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Digital Skills for Communication and Content Creation: Can B-learning Greatly Influence Them?

Habilidades digitales para la comunicación y la creación de contenidos: ¿Puede el aprendizaje bimodal influenciarlas?

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Abstract

This article reports the results of a study that took place at a private university in Bogota, Colombia. An English language course was the scenario for applying a set of sessions that sought to determine how blended learning could influence the development of digital skills for creativity and communication via a pedagogical intervention during an academic term. A quasi-experimental design was carried out to measure the variable 'communication and content creation skills' by conducting a pre- and post-test survey. From the statistical test, the general hypothesis was accepted for the scope of this study, stating that the b-learning model did not develop the skills chosen in this implementation meaningfully. These findings imply that creativity and communication skills can be influenced by this model; also, thought-content-creation skills received a major influence according to the internal statistical tests. However, the statistical tests that comprised this method also suggested that the impact was not high enough to prove the main hypothesis. Furthermore, findings provide an opportunity to explore research designs that are not common in this field of education.

Keywords: b-learning, content creation, communication, collaboration, digital skills

Resumen

Este artículo muestra los resultados obtenidos de un estudio llevado a cabo en una universidad privada en Bogotá, Colombia. Un curso del programa de inglés fue el escenario de aplicación para unas sesiones didácticas que buscaban establecer cómo el aprendizaje bimodal influenciaba el desarrollo de

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las habilidades de la comunicación y la creación de contenidos en la intervención pedagógica durante un periodo académico. Para este alcance, se desarrolló un estudio con diseño cuasi-experimental para la medición de la variable 'habilidades de comunicación y creación de contenidos' por medio de un diseño de encuesta pre y post test. Las pruebas estadísticas aplicadas al análisis de resultados arrojaron datos que aceptan la hipótesis general propuesta en el estudio, señalando que el aprendizaje bimodal no ejerce una influencia significativa en el desarrollo de las habilidades involucradas. Los hallazgos revelan que las habilidades de creación de contenidos y de comunicación pueden ser influenciadas de acuerdo con las pruebas estadísticas internas, más sin embargo también señalan que su influencia no generó suficiente impacto. Al mismo tiempo, los resultados abogan por explorar diseños de investigación poco comunes en este campo académico.

Palabras clave: aprendizaje bimodal, creación de contenidos, comunicación, colaboración, habilidades digitales

Introduction

Twenty-first century skills for educators have heightened a training wave for digital competency mostly for teachers, instructors, and educators (Rodriguez Armenta, & Padilla, 2007; Area Moreira, Fariña, & San Nicolás, 2012). However, few studies have recently explored the students' domain of digital competency in the national educational context (González-Zabala, Galvis, & González-Zabala, 2016; Casillas & Cabezas, 2017). Some of these formal studies have dealt with the technology and digital literacy as a means to have students excelling in their educational path.

During teaching practices in the EFL field, it is perceived that students' needs face a tremendous fast adaptation yet they are struggling to implement ICT tools use skillfully in education environments. If this situation persists, teachers, educators, and institutions may also struggle with some distant and not easy ways to access and facilitate language learning activities, such as students and teachers feeling incompetent or dealing with unsatisfactory classwork or tasks taking place in training activities which involve ICT use.

In order to tackle the previous pedagogical background in the educational context of this pedagogical intervention, the scope of the research study presented in this article explores a set of skills known as the digital competency framework (DigComp) by the European Commission (Ferrari et al., 2013). The key factor was to explore these skills in professional practices in foreign language courses such as English language courses. In this way, this study inquired about how the b-learning model can provide influence on the development of digital skills for communication, collaboration, and content creation within a group of Business Administration students while taking an English language course at a higher education institution. In terms of the application, a non-randomized control group, pre-test and post-test research design was used for the analysis of data in this pedagogical implementation.

An important initial attempt has been investigated by a research group whose aim was to design an instrument in which digital competency could be measured to guarantee better academic performance in a private university (Cantor, Corchuelo, Montenegro, & Pinzón, 2016). Findings of this study have resulted in one instrument that has been used inside the institution to classify levels of competency and performance of the students of the university.

Other research studies[2] have found great importance in the same context of higher education, mainly involving b-learning implementations in higher education institutions as in Spain (Aznar Díaz, 2005; Echeverría, 2017). The findings discuss the positive aspects of quality and innovation practices associated with this education model. Other studies involving resources and online tools were evaluated as a consistent methodology for the b-learning courses in higher education (Álvarez, Rodríguez, & Ribeiro, 2011). Furthermore, in Mexico, a study explored scientific competencies through a b-learning model (Gay, 2014). The major results pinpointed a development of professional skills and teaching strategies that were beneficial to learning experiences and proposed the limitations of the b-learning model. Finally, in Colombia, a study which sought teachers' and students' perspectives in higher education, after years of implementation with b-learning, (Arango Vásquez, Quinceno, & Vásquez, 2016) presented a case disputing four main characteristics of the pedagogical and didactic implication for the b-learning model implementation.

