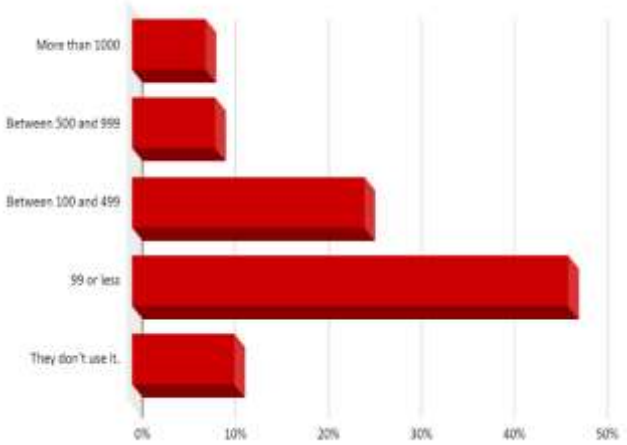

Figure 3. Number of teachers using the platform for educational purposes

Teaching models in tourism in the 21st century

In the global context, the most representative problems fall to the economy, education, social development and the environment. For example, the global economy was affected in 2009 by factors such as the sharp decline in trade flows and the sharp rise in unemployment rates, the global economic crises have reactions that lead to greater economic problems.

Therefore, the World Trade Organization (WTO) attaches the importance to tourism, specially for its contribution to employment, as a source of foreign exchange, as a key element in avoiding these factors, as the tourism services sector, and one of the most dynamic of the economy, makes a heavy use of labor and maintains numerous links with other important segments of the economy. [10]

Mexico in terms of education in the tourism sector, has a huge challenge in the recomposition of its tourism model. It is of great importance the creation of tourist products that respond to the scheme of production of sensations to maintain and improve their international positioning, in order to satisfy national demand, guarantee profitability to the inversion and favor the processes of social change in the receiving communities without tension or marginality, and finally, to preserve the natural environment, that offers quality and competitiveness, as is shown as a work that only in a conjunction of efforts will be faced. [11]

Currently, economic development allows people working, on the one hand, to increase their economic income and on the other, guarantees them the enjoyment of a paid holiday period; both factors favor the displacement of these people alone or accompanied to tourist destinations in search of activities related to rest, recreation, health and culture. [10]

Travel has been increased thanks to factors such as modernization in the means of transport and new technologies that facilitate such displacement, as well as the use of technologies in the contracting of services and customer service.

Today with the use of the Internet, there is greater access to the promotion and marketing of products and tourist services. [11]

On the other hand, generating quality educational environments for the teaching of tourism implies observing that at present, the modernization of society and in parallel with education, share a number of relations between man and his work, and the possibility of an improvement in the economic, labor and social environment of the tourism professional, the meaning given by educational models to the recognition of the study, allows to reorient the constant amount of training and vocations in the different areas of knowledge, technical and scientific disciplines and awareness in the individual. [12]

The following is an overview of the models of teaching in tourism, defining trends, impacts, scopes, emerging problem patterns, and benchmarks to clarify approaches and models of vocational training and curricular innovation in this field. As a social function, education allows the integration of the individual into their contextual relationship through the understanding, meaning and orientation of their knowledge; it contributes to consolidate a system, that intentionally highlights the capabilities and abilities of the individuals and modifies their behaviors from what they do or develop and, it also implies a possibility of being in itself a commitment. [13]

Today, education proposes intellectual, cultural and social challenges, which not only involve the social actors in it (students, teachers, researchers and university rectors), but also for entrepreneurs and employers who regard

university institutions as training centers for high-level professionals and the production of knowledge and technology essential to maintaining the pace of economic development. In the face of the constant reconstruction of a society, education enables and establishes social relations between human beings, their nature and their forms of production by defining their own action; furthermore there is a natural field of human activity that is not being affected by this phenomenon of planetary scale, this multidimensional process of change at the global level that is currently taking place. [13]

In this sense, new challenges in university quality that lead to effective and efficient academic management are put into evidence: the ability to permanently self-assess the quality of education, taught, both nationally and internationally, must not only be posed in cognitive terms, but must be measured in terms of response to the needs of society with a high degree of development of the educational process; currently the development needs of society, demand in terms of the needs of society social integration of sciences in two aspects: vocational training and work, in both spaces, the individual coexists with people trained in diverse areas of knowledge sharing different elements of knowhow, so the students must learn to socialize and reward their own to achieve an effective application of knowledge in the space and social group in which they develop themselves. [14]

Thus, it is worthy to adopt flexible curricular models, based on professional competences, that enable the design and restructuring of the curricula of the careers in Tourism, in order to allow interdisciplinary training, self-learning, the co-responsibility of teaching and decision-making regarding the professional treatment of tourism students. [14]

Higher education institutions, and specifically universities, define institutional policies of linkage, generate educational paradigms aimed at flexibilization, as well as articulation between educational programs and the labour market; the diversity in which it develops, makes it necessary to characterize from an educational point of view.

