ACTA
UNIVERSITARIA
Multidisciplinary Scientific Journal

E-learning through Google Hangouts: a tool in the teaching-learning process of English

E-learning a través de Google Hangouts: una herramienta en el proceso enseñanza- aprendizaje de la lengua inglesa

Higinio Fernández Sánchez[1*], Claudia B. Enríquez Hernández[2], Blanca Flor Fernández[2], Nazaria Martínez Diaz[3], María del Carmen Santes Bastian[3]

[1]Centro de Idiomas, Universidad Veracruzana, Campus Poza Rica-Tuxpan. Adolfo Ruíz Cortines 306, Obras Sociales, 93240 Poza Rica, Veracruz. E-mail: hifernandez@uv.mx
[2]Facultad de Enfermería, Campus Veracruz-Boca del Rio, Universidad Veracruzana.
[3]Facultad de Enfermería, Campus Poza Rica, Universidad Veracruzana.
*Corresponding author

Abstract

As today's world becomes a networked society, Information and Communication Technologies (ICT) have become powerful contributors towards the acquisition of a foreign language. The aim of this study is to examine the feasibility of implementing a technology-based program: the English as a Foreign Language (EFL) students' satisfaction with the program and the perceived benefits in improving their English skills (speaking, listening, reading, and writing). A one-group, pretest-posttest design was used. A six-week technology-based program, with 30 min sessions, was implemented once a week. A total sample size of 20 students enrolled in a one-day advanced EFL course. There was a high satisfaction towards the program (80%) and towards the facilitator (100%). Fifty percent of participants considered the Hangout sessions as very helpful in developing their speaking skill, 75% considered them to be very helpful for their listening skill., and 50% reported the Hangout sessions to be somewhat helpful in developing their reading skill and their writing skill. Even though taking time to work outside of the classroom had its challenges, the virtual environment led to the collaboration between students, who demonstrated high commitment during the sessions, allowing their writing, reading, speaking and listening skills to improve.

Keywords: Virtual education; e-learning; Google Hangouts; teaching-learning; English language.

Resumen

A medida que el mundo de hoy se convierte en una sociedad en red, las Tecnologías de la Información y la Comunicación (TIC) se han convertido en poderosas contribuyentes para la adquisición de un idioma extranjero. El objetivo de este estudio fue examinar la factibilidad de implementar un programa basado en la tecnología: la satisfacción de los estudiantes del inglés como lengua extranjera (EFL, por sus siglas en inglés) con el programa y los beneficios percibidos para mejorar sus habilidades en inglés (hablar, escuchar, leer, escribir). Se utilizó un grupo intervención con mediciones pretest-postest. Se implementó un programa de seis semanas basado en la tecnología, con sesiones de 30 min una vez por semana. Una muestra total de 20 estudiantes fueron inscritos en un curso avanzado de EFL de un día. Hubo una alta satisfacción con el programa (80%) y con el facilitador (100%). El 50% de los participantes consideraron que las sesiones del *Hangout* fueron muy útiles para desarrollar su habilidad de *Speaking*, el 75% las consideraron muy útiles en su habilidad *Listening* y el 50% informaron que las sesiones del *Hangout* fueron útiles para desarrollar su habilidad de *Reading* y su habilidad de *Writing*. Aunque tomarse el tiempo para trabajar fuera del aula tenía sus desafíos, el entorno virtual condujo a la colaboración entre los estudiantes, quienes demostraron un alto compromiso durante las sesiones, mejorando sus habilidades de escritura, lectura, conversación y comprensión auditiva.

Palabras clave: Educación virtual; e-learning; Google Hangouts; enseñanza-aprendizaje; Lengua Inglesa.

Introduction

In the past few decades, Information and Communication Technologies, better known as ICT, have enabled people to connect with others across the world using telecommunications (Kreps & Kimppa, 2015). These media can vary from the Internet to wireless networks and cellphones (Yifeng, 2015). In 1964, McLuhan (as cited in Scolari, 2015), a media and communication theorist, first used the term Global Village (also known as world village), the societal, cultural and community effects of telecommunications, and is often used as a metaphor to describe the Internet and the World Wide Web (Bobbit, 2011). People suggest that interconnecting cultures can generate opportunities among nations (Dixon, 2009).