Encouraged by this current status, the research study in this article proposes the following general research question: How significant can b-learning influence the development of digital skills for communication and collaboration, and skills for content creation within an English course in a group of business administration students?

Conceptual Framework

In order to review the elements regarding digital competency in the higher education field, I will embark on an encompassing conceptualization of the core concepts for this study as being blended-learning education, digital competency, and its areas comprehended by digital skills for communication and collaboration, and digital skills for content creation.

Blended-learning as an Alternative Model for Higher Education

B-learning education has been defined as the balanced mix or blend of two learning modalities; the first takes place on site and the second takes place online anytime a student

[2] The studies cited in this paragraph were done within many professional programs, not exactly in EFL. However, they were conducted under advice of professionals in education. These also focused on statistical analysis, which is congruent with the type of analysis presented in this current study.

devotes him or herself to independent learning. B-learning has also been referred to as hybrid learning by many authors (de Benito Crosetti, Gisbert Cervera, Pérez García, & Salinas Ibáñez, 2018; Marsh, McFadden & Price, 2003), meaning the same within the education model, and in this research report adopted as b-learning. This concept has been flagged by authors such as Llorente (2010), and Sharma and Barrett (2007), among others, with a strong emphasis on time distribution not only as a pedagogical and institutional decision but also as an attempt for the best ICT incorporation practices in teaching and learning endeavors.

Since models in education were framed by the use of emerging technologies registered back in the 60s, 70s, and 80s, such as computer-based learning (CBL) and more so with the Computer-assisted language learning (CALL) (Levy & Stockwell, 2006; Levy, 1997); there have been certain transformations which can shape educational programs differently from a single face-to-face teaching model.

Nowadays, technological tools and a variety of services can highly improve the amount of time, effectiveness, and the modality in which learners can choose how learning is carried out. No longer can onsite classrooms be provided with resources of spaces for learning environments, but some b-learning strategies can be adopted as an institutional decision for academic programs to develop.

This research study finds the concept of b-learning as Llorente (2010) claimed: a learning modality that combines the best face-to-face teaching strategies with the best flexibility from online learning, all of this integrated towards the benefits of student-centeredness with technology support.

Furthermore, some essential considerations by other authors need to be reflected upon for this complete, let us say, 'recipe'. For Hooie (2013), this educational model gains effectiveness over the teacher's role since it is mentioned that:

> It allows us to keep the best of existing practice, while trying new strategies designed to make us more effective; when applied correctly, blended learning enables us to focus on the most essential teacher roles. In other words, blended learning pinpoints the strategies that makes us most effective and frees time for us to focus on those strategies. (Hooie, 2013, p. 6)

For this author, the b-learning model shares that kind of formula in which all learning activities take place in two settings: one that takes place on site with the best strategies to extend upon for students, and the other that takes place online to take the best advantages of it. Additionally, this model explains that what is being 'blended' is any kind of traditional instruction that obtains the best of its complements with online instruction (Bersin, 2004). That is precisely why the research study presented in this article considers an empowering opportunity to take the best advantage of this model

for education rather than a traditional path. Professionals are facing the trend of rapid change in higher education, which requires them to possess a set of skills suitable for the 21st Century.

What Digital Competency Diverges

The second concept I will be looking at is digital competency. Concerning the current research study, this competency stems from the vast theme of digital literacy, and later sorts itself into sets of areas of competency. Digital competency is a grouping of knowledge, attitudes, and abilities that permit a citizen, in this case a student, to have a critical choice and use ICT tools, so that work, learning, and leisure goals are achieved with inclusion and social participation (Ferrari et al., 2013).

In particular, the framework referred to as DigComp by the European Commission Joint Research Center has been avowed as a set of skills which implies the knowledge and attitudes to achieve a certain goal as a confident, critical, and creative ICT user (Ferrari et al., 2013). The competency can be used for all areas of human activities such as working life, professional training, learning, and even leisure. The digital competency and areas are well distinguished from information literacy in the sense that they require much more effort and conscious technical capacities for a citizen to identify, use, and handle well, any kind of ICT resource for personal use. More assertively, digital competency is made up of these skills since they imply the use beyond a simple canny choice of digital means. As a final point, for a citizen to become digitally competent, she or he must possess the ability to decide and discern from the good works within a digital world (Esteve & Gisbert, 2013, p. 31).

Considering that the broad and complex taxonomy of digital competency is made up of numerous skills and six or eight levels of performance, the current research study only targets these two areas: communication and collaboration as well as content creation because these areas were the ones most related to the pedagogical intervention. The following paragraphs expand on these areas.