The different levels and orientations through which its work must be addressed, and it is fundamental to attend to its methodological theoretical construction, hence is the development of strategies and procedures for its operation, such as the response that educational institutions must offer to society. [15]

The world as a whole, faces a time of change and transformation that impacts its social, economic, political and cultural. Although, all countries face the challenges of globalization and technological changes, few are engaged in simultaneous change with the modernization of the country and its socio-economic system, which requires to redefine goals, redesign instruments and adapt decision-making mechanisms. [15]

The Technological Tools, the subsidy to the competencies of the student of Tourism.

As already discussed in this article and as a summary, Tourism, over time has adopted the use of technologies as promoters of the tourist service, as well as for the improvement in the efficiency of its administrative and work processes, given by the global nature of the activity. An especially important example of this use is with The Globalizing Systems, which have allowed the centralization of information from tourist destinations in a single system.

So, if Tourism is understood as a whole constructivist model (as has been addressed before), it is important that, from this fork, educational institutions tend to respond to the students in training, to lead to the dawn of competitiveness.

Today, the tools used to carry out tourism teaching are focused on digital innovation, i.e. Augmented Reality (AR), Big Data (BD) and Machine Learning (ML), are the tools that should be used by actors involved in the tourism sector. Therefore, the teaching strategies used before or to this day differ entirely from the future, from what should be used within this industry and which is undoubtedly one of the tourist trends, not only because of the application of the technology, but also by the intelligent connectivity that could lead to tourist destinations as smart.

All the above can only be done if tourism students know the trends of tourism and the revolution of business ecosystems.

According to an exploratory analysis, made to ten electronic consultation platforms in terms of economics and tourism, mentioned at the bottom of this document; the conclusion obtained is that the technology tools involved in tourism education, should address issues of digital marketing, innovation and product differentiation, adaptation of the tourist space, mobile applications, big data, artificial intelligence and collaborative economy. Therefore, as a form of exemplification are presented the following tools that in teaching practice can be incorporated into the content and learning activities:

Thinglink: Tool for the creation of' interactive sites in a practical and entertaining way, focuses on product description and interaction with potential customers,

turning out to be a first approach in the areas of big data and digital marketing.

Productboard: Early phase ideation software, and therefore allow to manage captured information, in order to promote a collaborative environment for employees and customers in the fulfillment of strategic objectives, serving this as a process of innovation and differentiation of supply in companies in the sector.

Poly by Google: It is a digital tool for the formulation of digital material in 3D, in order to create virtual environments of spaces or presentation of prototypes. This manages to be a means of adapting Tourism, to offer spaces as a means of reference, analysis and even as a means of virtual visit.

It is important that within higher education institutions to make a diagnosis to know the skills that teachers have in the use of Information and Communication Technologies, in order to generate an instrument that guide teachers precisely to implement ICT's in the classroom. [16]

Tourism is characterized as an extraordinary phenomenon of economic relevance around the world, it presents a growth dynamic that has changed markedly and that also differentiates with trends of the past to reach the new tourism trends; that is why tourism companies must nurture employees with innovative vision and efficient use of management tools. The ideal is to integrate AR with tourism, and that in addition the constant evolution of ICTs assume new and sophisticated experiences for students, allowing them in the future to make use of emerging technologies, which will allow them to offer their potentially innovative experiences, while they approach to their needs. [17], [18]

Another key point is the acceleration in the development of public policies that allow universities and their actors, to have adequate broadband, these public policies should allow society to make use of ICTs in addition to providing training to make use of them. This is intended to change the teacher's perception of the use of technology, in turn, motivates the student not to be a passive actor in his learning and to strengthen the professional development of the student of the tourist area and in turn the face-to-face classes remain constantly updated, in terms of the use of new technologies and emerging technologies. 19

A tool as a digital support for school activities is Google Forms because with this online application different types of studies can be carried out, i.e. ordinary assessments and diagnostic evaluations can be carried out, in addition to performing different types of questionnaires and surveys to track student knowledge or marketing targets, surveys for customers, etc; in addition to this making use of Google Drive allows you to have use of a cloud that allows you to store information and share files with students immediately, making students responsible for their files and the activities they must upload in time. [20]

"... the characteristics of current students, familiar with new technologies, highlight the need to create new materials and resources for the teaching of Tourism..." [21]

Conclusions

The use of technology in education, mainly in the tourist area allows today to have greater approach of students to the real scenarios, however it is of great importance that different educational learning theories and not only of the behavioral one be used; we must start from the implementation of educational technology and with it we will be able to provide students with different tools and digital means, which will allow them access to the information, evaluate their performance and generate their own knowledge.

Similarly, it is important to add that the tourism industry is constantly changing today and that is why education must be so, while it is true that teaching strategies are not static, we must be aware that the constant changes in education, in the tourism industry in technological generations and in emerging technologies will allow IES to adhere to constraining changes, which allow gaps to adhere to close.

ICTs are gaining ground within the tourism sector, as staying connected is an important requirement not only for travelers but also for all those working in the tourism sector, so it is sought that service providers accessibility and that not only tourism is transformed from service, everything that leads to evolution and that contributes to the knowledge society must be transformed, in this case in the use of ICT, education and the tourism industry.