Recent studies have found that ICT have had a massive impact on peoples' everyday tasks, from banking to networking (Aguado, Rogel, Garduño & Zuñiga, 2008); moreover, they allow people to acquire their everyday informal education (Da Silva, 2014). In the job market, the World Bank (as cited by Walsh & Cielisk, 2013) reported that ICT have reduced unemployment rates by creating new jobs like computer and game designer, and in the retailing world shopping online has become one of the most enjoyable benefits people have received from the ICT (Gianluca, 2009).

Evidence has shown that the implementation of ICT throughout the school years can aid in strengthening the skills required by students to join the workforce and society in general (Al-Wreikat, 2011; Voogt, 2012). According to Peña-Barragán (2017), there are three main advantages of ICT tools for education. Through ICT, images are used to improve the memory of students, teachers can better explain complex instructions, and teachers can elaborate interactive lessons, which could improve in student attendance and enjoyment.

These emerging technologies have become powerful contributors towards the acquisition of a foreign language (Andrei, 2017). In English as a Foreign Language (EFL) teaching, research findings have proven that ICT empower students' learning, motivation, critical thinking skills and their autonomy in learning (Andrei, 2017; Rahimi & Yadollahi, 2011). Alongside the evolution of innovating technology are the programs in language teaching that have undergone modifications, enabling new opportunities to promote the effectiveness of the language teaching (Isisag, 2014).

As today's world becomes a globalized society, the Language Center of the *Universidad Veracruzana*, *Campus Poza Rica-Tuxpan* aims to develop competent English-speaking students by the end of their English courses, allowing them to not only enrich their professional development but also their personal growth. The Language Center (LC) offers nine levels of EFL courses, each lasting a semester, divided into three basic levels, three intermediate levels, and three advanced levels. The LC is aware that it can be overwhelming for students to try and fit in an English course during a busy working, school week. In order to accommodate to students' needs, the LC offers diverse schedules, including Fridays from 16:00 h to 21:00 h and Saturdays from 9:00 h to 14:00 h. Such schedules enable students to be in a classroom setting only once a week.

Even though these types of schedules are beneficial to their necessities, practicing their English skills in their everyday life can be overlooked and therefore make the learning of the language less successful. This can become a burden for the student when he/she realizes that they are not producing the language as they would like to, due to the lack of contact with it. This issue raised questions on how teachers can take suitable approaches in order to provide language learning outside of the classroom setting integrating ICT. Google Hangout (video chat application) was taken up as a pilot project by a group of intermediate EFL students to harness the outside-class learning. The project integrated other ICT such as Facebook (online social network service), YouTube (video-sharing website), Google Drive (file storage and synchronization), and the Web to turn students into producers

ISSN online 2007-9621

Fernández-Sánchez, H., Enríquez Hernández, C. B., Fernández, B. F., Martínez Diaz, N., & Santes, M. C.

E-learning through Google Hangouts: a tool in the teaching-learning process of English | 1-7

of online content and created collaborative learning while giving them the chance to practice their four English skills.

Aim

To examine the feasibility of implementing a technology-based program: the EFL students' satisfaction with the program and the perceived benefits in improving their English skills (Speaking, Listening, Reading, and Writing).

Method

Design

A one-group pretest-posttest design was used. This design is considered appropriate for pilot studies (Whitehead, Julious, Cooper & Campbell, 2015), with special focus on the feasibility of the program.

Setting and sample size

The target population was EFL students. Well-defined eligibility criteria were predetermined in order to increase the representativeness of the sample. The inclusion criteria were students who were enrolled in a one-day EFL course at the LC of the *Universidad Veracruzana* (UV), *Campus Poza Rica-Tuxpan*, Veracruz, Mexico. Possibly suitable participants were recruited with an open-invitation, where they decided to participate or not under informed consent. A total of 20 EFL students agreed to take part in this study; this sample size was adequate according to pilot study designs.