Digital Competency: Skills for Communication

On the one hand, this main area of competence refers to the necessary skills to establish communication and collaboration with others within digital environments (Carretero, Vuorikari, & Punie, 2017). With a set of six skills, this area is classified into a complex taxonomy which bears those related to (1) interaction within digital technologies, (2) sharing through digital technologies, (3) getting involved in citizenship, (4) collaboration through digital technologies, (5) using proper ways, and (6) administering digital identities.

Digital Competency: Skills for Content Creation

On the other hand, this area refers to the skill to create, edit, integrate, and modify digital contents in both ways, pre-existing ones or those created from scratch. Divided into four skills, this area contains the following skills descriptors: (1) using digital content creation forms, (2) integrating and re-elaborating digital content, (3) understanding and protecting rights and authorship, and (4) programing skills domain (Carretero et al., 2017).

In closing, this conceptual framework greatly assists the research in defining a current state of the art that has, rather, been scarcely explored nationwide as a means of measuring digital competency and skills handled by students in higher education levels.

Research Design

Concerning exploring the combination of b-learning and digital skills for communication and content creation, these two skills areas became variables for the research design and are explained as follows. A quantitative and quasi-experimental pre- and post-test design was carried out to measure the influence gained, with the dependent variable against the independent variable under the pedagogical intervention or treatment for the following reasons. The quasi-experimental research consists of the deliberate manipulation of at least one independent variable in order to observe its behavior and effect on other variables (Hernández, Baptista, & Fernández, 2014, p. 151). In this study, the focus on the variables was established as the independent variable being b-learning, and the dependent variable as the digital skills. By independent variable, it implies that the experimental group will receive the treatment and control using b-learning sessions. Also, the dependent variable implies that digital skills for communication and collaboration will be integrated in the sessions for both groups, control and experimental.

Additionally, the quasi-experimental study uses a random sample selection criterion that does not feature the nature of the study. As a result, to perform the sampling and apply the research design, the quasi-experimental designs are similar to the experimental design of random samples because it involves the manipulation of variables and also differs in that subjects are not randomly chosen for the treatment group (Ary, Jacobs, Sorensen, & Walker, 2010, p. 328). It is important to keep in mind that these criteria chosen for the research design can provide control over the variables which were handled in the study. This means that the variable *digital skills for communication and content creation* was controlled during the pedagogical intervention by providing the same learning practices and all participants were taught within the same English program goals. Nevertheless, the variable b-learning was part of this treatment in the experimental group only.

Three single steps were considered for implementing this research design as follows:

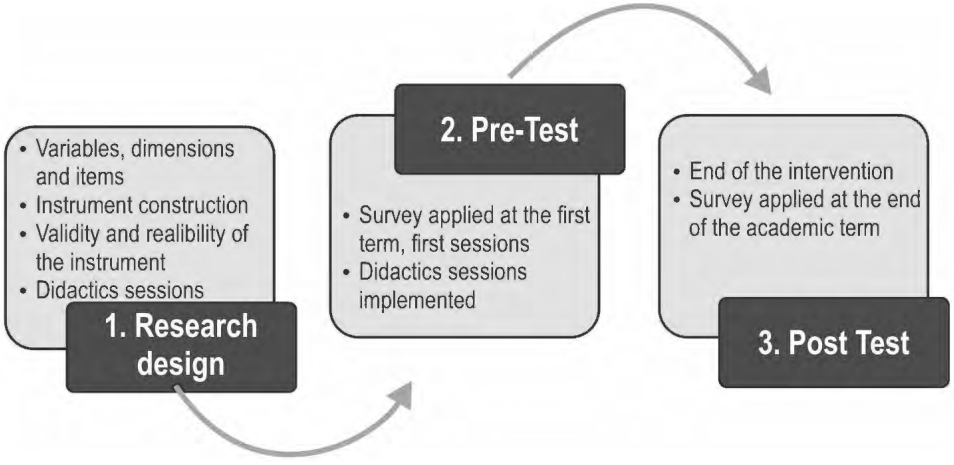

Figure 1. Steps of the Research and Data Collection

This design permitted the implementation of a pedagogical intervention with two different groups of students under certain conditions in a normal learning process and to observe the phenomenon of the development of digital skills.

Pedagogical Implementation: A Blend between English Language Lessons and Digital Skills

In this current study, the two areas of digital competency were considered within the following scenario especially addressed to explore, understand, and implement learning tasks for the digital skills training. This intervention was conducted during a single academic term in an English language course at a private university in Bogota, Colombia. The atmosphere and characteristics of the groups in this English course for the implementation were a guarantee that bias factors could alter the experiment, such as participants enrolled from other professional studies, other teaching styles, or students enrolled in superior English language proficiency levels. In this way, the factors could interfere with the variable, at least for digital skills development. This explains choices and criteria required to manipulate the variables for the quantitative analysis properly.