In conclusion the implementation of technology in the teaching-learning processes in the tourist area allows students to be provided with an experiential education by simulating real contexts; Thus, familiarizing the student with his future professional field.

References

[1] J.C. Almenara, «Tecnologías de la Información y la Comunicación (TIC): escenarios formativos y teorías del aprendizaje,» Revista Lasallista de Investigación, vol. 12, nº 2, pp. 186-193, 04 septiembre 2015.

[2] J. C. Almenara, «¿Qué debemos aprender de las pasadas investigaciones en Tecnología Educativa?,» Revista Interuniversitaria De Investigación En Tecnología Educativa., nº 0, 2016.

[3] M. T. Zamudio, «Referentes de formación en educación superior. área de conocimiento:Turismo,» Sophia, vol. 11, nº 2, pp. 185-205, 2015.

[4] M. Castillo-Palacio, «Innovación curricular en la formación en turismo: un enfoque teórico-conceptual,» Praxis & Saber, vol. 11, nº 25, pp. 255-278, 2020.

[5] P. J. Sheldon, D. R. Fesenmaier y J. Tribe, «The Tourism Education Futures Initiative (TEFI): Activating Change in Tourism Education,» Journal of Teaching in Travel & Tourism, vol. 11, nº 1, pp. 2-23, 2011.

[6] F. J. D. Páez, «Metodologías de Innovación Educativas en Geografía: el Ejemplo de la Planificación y Gestión Territorial de los Destinos Turísticos,» pp. 177-187.

[7] UNESCO, «Las TIC en la educación,» 2019. [En línea]. Available: a internet y cada día se suman nuevos usuarios; en 7 de cada 10 hogares, ubicados en el sector más pobre de la población, equivalente al 20%, existe un teléfono celular. Esto implica que en un día pueden enviarse 207.000 millones de mensajes de correo ele. [Último acceso: 11 marzo 2020].

[8] OEI, «Inclusión de las Tecnologías de la Información y las Comunicaciones (TIC) en la educación,» 2018.

[9] ANUIES, «Estado actual de la Tecnologías de la Información y las Comunicaciones en las Instituciones de Educación Superior en México,» ANUIES, 2018.

[10] Organización Mundial del Comercio, Problemas mundiales, soluciones mundiales: Hacia una mejor gobernanza mundial, 2010, p. 248.

[11] F. O. Agüera y S. M. Cuadra, «El turismo como motor potencial para el desarrollo económico de zonas fronterizas en vías de desarrollo. Un estudio de caso,» El Periplo Sustentable, vol. 31, 18 mayo 2016.

[12] L. P. Suárez y A. L. T. Salcedo, «Ambientes Educativos de Calidad para la Enseñanza del Turismo,» IV SeminTUR – Seminário de Pesquisa em Turismo do MERCOSUL, 2006.

[13] L. M. Collado Medina, A. H. Márquez y M. M. Zagal, «Innovación curricular en turismo: un campo de estudio y referentes para la formación universitaria,» Revista Electrónica "Actualidades Investigativas en Educación", vol. 13, nº 1, pp. 1-39, 2013.

[14] J. Borges de Carvalho, A. C. Filho y C. Borges, «El aprendizaje empresarial en los emprendimientos sustentables del sector turístico del cerrado brasileño,» Dialnet, vol. 22, nº 3, pp. 568-582, 2013.

[15] J. H. G. Peña, «La regulación del comercio: retos ante el cambio tecnológico,» Revista IUS, vol. 12, nº 41, pp. 43-70, 2018.

[16] R. A. Martínez y R. L. Fernández, «Digital literacy for teachers in Cuban Tourism and Hotel Management Schools. Some experiences on its development, » Universities and Knowledge Society Journal i, vol. 12, nº 3, pp. 3-16, 2015.

[17] A. M. J. Henao, G. J. S. Bolívar, C. A. A. Gómez, S. M. V. Restrepo, C. A. P. Velásquez y L. L. G. Echeverry, «Augmented Reality applications in education to improve teaching - learning processes: a systematic review,» Revista Espacios, vol. 39, nº 49, 2018.

[18] S. Fernández y D. Deluca Alfano, «Herramientas virtuales de comunicación como experiencia innovativa de aprendizaje en la Tecnicatura en Turismo Rural de la FAUBA,» IN-RED 2019. V Congreso de Innovación Educativa y Docencia en Red., pp. 1629-1640, 2019.

[19] J. D. Lizarraga, «La capacitación virtual para el desarrollo de la capacidad de gestión turística – huamanga ayacucho, lima: instituto para la calidad de la educación», 2019.

[20] H. P. L. López, M. G. P. Vera y S. M. P. Vera, «Google Forms in the diagnostic evaluation as support in the teaching activities. Case Students Bachelor of Tourism,» RIDE Revista Iberoamericana para la Investigación y el Desarrollo Educativo, vol. 9, nº 17, 2018.

[21] C. M. García, L. T. Torralba, C. Vaquero y M. G. Hernández, «BIG-Tourism: A Tool for Teaching Geography in the Degree in Tourism, » RED - Revista de Educación a Distancia, nº 44, pp. 1-19, 2014.