Intervention

This technology-based program aimed to improve the development of the four English skills (speaking, listening, writing, and reading) in EFL students. The program was given once a week for six weeks with 30 min sessions. A professional EFL professor who had previous training with the implementation of technology-based programs designed and delivered the program. The program was delivered in an online based setting (Google Hangout App). Each Hangout session was planned and implemented as followed:

First a Facebook group was created in order to post the material required for each Hangout session.

Once the Facebook group was up and running, the material required for each Hangout session, such as links to online information, was posted every Saturday evening along with the instructions.

Every Wednesday evening at 9:30 pm the professor logged into his Gmail account and started a new Hangout session, where a link to join the session was given by the system. The link to the new session was then copied and pasted on the Facebook group, so the students could automatically join the session.

The Hangout sessions started at 9:30 pm and lasted 30 min average.

During the Hangout sessions, every student was given the chance to express their opinion about the material given.

ISSN online 2007-9621

Fernández-Sánchez, H., Enríquez Hernández, C. B., Fernández, B. F., Martínez Diaz, N., & Santes, M. C.

E-learning through Google Hangouts: a tool in the teaching-learning process of English | 1-7

Feasibility criteria and measures

Satisfaction

The satisfaction of the program was considered as the participants' point of view towards the program and the facilitator. An anonymous survey was administered face to face at the posttest by one of the co-authors of this study. The Satisfaction with Therapy and Therapist Scale of 12 items was administered; subscale 1, satisfaction with the Therapy of six items, with an internal consistency of 0.90, using the Cronbach's Alpha coefficient; and subscale 2, satisfaction with Therapist of six items, with and internal consistency of 0.89, using the Cronbach's Alpha coefficient (Oei & Green, 2008).

Preliminary effects

The program's preliminary effects were measured using an anonymous survey developed for this study and was administered before and after the program by one of the co-authors of this study. It included two sections; the first section asked for sociodemographic data and their contact with technology gadgets and online applications, and the second section included a four-item questionnaire regarding the way the program helped them develop their English skills. The questionnaire was developed by the researchers of this study, and it obtained an internal consistency of 0.60 with the Cronbach's Alpha coefficient.

Data análisis

The Statistical Package for Social Sciences (SPSS) programs, version 22.0 for Mac OX, was used for the statistical analysis and content analysis for the open-ended questions. The preliminary effects and the satisfaction were measured using frequencies, percentages and measurements of central tendency.

Ethics

The study was designed following the *Diario Oficial de la Federación* (DOF, 2013). The information was handled as anonymous, and an informed consent was given to the participants, where it was stated that they could opt not to participate if they wished to or not and/or abandon the study at any time.

RESULTS

Enrollment

Of the 30 students who were eligible to take part in the program, 20 consented to participate. The 10 students who did not accept to participate in the study declared not having time during the week for this program. Of the 20 participants, 16 completed the six sessions and were included in the data analysis.

Participant characteristics

On average, the students' ages ranged from 17 years to 21 years old and most were women (60%). Regarding the number of participants who had at least one gadget, 100% reported to either have a desktop computer, a laptop, a smartphone or a tablet. Seventy five percent of the students reported to have internet connection at home.

Participants contact with technology

As to whether the participants had used the application Google Hangouts prior the study, 13% reported to have used it before, but 75% reported to have used other types of video-chat applications. Thirty eight percent of the participants used a computer for the Hangout sessions, 31% used a tablet and 25% used a smart phone. Sixty nine percent of the students stated to have practiced their English skills outside the classroom less than one hour per week, prior the Hangout sessions, and 63% reported to have increased that amount of time to more than two hours a week during the sessions.

Satisfaction

As reported by participants, there was a high satisfaction towards the program (80%), and a high satisfaction towards the facilitator (100%). When assessing the reasons behind the satisfaction with the programs, the participants responded *"some of the topics were not of my interest"* and *"some of topics were a bit sensible"*.

Preliminary effects

As for the preliminary effects, 50% of participants considered the Hangout sessions as very helpful in developing their speaking skill, while 75% contemplated them to be very helpful for their listening skill. Similarly, 50% of the participants reported the Hangout sessions to be somewhat helpful in developing their reading skill and 50% also thought the sessions were somewhat helpful for their writing skill (table 1).