Finally, a set of didactic sessions were designed based on the syllabus for the current English language program at the institution in which some activities had to be carried out during b-learning distribution by the teacher (See Appendix A, sample of didactic sessions design). The sessions were authorized and shared with the academic head of the department

to be functional in the academic term. The purpose of these sessions was to provide certain tasks to be achieved by means of collaboration and creation of digital content according to each of the groups.

Instrumentation

In the first step, the instrument for this study was devised as an adapted summary taken from the skills proposed by the theory constructs of digital competency areas (Ferrari et al., 2013). Afterwards, having the dimensions established and their specific indicators per skill, the selection of items in the survey was a group of statements articulated as a capacity, ability, behavior, or attitude against certain domains.

Furthermore, the construction of this survey required validity and reliability to be used to avoid bias in the study (Ary et al., 2010). Validation was applied by having the instrument examined under careful analysis by a panel of three expert ICT professors in order to classify items in the survey with the criteria of relevance, sufficiency, clarity, and coherence. After this, the first piloting survey was reduced from 39 to 34 items (See Appendix B).

Subsequently, the survey was piloted with a group of a similar population before being applied to the focused groups. Finally, the internal reliability coefficient test was run to determine the Cronbach's alfa coefficient (Bryman, 2012). In this reliability test, this coefficient obtained a high reliability and consistency number with a value of $\alpha = 0.953$, which could corroborate substantial consistency among items for the strength on the final version of this survey.

To determine the influence in the experiment analysis, three categories were established as the level of perception that participants had about their own performance relating to each ability. The categories matched the ones in the theory by Ferrari et al. (2013) in which levels of performances of the digital competency are basic, intermediate, and advanced[3].

Population and Sample

Fifty business administration students, enrolled in the same English level I course, willingly participated in both groups. In this population, 52% were male participants and 48% were female. Also, 68% of the participants were from 18 to 25 years-old; 20% were from 26-33 years-old; and 12 % were over 34 years-old.

On the one hand, the experiment implies a control group of 25 students which received regular teaching sessions with the traditional English language program, same syllabus.

[3] Please, look at Ferrari et al. (2013) for a detailed description of these three levels of performances of the digital competency.

Lessons for this group took place on campus with no emphasis on digital skills implicitly provided. On the other hand, an experimental group of 25 students was taught the same English language lessons with adapted blended-learning sessions which required certain communication and collaboration or content creation digital skills in certain tasks online directly.

Data Collection

This research was implemented within a regular academic program. The English level I program consisted of 16 weeks and 32 hours of direct work, and students were instructed in a single two-hour weekly session. From these regular sessions, just 10 of them were chosen as the pedagogical intervention sessions with the syllabus and tasks oriented to the digital skills development. The survey previously described was applied in two different moments with both groups; first, as a pre-test at the beginning of the academic term 2019-I, and a post-test after the pedagogical implementation was completed.

The first stage called pre-test helps the statistical analysis determine whether the data obtained presented normal or abnormal distribution, and thus, this step helps decide which test corresponds to the data analysis. To illustrate how this survey can reveal and account for the influence the research pursues, these were the hypotheses being tested once the survey was applied during the academic term:

Main Hypothesis

- $\mathbf{H_0}$ B-learning does not influence meaningfully the development of digital skills for communication (Dimension 1) and content creation (Dimension 2).

Specific Hypotheses

- $\mathbf{H_{0\text{-}D1}}$ B-learning does not influence meaningfully the development of digital skills for communication and collaboration.
- $\mathbf{H_{0\text{-}D2}}$ B-learning does not influence meaningfully the development of digital skills for content creation.

Further on, the implemented tests provided the analysis in the following direction: a survey was applied comprised of tests to prove this hypothesis per group and per moment; this is the pre-test and post-test. Due to this need, two kinds of statistics were run, and a significance level was provided to prove each hypothesis as explained in the next section.

Statistical Tests for Hypotheses

Firstly, the study opted for nonparametric techniques in data interpretation. The Mann-Whitney U test was chosen because of the need of analysis over the two groups, and to

establish if the difference found in ranked values is statistically meaningful against the hypothesis (Fraenkel & Wallen, 2012, p. 237). Also, as this group of experts declared, this test is used when the data were obtained from two independent samples (Ary et al., 2010). Additionally, the Wilcoxon signed rank test was used in the values obtained due to the nature of the descriptive categories and items used in the data interpretation procedure as two paired groups are compared using descriptive and ordinal categories.

The significance level was established as 5%, which means that the value determined to reject the null hypothesis in each section of the study must show a value of $p. \leq 0.05$ (equivalent or under) to prove statistical and meaningful difference.

Findings

The general findings shared in this section correspond, at first, to the general hypothesis and the analysis of both dimensions (dimension 1- communication, and dimension 2- content creation). For this purpose, the results present both moments of the survey application of the pre-test and post-test, and the two groups, experimental and control samples. Therefore, some techniques of inferential statistical analysis were used when data were analyzed. The following figure shows percentages on the skills improvement by level of performance obtained with the survey:

In Figure 2, we can observe the pre-test and post-test results showing that only two categories were found in the results: intermediate and advanced. In the experimental

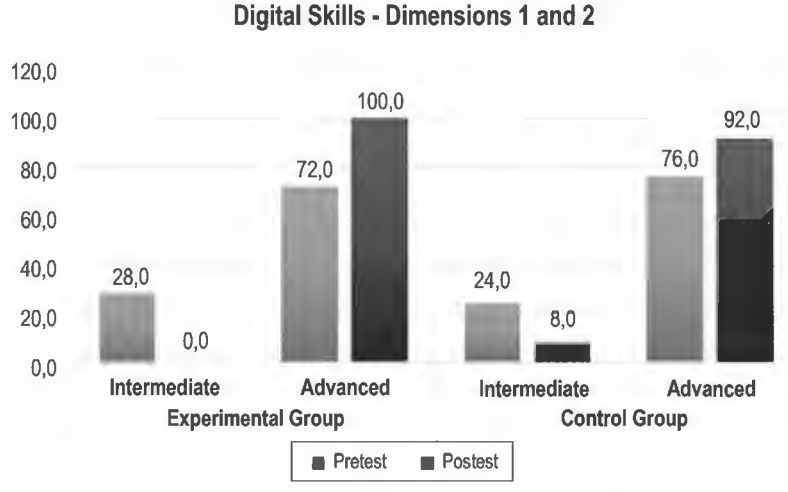

Figure 2. Digital Skills General Test Result

group, there was an evident improvement of all skills from 72 % to 100% in the advanced category, which explains that many individuals evolved after the pedagogical implementation. While in the control group, from 76% to 92 % in the category of advanced, this shows an improvement of just a 16%. These results merely indicate that there was somewhat a progression in digital skills during the moments the study took place; however, it judges 28% in the experimental group as a slight indicator to convey as a successful method in this study.

The following figure represents the values obtained when running the analysis of skills for communication and collaboration dimension isolated.

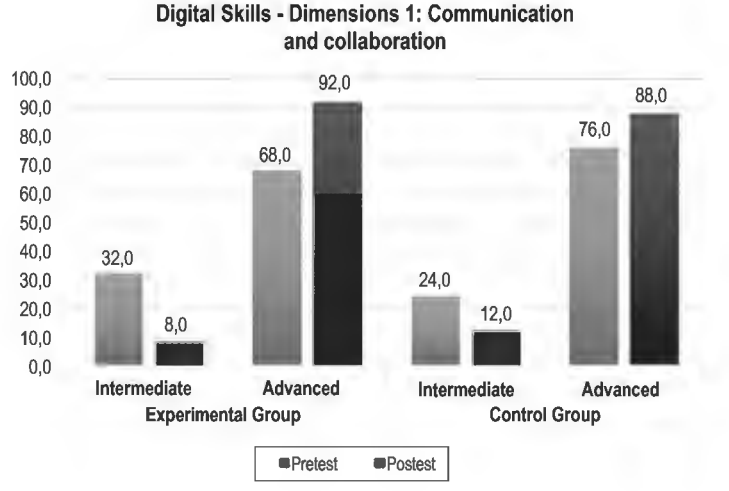

Figure 3. Dimension 1- Communication and Collaboration Results

We can observe in Figure 3 that dimension 1 items account for the data behavior in communication skills. In the experimental group, there were from 68% to 92 % of participants who were scored in the advanced category, which denotes an improvement of 24% in these skills. On the other hand, in the control group a 76% changing to 88% of advanced participants were classified in the advanced category, which is interpreted as a high domain level after the implementation was done. This reveals that just 24% (intermediate) and 12% (advanced) of the participants moved amid categories and provided the study with deficient evidence of improvement of digital skills for communication.

As a summary for the data analyzed about skills for content creation, Figure 4 is presented.