Table 1. Development of English skills

English skills	Very Helpful		Somewhat Helpful		Fairly Helpful		Unhelpful	
	fr	%	fr	%	fr	%	fr	%
Speaking	8	50	6	38	2	12	-	-
Reading	5	31	8	50	3	19	-	-
Writing	3	19	8	50	5	31	-	-
Listening	12	75	3	19	1	6	-	-

n=16

Source: Evaluation: Google-Hangout survey (Fernández, 2016).

DISCUSSION

This pilot study reports the value of outdoor learning as supported by other research, where they indicate education outside the classroom is of significant benefit to the EFL student (Cox, Calder, Fien & Ryan, 2015; House of Commons Education and Skills Committee, 2005). Additionally, group activities give self-confidence to students, while allowing the development of their personal and social education.

Even though taking time to work outside of the classroom has its challenges, as evidenced by research (Makel, Li, Putallaz & Wai, 2011), the virtual environment and the use of this tool led to the

collaboration between students, who demonstrated a high satisfaction with the program and the facilitator, allowing their writing, reading, speaking, and listening skills to improve. In addition, research has suggested that students can use different approaches using technology to improve their learning skills outside the classroom (Basheer-Nomass, 2013; Sayer & Ban, 2014), as evidenced by this study.

Furthermore, the use of Google Hangouts as an educational tool meant that the teacher and students devoted time and effort to the organization and coordination of sessions and improves their skills in the use of technology and technological tools. Nonetheless, the implementation of Hangout sessions outside the classroom can be time consuming for both the teacher and the students; internet availability and connectivity can also be a hassle at times, as supported by evidence (Haythornthwaite, 2005).

CONCLUSION

The purpose of this paper was to examine the feasibility of implementing a technology-based program: the EFL students' satisfaction with the program and the perceived benefits in improving their English skills (speaking, listening, reading, and writing). Overall, this pilot study allows EFL professionals to have an overview of how online programs can contribute to language learning. The authors of this work conclude that this study is worth further development in a larger study to determine its efficacy.

REFERENCES

Aguado López, E.,. Rogel Salazar, R.,. Garduño Oropeza, G., & Zuñiga, M ,F. (2008). Redalyc: una alternativa a las asimetrías en la distribución del conocimiento científico. *Revista Ciencia Docencia y Tecnología, 19*(37),11-30.

Al-Wreikat, Y., Adbullah, M. (2011). Effectiveness of teaching approaches of in-service training courses for EFL teachers in Jordanian schools. *English Language Teaching, 4*(1). doi: https://doi.org10.5539/elt.v4n1p190

Andrei, E. (2017). *Technology in Teaching English Language Learners: The Case of Three Middle School Teachers.* Coastal Carolina, United States of America: Coastal Carolina University.Retrieved on August 6, 2018 from http://onlinelibrary.wiley.com/doi/pdf/10.1002/tesj.280

Basheer Nomass, B. (2013). *The Impact of Using Technology in Teaching English as a Second Language.* English Language and Literature Studies, 3(1), 111-116. doi: https://doi.org/10.5539/ells.v3n1p111

Bobbitt, D. (2011). *Teaching McLuhan: Understanding Media.* Retrieved on August 6, 2018 from http://enculturation.net/teaching-mcluhan

Cox, B., Calder, M., Fien, J., & Ryan, L. (2015). *Learning outside the classroom.* UNESCO. Retrieved on August 6, 2018 from http://www.unesco.org/education/tlsf/mods/theme_d/mod26.html

Da Silva, R. (2014). Video games as opportunity for informal English Language Learning: Theoretical Considerations. *The ESPecialist, 35*(2), 155-169. Retrieved on August 6, 2018 from http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.878.7424&rep=rep1&type=pdf

Dixon, V. K. (2009). "Understanding the Implications of a Global Village" Inquiries *Journal/Student Pulse, 1*(11). Retrieved on August 6, 2018 from http://www.inquiriesjournal.com/a?id=1681

Diario Oficial de la Federación. (4 de enero de 2013). NOM-012-SSA3-2012, *Que establece los criterios para la ejecución de proyectos de investigación para la salud en seres humanos.* Retrieved from http://dof.gob.mx/nota_detalle.php?codigo=5284148&fecha=04/01/2013

Fernandez-Sanchez, H. (2016). Evaluation: Google-Hangout Survey. Unpublished manuscript.