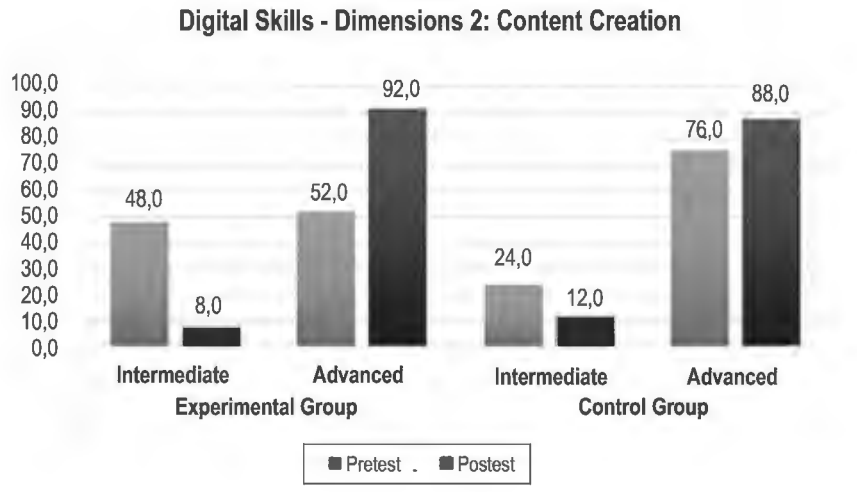

Figure 4. Dimension 2- Content Creation Results

In Figure 4, the behavior of items regarding dimension 2 are observed in digital content creation. In the experimental group, most of the participants who felt their content creation skills were intermediate could highly progress towards the advanced category by the end of the intervention; from 52% to 92 % showed a positive shift of their development of skills by 40%. And in the control group, those participants who increased from 76% to 88% on the post-test, achieved an unexpected low change of just 12%. Alternately, this issue could be viewed as favorable for the impact of the b-learning model on the development of digital skills for content creation.

Results for Statistical Tests for Hypotheses

The first statistical test performed with the values in the general hypothesis found a value of significance Sig. 0.750, in the pre-test; as a consequence, this could guarantee that all participants were on par with the stage and category of skills development. In other words, at the moment the pre-test was carried out, there were not any incongruent differences in the 50 participants related to their level of performance and it means most of the values were even or at the same level.

Presently, the value found at the moment of post-test, was Sig. 0.153, which makes the study assesses the main hypothesis as accepted. What this means is, there was not a significant level of change within the values obtained to demonstrate that the control group

is meaningfully different from the experiment group. There is no statistically significant influence from b-learning in the development of these skills in the setting.

Subsequently, the other statistical tests Mann-Whitney U tests and Wilcoxon were performed to analyze the values obtained in each detailed segment separately; this is, values obtained across experimental and control groups to compare the level of performance, values obtained across the pedagogical implementation span (pretest and posttest) to compare improvement, and those obtained individually in each dimension of the digital abilities (communication and content creation) to compare elements of the competency. These values were Sig. 0.014, Sig, 0.083, Sig. 0.002, and according to the stated value of significance, these figures indicate that there was not enough relevant difference in any of the analyses mentioned. (See Appendix C for statistical figures).

As a consequence, for this research study, it was found that, according to the accepted null hypothesis, there is no significant statistical evidence to determine that b-learning can highly influence the development of the skills in these dimensions given the research settings.

Conclusion and Discussion

The main conclusion of this study claims that the statistical tests show little to no significant difference to reassure that b-learning can significantly influence the development of the digital skills considered in the experiment. Many astonished reactions may provoke a lack of faith in the nature of quasi-experimental study and quantitative research alone. In spite of this misconception, I dare to question whether traditional teaching and styles fail, or the technology is pervading all teaching methods now, and that some digital skills are acquired at a certain degree transcending work, school life, and learning.

The main findings of this study overlap with González Montero (2017), since in the higher educational context, students do not obtain instrumental digital competencies, but are only found to be competent users for those tools of frequent access and use. More precisely, the development of digital skills should encounter a system of beliefs, attitudes, and emotions acquired by the actors in this education context. This research also coincides with Flores, Gómez, and Zambrano (2015), whose research found low levels of performance in knowledge when measuring some categories of digital literacy such as the use of ICTs for learning related tasks. They mentioned that even though there exists certain evidence on know-how over certain tools and programs, they are found to be limited to the use and application for the academic task, yet are not beyond this requirement.

Moreover, this research study confronts Echeverría (2017) when presenting the use of b-learning as a method that overcomes and surpasses the traditional method applied in higher educational contexts alike. I agreed on the view that empowering roots of b-learning

are recommendable uses as a perfect complement for a learning and teaching best practice 'recipe', but not quite as a whole change.

Blended learning can efficiently empower those scenarios in which learners can be using their learning time and the manner in which they use some technology resources is part of what needs to be properly blended for this 'learning recipe'.

With this research study, the main conclusion to be drawn is that even though learning processes can highly influence digital competency training, many of the other learning activities in progress and traditional learning can potentially provide indirectly such development; the blended learning approach should receive a more precise cross-curricular implementation. The most outstanding conclusion in this research is that b-learning is just one of the vast sets of influential components in learning to account for digital competency. As concerns English language instructors and educators, they have always applied teaching and learning activities which permit that 'blend' to happen, even if they are working from the best traditional practice. One example of this blend is taking place when adopting flipped learning practices (Buitrago & Díaz, 2018). Educators can always provide some alternatives to ´blend´ their own practices by benefitting from ICT tools incorporated wisely to pedagogical practices which are not always framed under a certain educational model; however, there is a need to name and embrace new frameworks for education to go beyond the classroom, to generate a meaningful impact.

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Appendix A. Sample of didactic sessions design

Syllabus English Level- I

Group **English 1**

<table>
<tr><td colspan="3">Goal Session No. 4: Students will be able to use interaction questions to start a conversation by exchanging personal bio-data information</td></tr>
<tr><td colspan="3">Digital skill area 2- creation of digital content- Skill: creates, edits, makes digital resources with a personal expression form.</td></tr>
<tr><td>Language Competence</td><td>Experimental Session 2</td><td rowspan="2">Weekly Hours: 2 Hrs on Campus. 2 Hrs Online Tasks</td></tr>
<tr><td>By the end of this week, the student is able to identify and use personal question forms to exchange personal information in an interaction by using Wh. questions (present simple form)</td><td>Week 4</td></tr>
<tr><td colspan="2">Learning Activities</td><td>Digital Resources</td></tr>
<tr><td colspan="2">2.1. Students identify and use information questions and forms in present simple to interact with others</td><td rowspan="4">Class materials:
– Audio- Textbook and its own online platform
– Digital resources for content creation: Audio recording creation and storage:
– Vocaroo.com
– Online-voice-recorder.com
– Ivoox.com
Resources for autonomous extra tasks - blended session:
Online virtual class LMS, and textbook platform</td></tr>
<tr><td colspan="2">2.2 Students use and express questions using proper grammar with Wh. words: (what do you do? -where do you live-who's …- when is your birthday? - how old are you /is she?, etc.)</td></tr>
<tr><td colspan="2">2.3. Students exchange information related to situations where personal bio data is required in a fictional scenario. The use of intonation and sounds are checked in audio recordings. Questions used: (E.g. What's your name? How old are you? What's your address? When's your birthday? Where do you live? etc.).</td></tr>
<tr><td colspan="2">2.4 Control Group: Students are able to express personal information through a live conversation, and are also able to exchange information. (Class time role-play) Experimental Group: Students are able to express personal information through a live interaction with a peer (online audio-recording), by means of topics practiced during this session. Then, students should share the audio recording material for class feedback.</td></tr>
</table>

Assessment Activity
Shareable Audio Recording:
Teacher will assess the audio-recording (or role-play in case CG) interaction in which two or three students are exchanging personal information, jobs, occupations/ studies, and other personal details
Assessment Criteria & Instrument
– **Instrument**: Class activity assessment rubric- Language Skill: Speaking- Format is adjusted in a virtual class platform. – *Criteria*: pronunciation, use of grammar (possessive adjectives, verb to be, simple present, basic opinion adjectives), language and content (how many questions used or how many personal details were exchanged).
Further Autonomous Tasks Preparation
Reading and Listening strategies (From the textbook used)

Appendix B. Summary of the instrument

Dimensions	Indicator	Item No.	Items
D1- Communication And Collaboration	I1. Interacts through means of digital technology	1	I can use any basic digital means to communicate with others (e.g., instant messaging, email, smartphone, video calls, etc.)
		2	I can manage many digital means of communication to interact with others
		3	I can manage, add, modify, adapt digital means to communicate, interact and work with others
		4	I can guide others and explain how to modify, add, search contacts, and adapt digital means of communication
	I2. Shares information with others through digital technologies	5	I can share simple data and information with others (e.g., send, attach audio, media, images, text, files, videos, etc.)
		6	On my own, I can share data, information and other media through digital technologies
		7	I can show others and give solutions against various digital means of communication to share data through digital technologies
		8	I can create solutions and integrate my own forms of sharing data through digital technologies properly
	I3. Participates and engages in social practices and citizenship through digital technologies	9	I can use basic forms of social networking or participation services (e.g., Facebook, Twitter, instant messaging groups, virtual classrooms, etc.)
		10	On my own, I can use a wide range of social participation and website services, portals or social communities (e. g., follow, hashtag, tags, among others)