Gianluca, M. (2009). e-Government 2015: exploring m-government scenarios, between ICT-driven experiments and citizen-centric implications. *Tech Ana Strat Mana, 21*(3),407-424. doi: https://doi.org/10.1080/09537320902750871

Haythornthwaite, C. (2005). Social networks and Internet connectivity effects. Information, *Communication & Society,8*(2), 125–147. doi: https://doi.org/10.1080/13691180500146185

House of commons education and skills committee. (2005). *Education outside the classroom. (Second Report of session 2004-05)*. Retrieved on August 6, 2018 from https://publications.parliament.uk/pa/cm200405/cmselect/cmeduski/cmeduski.htm

Isisag, K. (2014). The positive effects of integrating ICT in Foreign Language *Teaching. International Conference ICT for Language Learning, 5th edition*. Florence, Italy. Retrieved on August 6, 2018 from https://conference.pixel-online.net/conferences/ICT4LL2012/common/download/Paper_pdf/235-IBT107-FP-Isisag-ICT2012.pdf

Kreps, D., & Kimppa, K. (2015). Theorising Web 3.0: ICTs in a changing society. *Information Technology & People, 28*(4), 726–741. doi: https://doi.org/10.1108/ITP-09-2015-0223

Makel, M. C., Li, Y., Putallaz, M.., & Wai, J. (2011). High-Ability Students' Time Spent Outside the Classroom. *Journal of Advanced Academics, 22*(5), 720–749. doi: https://doi.org/10.1177/1932202X11424880

Oei, T., & Green, A. (2008). The satisfaction with therapy and therapist scale-revises (STTS-R) for group psychotherapy: Psychometric properties and confirmatory factor analysis. Professional Psychology: *Research and Practice, 39*(4), 435-442. doi: https://doi.org/10.1037/0735-7028.39.4.435

Peña-Barragán (2017). *La inclusión de las TIC en la educación Conversatorio. Instituto Nacional para la Evaluación de la Educación: México*. Retrieved on November 11, 2017 from https://www.inee.edu.mx/index.php/publicaciones-micrositio/blog-revista-red/610-blog-revista-red-home/blog-revista-red-articulos/2679-la-inclusion-de-las-tic-en-la-educacion

Rahimi, M. (2011). ICT use in EFL classes: A focus on EFL teachers' characteristics. *World Journal of English Language, 1*(2). doi: https://doi.org/10.5430/wjel.v1n2p17

Sayer, P., & Ban, R. (2014). Young EFL students' engagements with English outside the classroom. *ELT Journal, 68*(3), 321–329. doi: https://doi.org/10.1093/elt/ccu013

Scolari, C. A. (2015). Los ecos de McLuhan: ecología de los medios, semiótica e interfaces. *Palabra Clave, 18*(3), 1025-1056. doi: https://doi.org/10.5294/pacla.2015.18.4.4

Voogt, J. (2012). ICTs for Curriculum Change. *UNESCO Policy Brief April 2012, 12.* Retrieved from http://unesdoc.unesco.org/images/0022/002202/220243e.pdf`

Walsh, C., & Cielisk, N. (2013). ICTs are creating new Jobs and making labor markets more innovative, inclusive, and global-World Bank study. *The World Bank*. Retrieved on August 6, 2018 from http://www.worldbank.org/en/news/press-release/2013/09/10icts-are-creating-new-innovative-inclusive-and-global-world-bank-study

Whitehead, A. M., Julious, S. A., Cooper, C. L., & Campbell, M. J. (2015). Estimating the sample size for a pilot randomised trial to minimise the overall trial sample size for the external pilot and main trial for a continuous outcome variable. *Statistical Methods in Medical Research, 25*(3), 1057-1073. doi: https://doi.org/10.1177/0962280215588241

Yifeng Hu. (2015). Health communication research in the digital age: A systematic review. *Journal of Communication in Healthcare, 8*(4), 260-288. doi: https://doi.org/10.1080/17538068.2015.1107308