Dimensions	Indicator	Item No.	Items
D1- Communication and Collaboration	I3. Participates and engages in social practices and citizenship through digital technologies	11	I am an active online user of many online services (personal accounts, platforms, online virtual classroom in LMS, apps for learning, etc.)
	I4. Uses digital media to collaborate with others	12	I can use basic tools to collaborate online with others (e.g., drive, blogs, forums, etc.)
		13	I can manage to work in teams about a certain task assigned online
		14	I can handle a variety of online team collaboration tools and I can also guide others how to manage to use them
		15	I am willing to work online, share, work, collaborate with others according to certain tasks
	I5 Shows adequate behavior in the use of digital technologies: ethic online	16	I can use basic behavior rules and standard online good manners (e.g., writing skills, tone, level of formality and proper spelling with English language usage)
		17	I can make sure and check on what I write before publishing online
		18	I clearly distinguish the proper language to be used in certain online environments
		19	I can guide others on how to use good manners, rules, and online behavior (netiquette)
	I6. Manages and protects one's own identity in the digital environments	20	I use my personal data carefully and reasonably (users, passwords, browsers, phone numbers, addresses, etc.)
		21	I can create my online profile in academic or social contexts online
		22	I know and recognize basic forms of data protection and security online
D2-Digital Content Creation	I1. Develops digital content to express and connect with others	23	I can manage to create simple and basic multimedia using digital technologies (e.g., images, infographics, video, audio, slides, online documents, etc.)

Dimensions	Indicator	Item No.	Items
D2-Digital Content Creation	I1. Develops digital content to express and connect with others	24	I can use a wide range of different digital tools to create multimedia content for my tasks
		25	I can modify and edit digital pre-existing content to express myself
		26	I can guide others on how to create, edit, modify digital content by digital technologies
	I2. Integrates, modifies and adapts digital content	27	I can re-elaborate, modify and edit new digital content according to my own purposes (e.g., blogs, wikis, forums, websites, micro-sites, etc.)
		28	I can re-design my own illustration tools and means of organizing information with digital technologies (slides, online mind maps, infographics, etc.)
	I3. Identifies and explains licenses and copyrights in digital environments	29	When using information from the digital technologies, I acknowledge authorship, sources and references and /or quotes
		30	I understand what plagiarism is and I can act cautiously on using the information found in digital technologies
		31	I can recognize and acknowledge copyrights found in any source by digital technologies
		32	I understand the existence of licenses and ethic proper acting in the responsible use of information
	I4. Domains certain configuration and programming procedures	33	I understand basic forms of operating a technological device like a smartphone, tablet or laptop and its apps
		34	I can follow simple steps for installing applications on devices to be used in certain tasks

Appendix C. Statistics Figures

1. Wilcoxon tests performed (Analysis of data obtained comparing related samples)

Statistic test assessing related samples in pre and post text - General variable*

		Postest-Pretest
Experimental	Z	-2.646[b]
Group	Sig.	0.008
Controlled	Z	-2.000
Group	Sig	0.046

a Wilcoxon test based on negative ranks
b Based on Signed rank test
Note: Significance level 5%

2. Mann- Whitney U test performed (Analysis of data obtained comparing independent samples)

Statistic test comparing independent samples - General variable*

	Pretest	Postest
Mann-Whitney U test	300.000	287.500
W - Wilcoxon	625.000	612.500
Z	-0.319	--1.429
Sig A (bilateral)	0.750	0.153

Note: Significance level 5%

3. Statistics tests for analyzing general variable

Group of test for the general variable: Digital skills

*Statistic test comparing independent samples - General variable**

	Pretest	Postest
Mann-Whitney U test	300.000	287.500
W - Wilcoxon	625.000	612.500
Z	-0.319	-1.429
Sig A (bilateral)	0.750	0.153

Note: Significance level 5%

*Statistic test assessing related samples in pre and post text - General variable**

	Postest -Pretest	
Experimental	Z	-2.646[b]
Group	Sig.	0.008
Control	Z	-2.000[b]
Group	Sig.	0.046

b Based on Signed rank test
Note: Significance level 5%

4. Statistics tests for analyzing dimension 1

Group of test for Dimension 1. Communication and collaboration skills

Statistic test comparing independent samples - Dimension 1. Communication and collaboration skills

	Pretest	Postest
Mann-Whitney U test	287.500	300.000
W - Wilcoxon	612.500	625.000
Z	-0.624	-0.467
Sig.	0.533	0.641

Note: Significance level 5%

Statistic test assessing related samples in pre and post text - Dimension 1. Communication and collaboration skills

	Postest -Pretest	
Experimental	Z	-2.449[b]
Group	Sig.	0.014
Control	Z	-1.732[b]
Group	Sig.	0.083

b Based on Signed rank test
Note: Significance level 5%

5. Statistics tests for analyzing dimension 2

Group of test for Dimension 1. Communication and collaboration skills

Statistic test comparing independent samples - Dimension 2. Content creation skills

	Pretest	Postest
Mann-Whitney U test	237.500	300.000
W - Wilcoxon	562.500	625.000
Z	-1.750	-0.467
Sig.	0.080	0.641

Note: Significance level 5%

Statistic test assessing related samples in pre and post text - Dimension 2. Content creation skills

	Postest -Pretest	
Experimental	Z	-3.162[b]
Group	Sig.	0.002
Control	Z	-1.342[b]
Group	Sig.	0.180

b Based on Signed rank test
Note: Significance level 5%